Magnetic Ballast Catalog

SYLVANIA Magnetic Ballasts – 2005

the system solution®

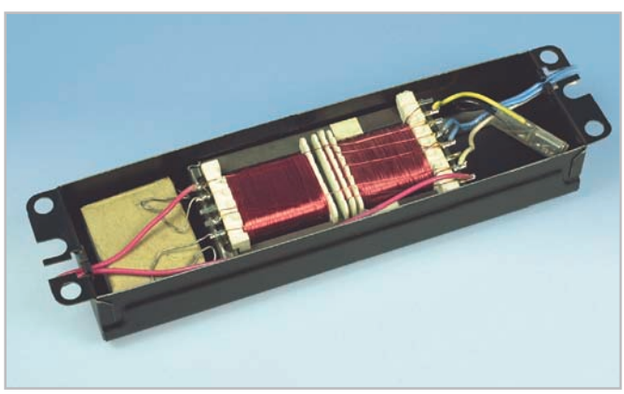
SEE THE WORLD IN A NEW LIGHT SYLVANIA

Magnetic Fluorescent Ballasts

A ballast typically provides three main functions:

1. **Proper starting voltage to the lamp:** The ballast must supply adequate starting or striking voltage to the lamp in order to ionize the gas and establish an arc between the lamp filaments.
2. **For fluorescent lamps only, the ballast may provide filament (coil) heating:** The ballast supplies the correct voltage to the lamp cathodes or filaments. This warms the lamp cathodes to the proper temperature to facilitate lamp starting. This is important to achieve rated lamp life.
3. **Limit lamp current:** The ballast must limit the current and control the power to the lamp once the start cycle is complete.

Incandescent lamps operate by passing current through a tungsten filament to produce light. The filament itself limits the amount of current flowing through the lamp by its own resistance. Unlike incandescent lighting, fluorescent and HID lamps produce light by ionizing gas within a light producing chamber. For a fluorescent lamp, this chamber is usually a glass tube. For HID lamps, this chamber is usually a quartz glass or ceramic material. In both cases the ionized gas or arc has a negative resistance characteristic that causes the arc to draw more and more current as the arc forms. If this current were not limited, the lamp would quickly fail, (extinguish). Because of this negative resistance, a ballast is used to regulate, (limit) the lamp current and power for proper operation.



Ballast Components

SYLVANIA magnetic fluorescent ballasts are produced with high quality components for reliable performance. These components include:

- A sturdy steel case
- A dry capacitor: contained in high power factor ballasts or for lamp regulation
- Steel laminations: high grade steel laminations to minimize losses
- Coils: tightly wound for reliable performance and quiet operation
- Thermal Protector: to protect against overheating of the ballast and fixture
- Potting compound — reduces the audible noise and helps cool the ballast
- Lead wires which are attached to the coils

OSRAM SYLVANIA is the global leader in lighting systems. The most important trend in lighting technology is the move toward systems … we started this trend with **THE SYSTEM SOLUTION™,** a family of optimally balanced energy saving lamps and electronic ballast combinations.

OSRAM SYLVANIA has the competitive advantage with years of experience in designing, developing and supporting integrated systems — both in ballasts and lamps. Our global network of design and manufacturing brings ballast and lamp knowledge together to produce innovative, cost-effective, energy saving systems.

- Committed to providing energy efficient ballasts & lamps.
- Our innovative system solutions exceed customer expectations.
- New energy saving, higher efficiency, lower power systems

OSRAM SYLVANIA, known for starting the trend toward systems with **THE SYSTEM SOLUTION,** also offers a wide variety of **Magnetic Ballasts. SYLVANIA Magnetic Ballasts are covered by our Magnetic Ballast Limited Warranty and our comprehensive Metal Halide and High Pressure Sodium Limited System Warranty** (see warranty section for additional details). **SYLVANIA Magnetic Ballasts,** like all of our products are backed by unparalleled customer service that is available to you wherever and whenever needed.

Fluorescent Lamps

Fluorescent lamps are a popular light source due to their high efficacy in converting electrical energy to visible light.

Fluorescent Ballast Types

Rapid Start Ballasts

Operate the popular T12, T10 and T8 lamps with a smooth start to ensure optimal performance. A rapid start ballast starts a lamp by simultaneously applying current to both lamp cathodes and voltage across the lamp. This automatic heating of the lamp cathodes removes the need for a separate starter used in pre-heat lamp types and eliminates the flicker associated with pre-heat start ballasts.

HO and VHO Ballasts

HO and VHO ballasts are rapid start T12 ballasts designed to operate the High Output, (800 mA lamps) and Very High Output, (1500 mA lamps) T12 lamps popular in the retail and industrial environments. These ballasts are typically larger versions of the standard F-Can to handle the higher power loads of these systems.

HO Sign Ballasts

New T12 high output (HO) magnetic ballasts for sign applications are designed to meet or exceed industry standards and requirements for the sign business. Sign ballasts typically operate 2-6 lamps and are selected by quantity of lamps to operate and the lineal footage of lamps used by the ballast.

Circline Ballasts

SYLVANIA Circline ballasts are rapid start ballasts designed to operate T9 Circline lamps. A separate starter is not required for these ballasts.

Trigger Start Ballasts

The circuit for this type of ballast is used to eliminate the starter and start a pre-heat lamp almost instantly. In this circuit, each electrode is connected to a separate winding within the ballast.

Slimline Ballasts — Instant Start

Slimline ballasts are designed for use with single pin T12 lamps and do not require separate starters. Slimline ballasts apply a much higher voltage across the lamp, which starts the lamp instantly and does not require the use of cathode heating. Slimline lamps are specially constructed to utilize this starting method, and provide good system efficacy because no power is used to heat the coils.

Pre-Heat Ballasts

These ballasts operate pre-heat style lamp types and are available in standard and thermally protected models. Pre-heat ballasts first apply a small amount of current to the lamp cathodes, then once the cathodes have been properly pre-heated, a voltage is applied to start the lamp. Because of this two step starting process, the ballast requires the use of a starter. The starter can be built into the ballast or wired into the circuit as a separate item.

General Information

Ballast Labels

SYLVANIA magnetic fluorescent ballast labels include an industry first — a handy cross-reference guide to help identify the proper ballast for replacing existing installed products. The line voltage is also clearly identified to ensure proper application and our shipping carton labels are also color coded to indicate the voltage to help avoid misapplication even before the ballasts are out of the box.

SLYVANIA fluorescent magnetic ballasts can only be used with the various combinations of lamp types listed on the product label. Any other lamp type or combination of lamps are not UL listed or CSA certified and would not be warranted by SYLVANIA.

Date Code

The ballast manufacturing date and location is printed on all SYLVANIA magnetic fluorescent product labels above the bar code.

Certifications

Depicts ballast is listed by Underwriters Laboratories Inc. in accordance with UL 935 for Fluorescent ballasts.

Depicts ballast is certified by the Canadian Standards Association in accordance with CAN/CSA - 22.2 No. 74-92.

Indicates SYLVANIA ballast complies with National Energy Conservation Amendments of 1988 (unless otherwise indicated).

Indicates SYLVANIA ballast complies with Canadian Energy Standards (unless otherwise indicated).

Ballast Characteristics

Lamp Starting

The metal body of a fluorescent fixture, when properly grounded, can assist in starting the lamp. The distance which fluorescent lamps operating on a Rapid Start or Trigger Start Ballast must be mounted within a grounded metal plane are:

Lamp Type	Mounting Distance of Grounded Metal Plane
40 Watt T12 and lower wattages	½"
T8 lamps	¾"
All other fluorescent lamps	1"

Lamp starting can also be effected by polarity and connecting of the appropriate ballast lead wires. To ensure proper starting, the grounded power supply must be connected to the white ballast lead and the hot line wire to the black ballast lead wire.

Safety

Ballasts must be installed and operated in accordance with the National Electric Code (NEC), Underwriters Laboratories Inc. (UL) requirements, and all applicable codes and regulations. Since it is possible to come in contact with potentially hazardous voltages, only qualified personnel should perform ballast installation. All installation, inspection, and maintenance of lighting fixtures must be performed with power to the fixture turned off.

Grounding

The ballast case and fixture must always be grounded. The grounding helps assure safety, proper lamp starting, and acceptable EMI/RFI performance. Install ballast in accordance with national and local electrical codes.

Thermal Protection

The National Electrical Code, (NEC) stipulates that all indoor fluorescent fixtures must contain a thermal protector in the ballast, except for simple reactor ballasts. SYLVANIA magnetic fluorescent ballasts, where required, contain a UL approved Class P automatic resetting thermal protector. This thermal protector will interrupt the power supply to the ballast if the maximum ballast temperature is exceeded, thereby minimizing potential overheating of the ballast and fixture. Once the internal temperature is returned to normal, the thermal protector will reset and resume operation of the ballast. If the cause of the overheating is not corrected, the ballast may again overheat and trip the thermal protector and continue this cycle until the heat problem is mitigated.

Temperature Effects on a Ballast

Similar to other electrical devices, heat is generated from a fluorescent magnetic ballast during normal operation. A fluorescent magnetic ballast using class A insulation is required by UL to have a maximum ballast case temperature of 90°C at its hottest point and an internal coil temperature not to exceed 105°C. If these temperatures are exceeded, ballast life will be reduced. Fixture ventilation and proper ballast installation are important in maintaining appropriate ballast temperatures.

Audible Noise

The noise emitted from a ballast may be an important consideration in the selection of a ballast. To assist in the proper selection of a magnetic fluorescent ballast all ballasts are given a sound rating. SYLVANIA magnetic fluorescent ballasts sound ratings range from A to D with A being the quietest. The sound rating can be found on all SYLVANIA product labels.

Factors that contribute directly to the characteristic hum of magnetic ballasts are:

- the basic circuitry and construction
- the component material
- the manufacturing process
- installation techniques of the ballast to the luminaire

A definite correlation exists between ballast audibility and such indirect variables as fixture application, fixture location, and the ambient room noise levels which are, of course dependent on room acoustics. Care should be taken when mounting the ballast to reduce vibration.

General Information Cont'd

Socket Wiring/Lamp Connection

For proper lamp and ballast operation, use good quality lamp sockets and ensure they are properly connected. Always wire the ballast according to wiring diagram shown on the ballast label. Some applications may not require the use of all the ballast output leads, therefore all unconnected leads should be capped individually.

Low Temperature Operation

There are two limiting considerations for low temperature operation:

1. The ability of the lamp to start at the required ambient temperature: the starting temperature for a fluorescent lamp is dependent upon the specific lamp type and the ballast itself. For example: all SYLVANIA HO and VHO magnetic ballast have the capability to start cold temperature rated fluorescent lamps down to -20°F. However, the typical starting temperature for an energy saving HO or VHO lamp is 60°F. Other ballast types may have different starting temperatures.
2. The light output of a fluorescent lamp varies considerably with the temperature of the bulb wall: typically the lower the ambient temperature for a fluorescent lamp the less light output will be generated by the lamp. After starting, the bulb wall temperature should increase sufficiently to operate the lamp. If the ambient temperature is not sufficient, enclosed fixtures or tube guards are recommended.

Voltage Tolerances

To ensure proper application, each SYLVANIA magnetic fluorescent ballast is designed to operate at the input voltage identified on the ballast and carton label. Input voltages that are too high can reduce lamp and ballast life. If input voltage is too low, unpredictable starting may occur and lamp life will be reduced. The typical tolerances for input voltage are +/-10%.

Input Ballast Frequency

The effectiveness of a ballast in limiting current depends on the frequency of the power supply. For this reason, a ballast should be operated only at the frequency for which it is designed. Operating a ballast outside of its normal frequency range can overheat the ballast and shorten the ballast life.

Fluorescent Troubleshooting Matrix

OSRAM SYLVANIA is focused on helping our customers understand our products and simplify their use and application. We have developed a Fluorescent Troubleshooting Matrix which is intended to provide an overview of common fluorescent lighting system questions. This matrix lists common modes of system trouble and points out most of the possible causes with respective verification/ corrective action. For additional information go to **www.sylvania.com** or contact our National Customer Service Center at **1-800-LIGHTBULB (1-800-544-4828).**

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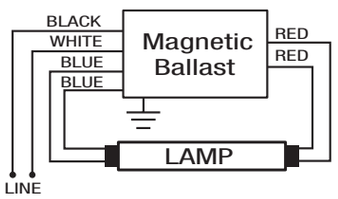
Magnetic T8
Rapid Start Fluorescent Ballasts

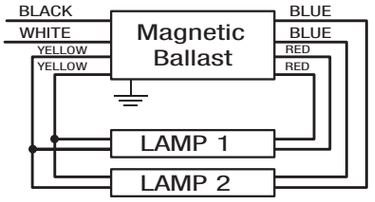
T8 Med Bipin

T8 Rapid Start High Power Factor

Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	No. of Lamps	Input Power (Watts)	Input Current (Amps)	BEF[1]	Ballast Factor (BF)	THD %	Power Factor	Min. Start Temp. (°F)	Certifications				Dim.	Wiring Dia.
F017T8 (17W) Rapid Start																
48312	MB1x17/120RS	120	1	31	0.27	3.42	1.05	7	0.93	50	X	X			A	1
F025T8 (25W) Rapid Start																
48096	MB1x25/32/120RS-LW	120	1	31	0.26	2.52	0.78	8	0.99	50	X	X			A	1
48240	MB1x25/32/120RS-SRNK	120	1	37	0.31	2.49	0.92	9	0.99	50	X	X			A	1
48241	MB1x25/32/277RS-SRNK	277	1	37	0.13	2.45	0.91	8	0.99	50	X	X			A	1
48242	MB2x25/32/120RS-SRNK	120	2	60	0.51	1.50	0.90	9	0.98	50	X	X			A	2
48243	MB2x25/32/277RS-SRNK	277	2	61	0.22	1.51	0.92	9	0.99	50	X	X			A	2
F032T8 (32W) Rapid Start																
48096	MB1x25/32/120RS-LW	120	1	35	0.32	2.43	0.85	12	0.92	50	X	X			A	1
48240	MB1x25/32/120RS-SRNK	120	1	44	0.39	2.14	0.94	9	0.97	50	X	X			A	1
48241	MB1x25/32/277RS-SRNK	277	1	43	0.16	2.16	0.93	8	0.99	50	X	X			A	1
48242	MB2x25/32/120RS-SRNK	120	2	74	0.63	1.27	0.94	9	0.98	50	X	X		X	A	2
48243	MB2x25/32/277RS-SRNK	277	2	75	0.28	1.23	0.93	9	0.96	50	X	X		X	A	2
F040T8 (40W) Rapid Start																
48096	MB1x25/32/120RS-LW	120	1	40	0.34	1.88	0.75	14	0.98	50	X	X			A	1
48240	MB1x25/32/120RS-SRNK	120	1	48	0.40	1.79	0.86	11	0.99	50	X	X			A	1
48241	MB1x25/32/277RS-SRNK	277	1	50	0.18	1.72	0.86	12	0.98	50	X	X			A	1



Wiring Diagram 1



Wiring Diagram 2

Specifications

Sound Rating: Class A
Starting Method: Rapid Start
Circuit Type: Series
Input Frequency: 60 Hz
Wiring: Leads Only

UL Listed Class P, Type 1 Outdoor
CSA Certified

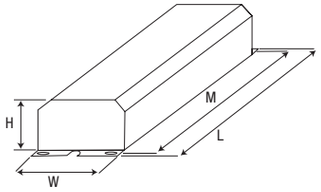
1: BEF denotes Ballast Efficacy Factor

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

For lead lengths refer to page 30.

For additional ballast case dimensions refer to page 31.

Additional product information is available at www.sylvania.com.



Dimensions (inches)					Packaging	
Dim.	L	W	H	M	Quantity	Weight (approx.)
A	9.5	2.38	1.5	8.91	10	3.5 lbs. ea.

Warranty

SYLVANIA Magnetic Ballasts are covered for 3 years by our Magnetic Ballast Limited Warranty. For details go to www.sylvania.com.

Item Number — **48242 MB 2 x 25/32 120 RS SRNK** — Ballasts are Individually Shrink Wrapped
Magnetic Ballast — Starting Method
Number of Lamps — Line Voltage
Primary Lamp Wattage

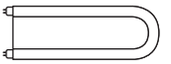
Ordering Guide

Specifications subject to change without notice.

OSRAM SYLVANIA National Customer Service and Sales Center
1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

Magnetic T8 U-Bend Rapid Start Fluorescent Ballasts

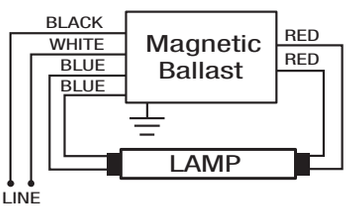
T8 U-Shaped (leg spacing of 1-5/8")



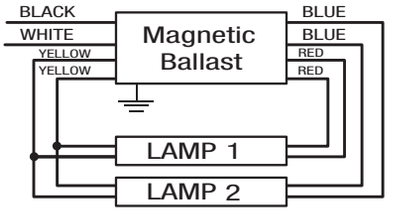
T8 U-Shaped (leg spacing of 6")

T8/U Rapid Start High Power Factor

Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	No. of Lamps	Input Power (Watts)	Input Current (Amps)	BEF[1]	Ballast Factor (BF)	THD %	Power Factor	Min. Start Temp. (°F)	Certifications			Dim.	Wiring Dia.
FB016T8/U (16W) Rapid Start															
48312	MB1x17/120RS	120	1	31	0.27	3.42	1.05	7	0.93	50	X	X		A	1
FB024T8/U (24W) Rapid Start															
48096	MB1x25/32/120RS-LW	120	1	29	0.24	2.66	0.77	7	0.99	50	X	X		A	1
48240	MB1x25/32/120RS-SRNK	120	1	36	0.30	2.53	0.91	9	1.00	50	X	X		A	1
48241	MB1x25/32/277RS-SRNK	277	1	37	0.13	2.45	0.91	8	0.99	50	X	X		A	1
48242	MB2x25/32/120RS-SRNK	120	2	60	0.51	1.50	0.90	10	0.98	50	X	X		A	2
48243	MB2x25/32/277RS-SRNK	277	2	61	0.22	1.51	0.92	10	0.99	50	X	X		A	2
FB031T8/U (31W) Rapid Start															
48096	MB1x25/32/120RS-LW	120	1	34	0.29	2.32	0.79	10	0.99	50	X	X		A	1
48240	MB1x25/32/120RS-SRNK	120	1	42	0.35	2.21	0.93	9	1.00	50	X	X		A	1
48241	MB1x25/32/277RS-SRNK	277	1	43	0.16	2.16	0.93	8	0.99	50	X	X		A	1
48242	MB2x25/32/120RS-SRNK	120	2	73	0.63	1.27	0.93	11	0.97	50	X	X	X	A	2
48243	MB2x25/32/277RS-SRNK	277	2	74	0.27	1.26	0.93	10	0.99	50	X	X	X	A	2
FB032T8/U (32W) Rapid Start															
48096	MB1x25/32/120RS-LW	120	1	35	0.30	2.29	0.80	12	0.97	50	X	X		A	1
48240	MB1x25/32/120RS-SRNK	120	1	42	0.35	2.21	0.93	9	0.99	50	X	X		A	1
48241	MB1x25/32/277RS-SRNK	277	1	43	0.16	2.14	0.92	9	0.97	50	X	X		A	1
48242	MB2x25/32/120RS-SRNK	120	2	74	0.63	1.26	0.93	10	0.98	50	X	X	X	A	2
48243	MB2x25/32/277RS-SRNK	277	2	75	0.28	1.23	0.93	10	0.95	50	X	X	X	A	2



Wiring Diagram 1



Wiring Diagram 2

Specifications

Sound Rating: Class A
Starting Method: Rapid Start
Circuit Type: Series
Input Frequency: 60 Hz
Wiring: Leads Only

UL Listed Class P, Type 1 Outdoor
CSA Certified

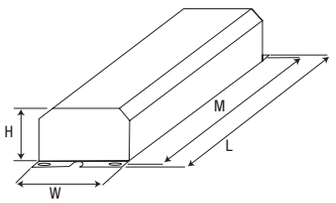
1: BEF denotes Ballast Efficacy Factor

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

For lead lengths refer to page 30.

For additional ballast case dimensions refer to page 31.

Additional product information is available at www.sylvania.com.



Dimensions (inches)					Packaging	
Dim.	L	W	H	M	Quantity	Weight (approx.)
A	9.5	2.38	1.5	8.91	10	3.5 lbs. ea.

Warranty

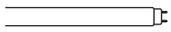
SYLVANIA Magnetic Ballasts are covered for 3 years by our Magnetic Ballast Limited Warranty. For details go to www.sylvania.com.

Item Number — **48242 MB 2 x 25/32 120 RS SRNK**
Magnetic Ballast
Number of Lamps
Primary Lamp Wattage
Ballasts are Individually Shrink Wrapped
Starting Method
Line Voltage

Ordering Guide

Specifications subject to change without notice.

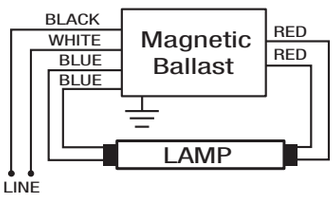
Magnetic T12
Rapid Start Fluorescent Ballasts



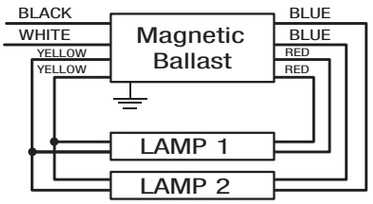
T12 Med Bipin

T12 Rapid Start High Power Factor

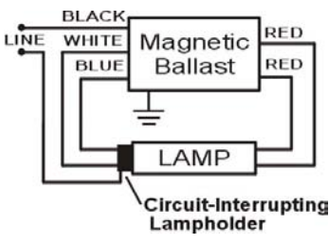
Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	No. of Lamps	Input Power (Watts)	Input Current (Amps)	BEF[1]	Ballast Factor (BF)	THD %	Power Factor	Min. Start Temp. (°F)	Certifications			Dim.	Wiring Dia.
F25T12 SUPERSAVER® Rapid Start															
48409	MB2x30/120RS-SRNK	120	2	70	0.60	1.29	0.90	12	0.98	60	X	X		A	2
48397	MB2x30/40/120RS	120	2	57	0.48	1.32	0.75	18	0.97	60	X	X		A	2
48410	MB2x30/277RS-SRNK	277	2	70	0.26	1.29	0.90	13	0.97	60	X	X		A	2
F30T12 (30W) Rapid Start															
48011	MB1x40/120RS-SRNK	120	1	42	0.35	2.31	0.97	12	0.99	50	X	X		A	1
48210	MB1x40/120RES-SRNK[2]	120	1	30	0.60	2.27	0.68	12	0.42	50	X	X		B	3
48120	MB1x40/277RS-SRNK	277	1	44	0.16	2.18	0.96	12	0.98	50	X	X		A	1
48409	MB2x30/120RS-SRNK	120	2	80	0.67	1.19	0.95	10	0.99	50	X	X		A	2
48397	MB2x30/40/120RS	120	2	66	0.55	1.20	0.79	11	0.99	0	X	X		A	2
48410	MB2x30/277RS-SRNK	277	2	80	0.29	1.19	0.95	11	0.99	50	X	X		A	2



Wiring Diagram 1



Wiring Diagram 2



Wiring Diagram 3

Specifications

Sound Rating: Class A
Starting Method: Rapid Start
Circuit Type: Series
Input Frequency: 60 Hz
Wiring: Leads Only

UL Listed Class P, Type 1 Outdoor
CSA Certified

1: BEF denotes Ballast Efficacy Factor

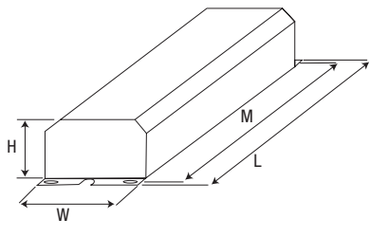
2: Normal Power Factor

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

For lead lengths refer to page 30.

For additional ballast case dimensions refer to page 31.

Additional product information is available at www.sylvania.com.



Dimensions (inches)					Packaging	
Dim.	L	W	H	M	Quantity	Weight (approx.)
A	9.5	2.38	1.5	8.91	10	3.5 lbs. ea.
B	6.5	1.94	1.38	6.0	16	2.3 lbs. ea.

Warranty

SYLVANIA Magnetic Ballasts are covered for 3 years by our Magnetic Ballast Limited Warranty. For details go to www.sylvania.com.

Item Number — **48409 MB 2 x 30 120 RS SRNK** — Ballasts are Individually Shrink Wrapped
Magnetic Ballast — Starting Method
Number of Lamps — Line Voltage
Primary Lamp Wattage

Ordering Guide

Specifications subject to change without notice.

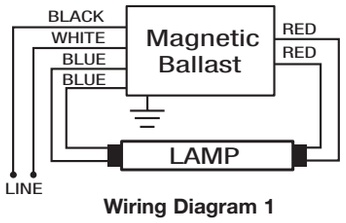
OSRAM SYLVANIA National Customer Service and Sales Center
1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

Magnetic T12
Rapid Start Fluorescent Ballasts

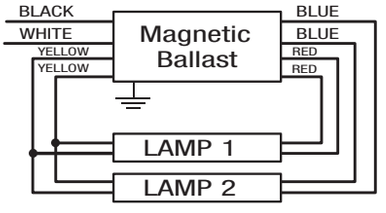

T12 Med Bipin

T12 Rapid Start High Power Factor

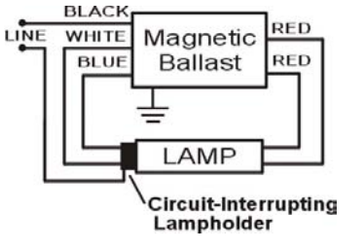
Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	No. of Lamps	Input Power (Watts)	Input Current (Amps)	BEF[1]	Ballast Factor (BF)	THD %	Power Factor	Min. Start Temp. (°F)	Certifications				Dim.	Wiring Dia.
F34T12 SUPERSAVER® (34W) Rapid Start																
48011**	MB1x40/120RS-SRNK	120	1	44	0.38	2.07	0.91	12	0.97	60	X	X		X	A	1
48120**	MB1x40/277RS-SRNK	277	1	44	0.16	2.07	0.91	12	0.98	60	X	X		X	A	1
48001	MB2x40/120RS-SRNK	120	2	73	0.65	1.21	0.88	16	0.94	60	X	X		X	A	2
48397	MB2x30/40/120RS	120	2	67	0.56	1.12	0.75	12	0.99	60	X	X			A	2
48121	MB2x40/277RS-SRNK	277	2	77	0.29	1.16	0.89	13	0.96	60	X	X		X	A	2
F40T12 (40W) Rapid Start																
48011	MB1x40/120RS-SRNK	120	1	50	0.43	1.90	0.95	8	0.98	50	X	X	X	X	A	1
48210	MB1x40/120RES-SRNK[2,3]	120	1	31	0.53	1.94	0.60	10	0.49	50	X	X			B	3
48120	MB1x40/277RS-SRNK	277	1	50	0.19	1.88	0.95	8	0.98	50	X	X	X	X	A	1
48001	MB2x40/120RS-SRNK	120	2	87	0.74	1.07	0.93	12	0.98	50	X	X	X	X	A	2
48397	MB2x30/40/120RS	120	2	77	0.64	1.04	0.80	10	0.99	0	X	X			A	2
48121	MB2x40/277RS-SRNK	277	2	89	0.34	1.06	0.94	12	0.94	50	X	X	X	X	A	2



Wiring Diagram 1



Wiring Diagram 2



Wiring Diagram 3

Specifications

Sound Rating: Class A
Starting Method: Rapid Start
Circuit Type: Series
Input Frequency: 60 Hz
Wiring: Leads Only

UL Listed Class P, Type 1 Outdoor
CSA Certified

1: BEF denotes Ballast Efficacy Factor

2: Normal Power Factor

3: For Residential Use Only

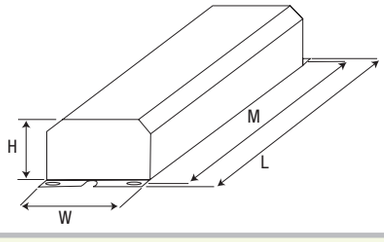
** Operating only 1 energy saver lamp on this ballast may effect the operation and life of the lamp. Consult individual lamp manufacturer for lamp specifications.

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

For lead lengths refer to page 30.

For additional ballast case dimensions refer to page 31.

Additional product information is available at www.sylvania.com.



Dimensions (inches)					Packaging	
Dim.	L	W	H	M	Quantity	Weight (approx.)
A	9.5	2.38	1.5	8.91	10	3.5 lbs. ea.
B	6.5	1.94	1.38	6.0	16	2.3 lbs. ea.

Warranty

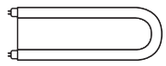
SYLVANIA Magnetic Ballasts are covered for 3 years by our Magnetic Ballast Limited Warranty. For details go to www.sylvania.com.

Ordering Guide

Item Number — **48001 MB 2 x 40 120 RS SRNK** — Ballasts are Individually Shrink Wrapped
Magnetic Ballast — Starting Method
Number of Lamps — Line Voltage
Primary Lamp Wattage

Specifications subject to change without notice.

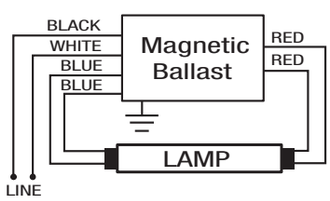
Magnetic T12 U-Bend Rapid Start Fluorescent Ballasts



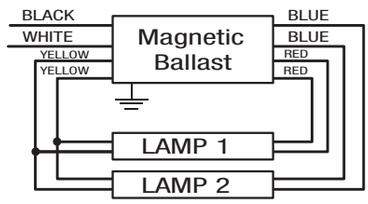
T12 U-Shaped
(leg spacing of 3-5/8" or 6")

T12/U Rapid Start High Power Factor

Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	No. of Lamps	Input Power (Watts)	Input Current (Amps)	BEF[1]	Ballast Factor (BF)	THD %	Power Factor	Min. Start Temp. (°F)	Certifications			Dim.	Wiring Dia.
FB34T12/U SUPERSAVER® (34W) Rapid Start															
48011	MB1x40/120RS-SRNK	120	1	43	0.36	2.12	0.91	14	0.99	60	X	X	X	A	1
48120	MB1x40/277RS-SRNK	277	1	44	0.16	2.07	0.91	13	0.98	60	X	X	X	A	1
48001	MB2x40/120RS-SRNK	120	2	74	0.66	1.20	0.89	16	0.93	60	X	X	X	A	2
48397	MB2x30/40/120RS	120	2	66	0.56	1.14	0.75	14	0.98	60	X	X		A	2
48121	MB2x40/277RS-SRNK	277	2	77	0.29	1.16	0.89	13	0.96	60	X	X	X	A	2
FB40T12/U (40W) Rapid Start															
48011	MB1x40/120RS-SRNK	120	1	50	0.43	1.88	0.94	9	0.98	50	X	X	X	A	1
48120	MB1x40/277RS-SRNK	277	1	50	0.19	1.88	0.95	9	0.98	50	X	X	X	A	1
48001	MB2x40/120RS-SRNK	120	2	87	0.74	1.06	0.93	12	0.98	50	X	X	X	A	2
48397	MB2x30/40/120RS	120	2	79	0.66	1.00	0.79	11	0.99	0	X	X		A	2
48121	MB2x40/277RS-SRNK	277	2	89	0.33	1.06	0.94	12	0.97	50	X	X	X	A	2



Wiring Diagram 1



Wiring Diagram 2

Specifications

Sound Rating: Class A
Starting Method: Rapid Start
Circuit Type: Series
Input Frequency: 60 Hz
Wiring: Leads Only

UL Listed Class P, Type 1 Outdoor
CSA Certified

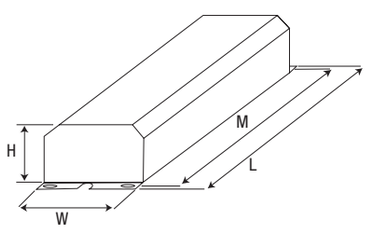
1: BEF denotes Ballast Efficacy Factor

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

For lead lengths refer to page 30.

For additional ballast case dimensions refer to page 31.

Additional product information is available at www.sylvania.com.



Dimensions (inches)					Packaging	
Dim.	L	W	H	M	Quantity	Weight (approx.)
A	9.5	2.38	1.5	8.91	10	3.5 lbs. ea.

Warranty

SYLVANIA Magnetic Ballasts are covered for 3 years by our Magnetic Ballast Limited Warranty. For details go to www.sylvania.com.

Item Number — **48001 MB 2 x 40 120 RS SRNK** — Ballasts are Individually Shrink Wrapped
Magnetic Ballast — Starting Method
Number of Lamps — Line Voltage
Primary Lamp Wattage

Ordering Guide

Specifications subject to change without notice.

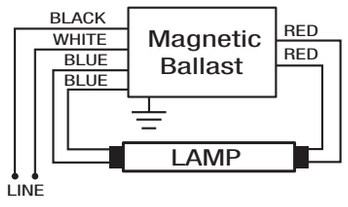
OSRAM SYLVANIA National Customer Service and Sales Center
1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

Magnetic T10
Rapid Start Fluorescent Ballasts

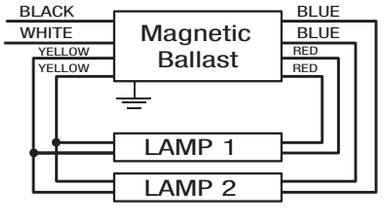
T10 Med Bipin

T10 Rapid Start High Power Factor

Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	No. of Lamps	Input Power (Watts)	Input Current (Amps)	BEF[1]	Ballast Factor (BF)	THD %	Power Factor	Min. Start Temp. (°F)	Certifications			Dim.	Wiring Dia.
F40T10 (40W) Rapid Start															
48011	MB1x40/120RS-SRNK	120	1	50	0.42	1.90	0.95	9	0.99	50	X	X	X	A	1
48120	MB1x40/277RS-SRNK	277	1	52	0.20	1.83	0.95	10	0.95	50	X	X	X	A	1
48001	MB2x40/120RS-SRNK	120	2	88	0.75	1.07	0.94	14	0.98	50	X	X	X	A	2
48397	MB2x30/40/120RS	120	2	79	0.66	0.99	0.78	12	0.98	0	X	X		A	2
48121	MB2x40/277RS-SRNK	277	2	90	0.35	1.05	0.94	13	0.93	50	X	X		A	2



Wiring Diagram 1



Wiring Diagram 2

Specifications

Sound Rating: Class A
Starting Method: Rapid Start
Circuit Type: Series
Input Frequency: 60 Hz
Wiring: Leads Only

UL Listed Class P, Type 1 Outdoor
CSA Certified

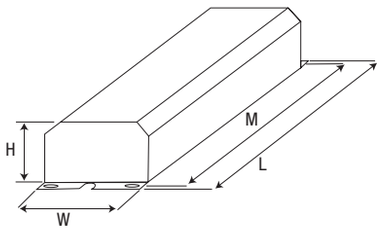
1: BEF denotes Ballast Efficacy Factor

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

For lead lengths refer to page 30.

For additional ballast case dimensions refer to page 31.

Additional product information is available at www.sylvania.com.



Dimensions (inches)					Packaging	
Dim.	L	W	H	M	Quantity	Weight (approx.)
A	9.5	2.38	1.5	8.91	10	3.5 lbs. ea.

Warranty

SYLVANIA Magnetic Ballasts are covered for 3 years by our Magnetic Ballast Limited Warranty. For details go to www.sylvania.com.

Ordering Guide

48011 MB 1 x 40 120 RS SRNK

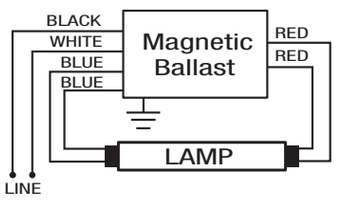
- 48011 — Item Number
- MB — Magnetic Ballast
- 1 — Number of Lamps
- 40 — Primary Lamp Wattage
- 120 — Line Voltage
- RS — Starting Method
- SRNK — Ballasts are Individually Shrink Wrapped

Specifications subject to change without notice.

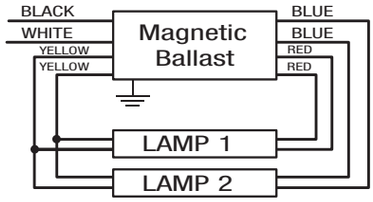
Magnetic T12 High Output Rapid Start Fluorescent Ballasts (800mA)

T12 RDC

Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	No. of Lamps	Input Power (Watts)	Input Current (Amps)	BEF[1]	Ballast Factor (BF)	THD %	Power Factor	Min. Start Temp. (°F)	Certifications			Dim.	Wiring Dia.
F18T12/HO (25W) Rapid Start															
48127	MB1x96/HO/120RS-SRNK	120	1	66	0.70	1.23	0.81	57	0.79	-20	X	X		C	1
48128	MB1x96/HO/277RS-SRNK	277	1	67	0.31	1.21	0.81	57	0.77	-20	X	X		C	1
48025	MB2x96/HO/120RS-SRNK	120	2	107	1.47	0.77	0.82	42	0.60	-20	X	X		C	2
48027	MB2x96/HO/277RS-SRNK	277	2	108	0.65	0.76	0.82	41	0.59	-20	X	X		C	2
F24T12/HO (35W) Rapid Start															
48127	MB1x96/HO/120RS-SRNK	120	1	70	0.76	1.18	0.83	56	0.77	-20	X	X		C	1
48128	MB1x96/HO/277RS-SRNK	277	1	75	0.33	1.11	0.83	52	0.81	-20	X	X		C	1
48025	MB2x96/HO/120RS-SRNK	120	2	112	1.58	0.76	0.85	40	0.58	-20	X	X		C	2
48151	MB1/2x48/96/HO/120RS-SRNK/IN*	120	2	105	0.91	0.84	0.88	14	0.96	-20	X	X		D	2
48027	MB2x96/HO/277RS-SRNK	277	2	112	0.71	0.76	0.85	40	0.57	-20	X	X		C	2
F30T12/HO (42W) Rapid Start															
48127	MB1x96/HO/120RS-SRNK	120	1	76	0.77	1.09	0.83	48	0.82	-20	X	X		C	1
48128	MB1x96/HO/277RS-SRNK	277	1	78	0.33	1.06	0.83	48	0.84	-20	X	X		C	1
48025	MB2x96/HO/120RS-SRNK	120	2	128	1.48	0.66	0.85	34	0.72	-20	X	X		C	2
48027	MB2x96/HO/277RS-SRNK	277	2	128	0.61	0.66	0.85	33	0.75	-20	X	X		C	2



Wiring Diagram 1

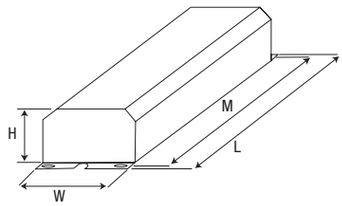


Wiring Diagram 2

Specifications

Sound Rating: Class C
Starting Method: Rapid Start
Circuit Type: Series
Input Frequency: 60 Hz
Wiring: Leads Only

UL Listed Class P, Type 1 Outdoor
CSA Certified
1: BEF denotes Ballast Efficacy Factor
*IN denotes product contains installation instructions.
Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.
For lead lengths refer to page 30.
For additional ballast case dimensions refer to page 31.
Additional product information is available at www.sylvania.com.



Dimensions (inches)					Packaging	
Dim.	L	W	H	M	Quantity	Weight (approx.)
C	11.75	3.19	2.63	11.14	4	11 lbs. ea.
D	11.75	3.19	2.63	13.14	4	11 lbs. ea.

Warranty

SYLVANIA Magnetic Ballasts are covered for 3 years by our Magnetic Ballast Limited Warranty. For details go to www.sylvania.com.

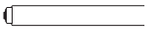
Item Number — **48127 MB 1 x 96 HO 120 RS SRNK** — Ballasts are Individually Shrink Wrapped
Magnetic Ballast — Starting Method
Number of Lamps — Line Voltage
Primary Lamp Length — Lamp Type

Ordering Guide

Specifications subject to change without notice.

OSRAM SYLVANIA National Customer Service and Sales Center
1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

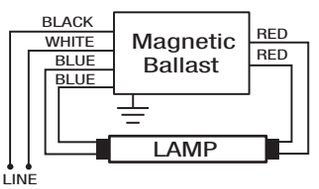
Magnetic T12 High Output Rapid Start Fluorescent Ballasts (800mA)



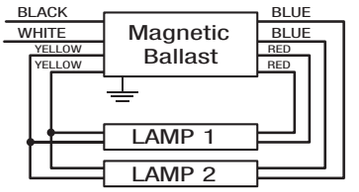
T12 RDC

T12/HO Rapid Start

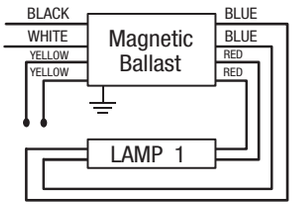
Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	No. of Lamps	Input Power (Watts)	Input Current (Amps)	BEF[1]	Ballast Factor (BF)	THD %	Power Factor	Min. Start Temp. (°F)	Certifications		Dim.	Wiring Dia.
F36T12/HO (45W) Rapid Start														
48127	MB1x96/HO/120RS-SRNK	120	1	82	0.80	1.02	0.83	45	0.85	-20	X	X	C	1
48128	MB1x96/HO/277RS-SRNK	277	1	86	0.35	0.97	0.83	43	0.88	-20	X	X	C	1
48025	MB2x96/HO/120RS-SRNK	120	2	133	1.59	0.65	0.86	31	0.69	-20	X	X	C	2
48151	MB1/2x48/96/HO/120RS-SRNK/IN*	120	2	135	1.14	0.67	0.90	14	0.98	-20	X	X	D	2
48027	MB2x96/HO/277RS-SRNK	277	2	136	0.71	0.63	0.85	30	0.69	-20	X	X	C	2
F42T12/HO (55W) Rapid Start														
48127	MB1x96/HO/120RS-SRNK	120	1	88	0.85	0.97	0.85	41	0.86	-20	X	X	C	1
48128	MB1x96/HO/277RS-SRNK	277	1	91	0.37	0.92	0.84	40	0.88	-20	X	X	C	1
48025	MB2x96/HO/120RS-SRNK	120	2	147	1.64	0.59	0.87	27	0.74	-20	X	X	C	2
48027	MB2x96/HO/277RS-SRNK	277	2	145	0.71	0.60	0.87	27	0.74	-20	X	X	C	2
F48T12/HO (60W) Rapid Start														
48127	MB1x96/HO/120RS-SRNK	120	1	94	0.90	0.91	0.86	40	0.87	-20	X	X	C	1
48151	MB1/2x48/96/HO/120RS-SRNK/IN*	120	1	97	0.84	0.95	0.92	20	0.96	-20	X	X	D	4
48128	MB1x96/HO/277RS-SRNK	277	1	101	0.40	0.84	0.85	36	0.91	-20	X	X	C	1
48025	MB2x96/HO/120RS-SRNK	120	2	158	1.70	0.56	0.89	25	0.77	-20	X	X	C	2
48151	MB1/2x48/96/HO/120RS-SRNK/IN*	120	2	154	1.33	0.62	0.95	14	0.98	-20	X	X	D	2
48027	MB2x96/HO/277RS-SRNK	277	2	161	0.76	0.55	0.88	25	0.76	-20	X	X	C	2



Wiring Diagram 1



Wiring Diagram 2



Wiring Diagram 4

Specifications

Sound Rating: Class C
Starting Method: Rapid Start
Circuit Type: Series
Input Frequency: 60 Hz
Wiring: Leads Only

UL Listed Class P, Type 1 Outdoor
CSA Certified

1: BEF denotes Ballast Efficacy Factor

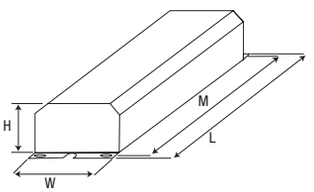
*IN denotes product contains installation instructions.

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

For lead lengths refer to page 30.

For additional ballast case dimensions refer to page 31.

Additional product information is available at www.sylvania.com.



Dimensions (inches)					Packaging	
Dim.	L	W	H	M	Quantity	Weight (approx.)
C	11.75	3.19	2.63	11.14	4	11 lbs. ea.
D	11.75	3.19	2.63	13.14	4	11 lbs. ea.

Warranty

SYLVANIA Magnetic Ballasts are covered for 3 years by our Magnetic Ballast Limited Warranty. For details go to www.sylvania.com.

Item Number — **48127 MB 1 x 96 HO 120 RS SRNK** — Ballasts are Individually Shrink Wrapped
Magnetic Ballast — Starting Method
Number of Lamps — Line Voltage
Primary Lamp Length — Lamp Type

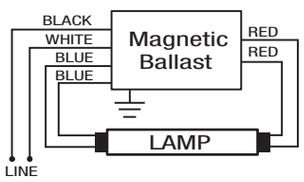
Ordering Guide

Specifications subject to change without notice.

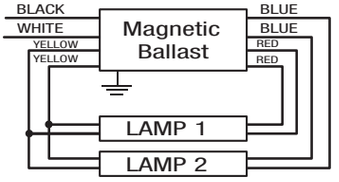
Magnetic T12 High Output Rapid Start Fluorescent Ballasts (800mA)

T12 RDC

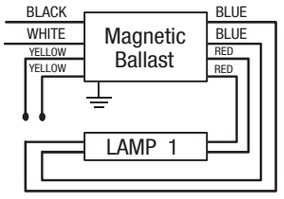
Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	No. of Lamps	Input Power (Watts)	Input Current (Amps)	BEF[1]	Ballast Factor (BF)	THD %	Power Factor	Min. Start Temp. (°F)	Certifications			Dim.	Wiring Dia.
F60T12/HO (75W) Rapid Start															
48127	MB1x96/HO/120RS-SRNK	120	1	115	1.01	0.76	0.87	30	0.94	-20	X	X		C	1
48151	MB1/2x48/96/HO/120RS-SRNK/IN*	120	1	115	0.99	0.80	0.92	18	0.97	-20	X	X		D	4
48128	MB1x96/HO/277RS-SRNK	277	1	114	0.44	0.76	0.87	31	0.93	-20	X	X		C	1
48025	MB2x96/HO/120RS-SRNK	120	2	185	1.80	0.48	0.89	19	0.85	-20	X	X		C	2
48027	MB2x96/HO/277RS-SRNK	277	2	189	0.80	0.47	0.88	19	0.85	-20	X	X		C	2
F64T12/HO (80W) Rapid Start															
48127	MB1x96/HO/120RS-SRNK	120	1	108	0.98	0.81	0.88	32	0.92	-20	X	X		C	1
48128	MB1x96/HO/277RS-SRNK	277	1	112	0.43	0.79	0.88	30	0.93	-20	X	X		C	1
48025	MB2x96/HO/120RS-SRNK	120	2	192	1.84	0.46	0.89	19	0.87	-20	X	X		C	2
48027	MB2x96/HO/277RS-SRNK	277	2	189	0.80	0.47	0.88	20	0.85	-20	X	X		C	2
F72T12/HO (85W) Rapid Start															
48127	MB1x96/HO/120RS-SRNK	120	1	116	1.03	0.77	0.89	18	0.94	-20	X	X		C	1
48151	MB1/2x48/96/HO/120RS-SRNK/IN*	120	1	119	1.02	0.78	0.93	18	0.97	-20	X	X		D	4
48128	MB1x96/HO/277RS-SRNK	277	1	117	0.44	0.76	0.89	18	0.95	-20	X	X		C	1
48025	MB2x96/HO/120RS-SRNK	120	2	205	1.90	0.45	0.92	13	0.90	-20	X	X		C	2
48027	MB2x96/HO/277RS-SRNK	277	2	200	0.80	0.46	0.91	18	0.90	-20	X	X		C	2



Wiring Diagram 1



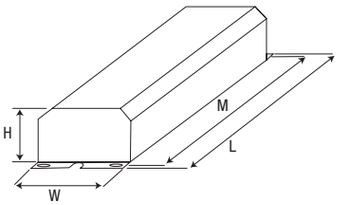
Wiring Diagram 2



Wiring Diagram 4

Specifications

Sound Rating: Class C
Starting Method: Rapid Start
Circuit Type: Series
Input Frequency: 60 Hz
Wiring: Leads Only
UL Listed Class P, Type 1 Outdoor
CSA Certified
1: BEF denotes Ballast Efficacy Factor
*IN denotes product contains installation instructions.
Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.
For lead lengths refer to page 30.
For additional ballast case dimensions refer to page 31.
Additional product information is available at www.sylvania.com.



Dimensions (inches)					Packaging	
Dim.	L	W	H	M	Quantity	Weight (approx.)
C	11.75	3.19	2.63	11.14	4	11 lbs. ea.
D	11.75	3.19	2.63	13.14	4	11 lbs. ea.

Warranty

SYLVANIA Magnetic Ballasts are covered for 3 years by our Magnetic Ballast Limited Warranty. For details go to www.sylvania.com.

Item Number — **48127 MB 1 x 96 HO 120 RS SRNK** — Ballasts are Individually Shrink Wrapped
Magnetic Ballast — Starting Method
Number of Lamps — Line Voltage
Primary Lamp Length — Lamp Type

Ordering Guide

Specifications subject to change without notice.

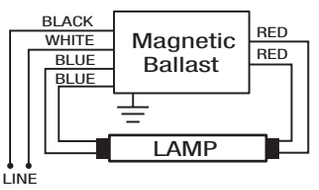
OSRAM SYLVANIA National Customer Service and Sales Center
1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

Magnetic T12 High Output Rapid Start Fluorescent Ballasts (800mA)

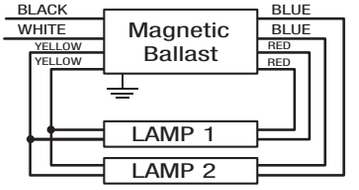
T12 RDC

T12/HO Rapid Start High Power Factor

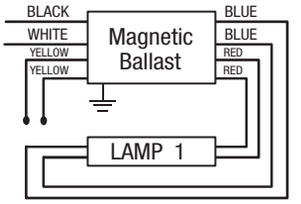
Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	No. of Lamps	Input Power (Watts)	Input Current (Amps)	BEF[1]	Ballast Factor (BF)	THD %	Power Factor	Min. Start Temp. (°F)	Certifications				Dim.	Wiring Dia.
F84T12/HO (100W) Rapid Start																
48127	MB1x96/HO/120RS-SRNK	120	1	140	1.20	0.64	0.90	24	0.96	-20	X	X			C	1
48151	MB1/2x48/96/HO/120RS-SRNK/IN*	120	1	137	1.17	0.68	0.93	14	0.97	-20	X	X			D	4
48128	MB1x96/HO/277RS-SRNK	277	1	140	0.52	0.64	0.90	23	0.97	-20	X	X			C	1
48025	MB2x96/HO/120RS-SRNK	120	2	234	2.08	0.38	0.90	15	0.95	-20	X	X			C	2
48027	MB2x96/HO/277RS-SRNK	277	2	240	0.91	0.37	0.89	14	0.95	-20	X	X			C	2
F96T12/HO SUPERSAVER® (95W) Rapid Start																
48127	MB1x96/HO/120RS-SRNK	120	1	117	1.05	0.79	0.93	19	0.93	60	X	X			C	1
48128	MB1x96/HO/277RS-SRNK	277	1	122	0.46	0.75	0.92	19	0.95	60	X	X			C	1
48025	MB2x96/HO/120RS-SRNK	120	2	211	1.95	0.44	0.92	14	0.90	60	X	X		X	C	2
48027	MB2x96/HO/277RS-SRNK	277	2	218	0.87	0.42	0.92	18	0.90	60	X	X		X	C	2
F96T12/HO (110W) Rapid Start																
48127	MB1x96/HO/120RS-SRNK	120	1	136	1.19	0.70	0.95	15	0.95	-20	X	X			C	1
48151	MB1/2x48/96/HO/120RS-SRNK/IN*	120	1	142	1.22	0.65	0.93	14	0.96	-20	X	X			D	4
48128	MB1x96/HO/277RS-SRNK	277	1	138	0.53	0.68	0.94	15	0.93	-20	X	X			C	1
48025	MB2x96/HO/120RS-SRNK	120	2	243	2.05	0.39	0.95	12	0.98	-20	X	X	X	X	C	2
48027	MB2x96/HO/277RS-SRNK	277	2	242	0.90	0.39	0.95	15	0.97	-20	X	X	X	X	C	2



Wiring Diagram 1



Wiring Diagram 2



Wiring Diagram 4

Insulate unused leads for 600V

Specifications

Sound Rating: Class C
Starting Method: Rapid Start
Circuit Type: Series
Input Frequency: 60 Hz
Wiring: Leads Only

UL Listed Class P, Type 1 Outdoor
CSA Certified

1: BEF denotes Ballast Efficacy Factor

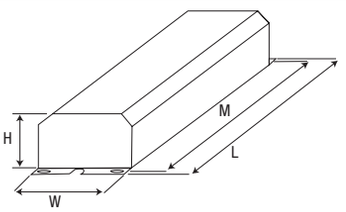
*IN denotes product contains installation instructions.

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

For lead lengths refer to page 30.

For additional ballast case dimensions refer to page 31.

Additional product information is available at www.sylvania.com.



Dimensions (inches)					Packaging	
Dim.	L	W	H	M	Quantity	Weight (approx.)
C	11.75	3.19	2.63	11.14	4	11 lbs. ea.
D	11.75	3.19	2.63	13.14	4	11 lbs. ea.

Warranty

SYLVANIA Magnetic Ballasts are covered for 3 years by our Magnetic Ballast Limited Warranty. For details go to www.sylvania.com.

Item Number — **48127 MB 1 x 96 HO 120 RS SRNK** — Ballasts are Individually Shrink Wrapped
Magnetic Ballast — Starting Method
Number of Lamps — Line Voltage
Primary Lamp Length — Lamp Type

Ordering Guide

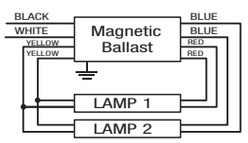
Specifications subject to change without notice.

Magnetic T12 High Output Sign Ballasts
Rapid Start Fluorescent Ballasts (800mA)

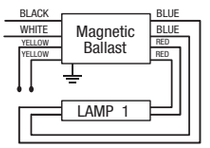
T12 RDC

T12/HO Sign Rapid Start

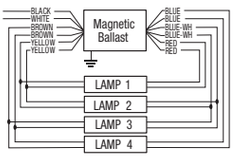
Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	No. of Lamps	Lamp Footage (ft.) Min.	Lamp Footage (ft.) Max.	Max. Input Power (Watts)	Max. Input Current (Amps)	OCV	Min. Start (°F)	Certifications	Dim.	Wiring Dia.
48225	MSB-12-0412-TP[4]	120	1-2	4'	12'	182	1.54	520	-20	X X	C	2,4
48226	MSB-24-0620-TP[5]	120	2-4	6'	20'	282	2.41	600	-20	X X	C	5,6,7
48227	MSB-24-1224-TP[6]	120	2-4	12'	24'	290	2.51	795	-20	X X	E	5,8,9
48228	MSB-24-2040-TP[7]	120	2-4	20'	40'	471	3.96	720	-20	X X	F	5,7,8
48229	MSB-46-1240-TP[8]	120	4-6	12'	40'	466	3.89	720	-20	X X	F	10,11,12
48232	MSB-46-2448-TP[9]	120	4-6	24'	48'	588	4.92	720	-20	X X	F	10,11,12



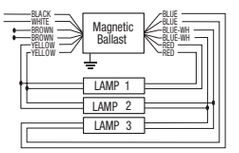
Wiring Diagram 2



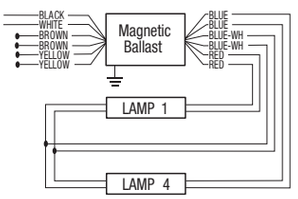
Wiring Diagram 4



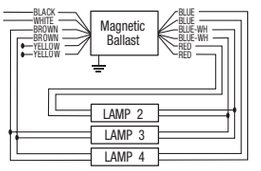
Wiring Diagram 5



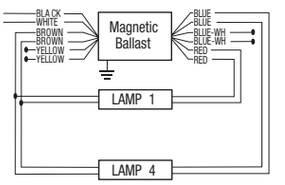
Wiring Diagram 6



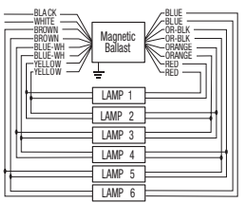
Wiring Diagram 7



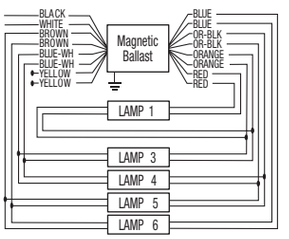
Wiring Diagram 8



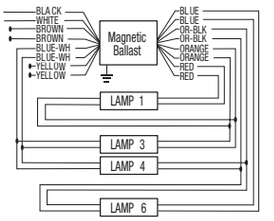
Wiring Diagram 9



Wiring Diagram 10



Wiring Diagram 11



Wiring Diagram 12

Insulate unused leads individually for 600V

Specifications

Sound Rating: Class D
Starting Method: Rapid Start
Circuit Type: Series
Input Frequency: 60 Hz
Wiring: Leads Only

UL Listed Class P, Type 2 Outdoor

CSA Certified

Available in White Can

4: For any 1 or 2 T12/RS/HO/800mA lamp combination provided total lamp length is not less than 4 ft. nor more than 12 ft.

5: For any 2, 3 or 4 T12/RS/HO/800mA lamp combination provided total lamp length is not less than 6 ft. nor more than 20 ft.

6: For any 2, 3 or 4 T12/RS/HO/800mA lamp combination provided total lamp length is not less than 12 ft. nor more than 24 ft.

7: For any 2, 3 or 4 T12/RS/HO/800mA lamp combination provided total lamp length of each circuit (A) and circuit (B) is not less than 10 ft. not more than 20 ft. Circuit "A" consists of lamp 1, 2 Circuit "B" consists of lamp 3, 4.

8: For any 4, 5 or 6 T12/RS/HO/800mA lamp combination provided total lamp length of each circuit (A) and circuit (B) is not less than 6 ft. nor more than 20 ft. Circuit "A" consists of lamps 1, 2, 3 Circuit "B" consists of lamps 4, 5, 6.

9: For any 4, 5 or 6 T12/RS/HO/800mA lamp combination provided total lamp length of each circuit (A) and circuit (B) is not less than 12 ft. nor more than 24 ft. Circuit "A" consists of lamp 1, 2, 3 Circuit "B" consists of lamp 4, 5, 6.

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

For lead lengths refer to page 30.

For additional ballast case dimensions refer to page 31.

Additional product information is available at www.sylvania.com.

Warranty

SYLVANIA Magnetic Sign Ballasts are covered for 2 years by our Magnetic Ballast Limited Warranty. For details go to www.sylvania.com.

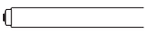
Ordering Guide

Specifications subject to change without notice.

Item Number — **48225 MSB 12 04 12 TP** — Integral Thermal Protection
Magnetic Sign Ballast — Maximum Lamp Footage
Number of Lamps (1, 2) — Minimum Lamp Footage

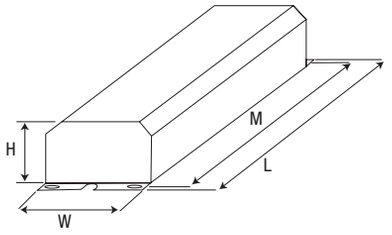
OSRAM SYLVANIA National Customer Service and Sales Center
1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

Magnetic T12 High Output Sign Ballasts
Rapid Start Fluorescent Ballasts (800mA)



T12 RDC

No. of Lamps per Ballast	Total Lamp Footage Required in feet [10]																							
	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48
1-2		MSB-12-0412-TP																						
2-4			MSB-24-0620-TP																					
						MSB-24-1224-TP																		
										MSB-24-2040-TP														
4-6						MSB-46-1240-TP																		
												MSB-46-2448-TP												

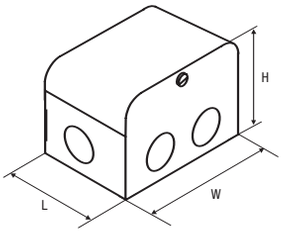


Dimensions (inches)					Packaging	
Dim.	L	W	H	M	Quantity	Weight (approx.)
C	11.75	3.19	2.63	11.14	1	11 lbs. ea.
E	14.31	3.19	2.63	13.75	1	16.25 lbs. ea.
F	19.19	3.19	2.66	18.63	1	21 lbs. ea.

Footnote

10: For proper ballast loading and lamp operation, total lamp footage must fall within length restrictions as shown in shaded regions of table. (For example MSB-12-0412-TP may be used to operate 1 or 2 T12/HO lamps and the combined lamp length must be between 4 and 12 feet. Sample combinations would include 2-F24/HO lamps; 1 or 2-F48/HO lamps; 1 F48/HO and 1 F-98/HO lamps; 2-F72/HO lamps; etc.) Refer to specification and ordering information for compatible lamp types and footage requirements for other ballasts.

J-BOX COVER
Cover for Sign & F-Can Ballasts



Ordering Information		Dimensions (inches)				Packaging	
Item #	OSRAM SYLVANIA Description	L	W	H	D	Quantity	Weight (approx)
48275	JBOX COVER	2.9	3.14	2.575	0.867	2	0.38 lbs. ea.

Warranty

SYLVANIA Magnetic Sign Ballasts are covered for 2 years by our Magnetic Ballast Limited Warranty. For details go to www.sylvania.com.

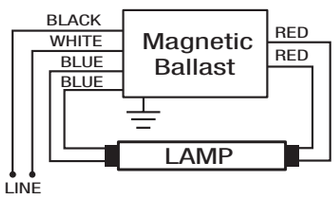
Ordering Guide

Specifications subject to change without notice.

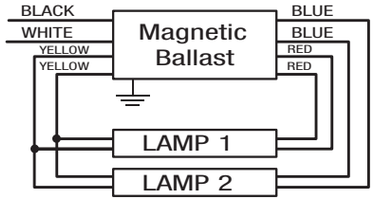
Magnetic T12 Very High Output Rapid Start Fluorescent Ballasts (1500mA)

T12 RDC

Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	No. of Lamps	Input Power (Watts)	Input Current (Amps)	BEF[1]	Ballast Factor (BF)	THD %	Power Factor	Min. Start Temp. (°F)	Certifications			Dim.	Wiring Dia.
F48T12/VHO (115W) Rapid Start															
48129	MB1x96/VHO/120RS-SRNK	120	1	141	1.43	0.62	0.88	26	0.82	-20	X	X		G	1
48130	MB1x96/VHO/277RS-SRNK	277	1	143	0.60	0.60	0.86	27	0.85	-20	X	X		G	1
48131	MB2x96/VHO/120RS-SRNK	120	2	270	2.47	0.33	0.88	20	0.91	-20	X	X		G	2
48132	MB2x96/VHO/277RS-SRNK	277	2	254	0.95	0.34	0.87	19	0.96	-20	X	X		G	2
F60T12/VHO (135W) Rapid Start															
48129	MB1x96/VHO/120RS-SRNK	120	1	182	1.71	0.49	0.89	24	0.88	-20	X	X		G	1
48130	MB1x96/VHO/277RS-SRNK	277	1	183	0.74	0.48	0.87	25	0.89	-20	X	X		G	1
48131	MB2x96/VHO/120RS-SRNK	120	2	290	2.58	0.31	0.89	18	0.94	-20	X	X		G	2
48132	MB2x96/VHO/277RS-SRNK	277	2	293	1.08	0.30	0.87	18	0.98	-20	X	X		G	2
F72T12/VHO (160W) Rapid Start															
48129	MB1x96/VHO/120RS-SRNK	120	1	185	1.74	0.50	0.92	14	0.89	-20	X	X		G	1
48130	MB1x96/VHO/277RS-SRNK	277	1	185	0.73	0.47	0.88	14	0.91	-20	X	X		G	1
48131	MB2x96/VHO/120RS-SRNK	120	2	363	3.08	0.25	0.90	15	0.98	-20	X	X		G	2
48132	MB2x96/VHO/277RS-SRNK	277	2	340	1.24	0.26	0.88	13	0.98	-20	X	X		G	2



Wiring Diagram 1



Wiring Diagram 2

Specifications

Sound Rating: Class D
Starting Method: Rapid Start
Circuit Type: Series
Input Frequency: 60 Hz
Wiring: Leads Only

UL Listed Class P, Type 1 Outdoor
CSA Certified

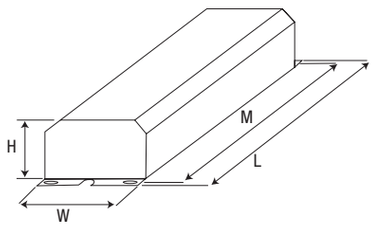
1: BEF denotes Ballast Efficacy Factor

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

For lead lengths refer to page 30.

For additional ballast case dimensions refer to page 31.

Additional product information is available at www.sylvania.com.



Dimensions (inches)					Packaging	
Dim.	L	W	H	M	Quantity	Weight (approx.)
G	14.31	3.19	2.63	13.75	4	16.25 lbs. ea.

Warranty

SYLVANIA Magnetic Ballasts are covered for 3 years by our Magnetic Ballast Limited Warranty. For details go to www.sylvania.com.

Ordering Guide

Item Number — **48129 MB 1 x 96 VHO 120 RS SRNK** — Ballasts are Individually Shrink Wrapped
Magnetic Ballast — Starting Method
Number of Lamps — Line Voltage
Primary Lamp Length — Lamp Type

Specifications subject to change without notice.

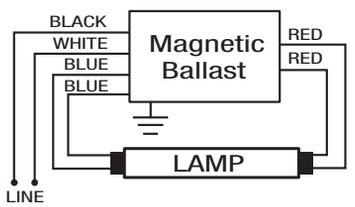
OSRAM SYLVANIA National Customer Service and Sales Center
1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

Magnetic T12 Very High Output Rapid Start Fluorescent Ballasts (1500mA)

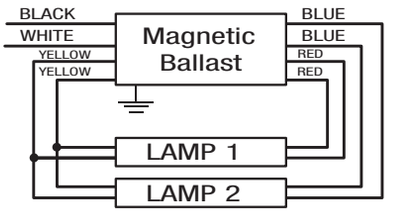
T12 RDC

T12/VHO Rapid Start High Power Factor

Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	No. of Lamps	Input Power (Watts)	Input Current (Amps)	BEF[1]	Ballast Factor (BF)	THD %	Power Factor	Min. Start Temp. (°F)	Certifications		Dim.	Wiring Dia.
F96T12/VHO SUPERSAVER® (195W) Rapid Start														
48129	MB1x96/VHO/120RS-SRNK	120	1	200	1.82	0.46	0.92	14	0.91	60	X	X	G	1
48130	MB1x96/VHO/277RS-SRNK	277	1	192	0.75	0.48	0.92	14	0.93	60	X	X	G	1
48131	MB2x96/VHO/120RS-SRNK	120	2	408	3.43	0.23	0.93	15	0.99	60	X	X	G	2
48132	MB2x96/VHO/277RS-SRNK	277	2	380	1.40	0.24	0.91	13	0.97	60	X	X	G	2
F96T12/VHO (215W) Rapid Start														
48129	MB1x96/VHO/120RS-SRNK	120	1	218	1.96	0.42	0.92	12	0.93	-20	X	X	G	1
48130	MB1x96/VHO/277RS-SRNK	277	1	212	0.81	0.43	0.91	12	0.95	-20	X	X	G	1
48131	MB2x96/VHO/120RS-SRNK	120	2	452	3.80	0.21	0.95	13	0.98	-20	X	X	G	2
48132	MB2x96/VHO/277RS-SRNK	277	2	423	1.57	0.22	0.93	19	0.98	-20	X	X	G	2



Wiring Diagram 1



Wiring Diagram 2

Specifications

Sound Rating: Class D
Starting Method: Rapid Start
Circuit Type: Series
Input Frequency: 60 Hz
Wiring: Leads Only

UL Listed Class P, Type 1 Outdoor
CSA Certified

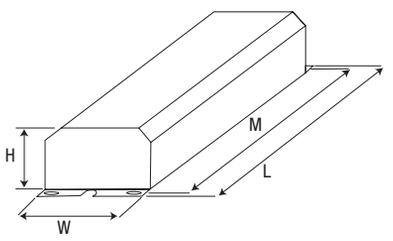
1: BEF denotes Ballast Efficacy Factor

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

For lead lengths refer to page 30.

For additional ballast case dimensions refer to page 31.

Additional product information is available at www.sylvania.com.



Dimensions (inches)					Packaging	
Dim.	L	W	H	M	Quantity	Weight (approx.)
G	14.31	3.19	2.63	13.75	4	16.25 lbs. ea.

Warranty

SYLVANIA Magnetic Ballasts are covered for 3 years by our Magnetic Ballast Limited Warranty. For details go to www.sylvania.com.

Ordering Guide

48129 MB 1 x 96 VHO 120 RS SRNK

- Item Number — 48129
- Magnetic Ballast — MB
- Number of Lamps — 1
- Primary Lamp Length — 96
- Lamp Type — VHO
- Line Voltage — 120
- Starting Method — RS
- Ballasts are Individually Shrink Wrapped — SRNK

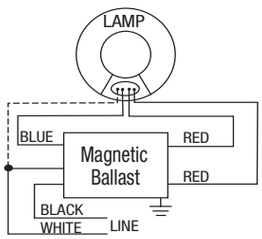
Specifications subject to change without notice.

Magnetic T9 Circline Rapid Start Fluorescent Ballasts

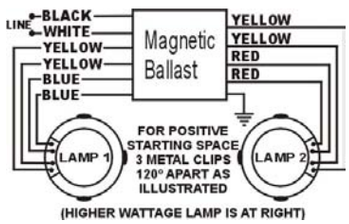
Circline 4-Pin T9

T9 Circline Rapid Start Normal Power Factor

Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	No. of Lamps	Input Power (Watts)	Input Current (Amps)	BEF[1]	Ballast Factor (BF)	THD %	Power Factor	Min. Start Temp. (°F)	Certifications			Dim.	Wiring Dia.
FC8T9 (22W) Rapid Start															
48230	MB1x22/120CIRC-SRNK	120	1	29	0.63	2.83	0.82	12	0.38	50	X	X		B	13
FC12T9 (32W) Rapid Start															
48231	MB1x32/120CIRC-SRNK	120	1	31	0.61	2.00	0.62	9	0.42	50	X	X		B	13
48210	MB1x40/120RES-SRNK	120	1	31	0.61	2.00	0.62	9	0.42	50	X	X		B	13
FC16T9 (40W) Rapid Start															
48231	MB1x32/120CIRC-SRNK	120	1	32	0.52	2.00	0.64	12	0.51	50	X	X		B	13
48210	MB1x40/120RES-SRNK	120	1	32	0.52	2.00	0.64	12	0.51	50	X	X		B	13
1 FC12T9 (32W) and 1 FC16T9 (40W) Rapid Start															
48397	MB2x30/40/120RS	120	2	71	0.60	1.06	0.75	14	0.99	0	X	X		A	14



Wiring Diagram 13



Wiring Diagram 14

Specifications

Sound Rating: Class A
Starting Method: Rapid Start
Circuit Type: Series
Input Frequency: 60 Hz
Wiring: Leads Only

UL Listed Class P, Type 1 Outdoor
CSA Certified

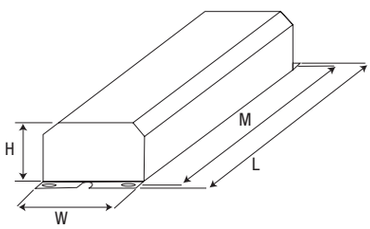
1: BEF denotes Ballast Efficacy Factor

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

For lead lengths refer to page 30.

For additional ballast case dimensions refer to page 31.

Additional product information is available at www.sylvania.com.



Dimensions (inches)					Packaging	
Dim.	L	W	H	M	Quantity	Weight (approx.)
A	9.5	2.38	1.5	8.91	10	3.5 lbs. ea.
B	6.5	1.94	1.38	6.0	16	2.3 lbs. ea.

Warranty

SYLVANIA Magnetic Ballasts are covered for 3 years by our Magnetic Ballast Limited Warranty. For details go to www.sylvania.com.

Ordering Guide

Specifications subject to change without notice.

Item Number — **48231 MB 1 x 32 120 CIRC SRNK** — Ballasts are Individually Shrink Wrapped
Magnetic Ballast — Lamp Type
Number of Lamps — Line Voltage
Primary Lamp Wattage

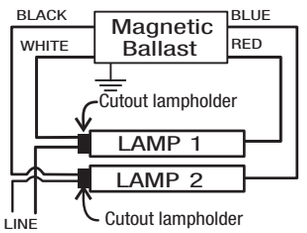
OSRAM SYLVANIA National Customer Service and Sales Center
1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

Magnetic T12 Slimline Instant Start Fluorescent Ballasts

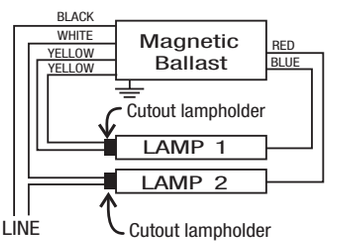
T12 Single Pin

T12 Instant Start High Power Factor

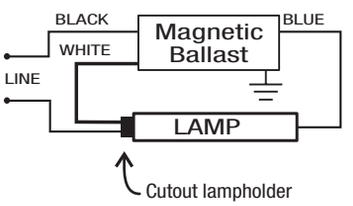
Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	No. of Lamps	Input Power (Watts)	Input Current (Amps)	BEF[1]	Ballast Factor (BF)	THD %	Power Factor	Min. Start Temp. (°F)	Certifications		Dim.	Wiring Dia.
F48T12 SUPERSAVER® (32W) Instant Start														
48122	MB2x48/120IS-SRNK	120	2	78	0.67	1.21	0.94	28	0.97	60	X	X	H	15
48123	MB2x48/277IS-SRNK	277	2	81	0.30	1.16	0.94	29	0.97	60	X	X	H	16
F48T12 (39W) Instant Start														
48122	MB2x48/120IS-SRNK	120	2	87	0.77	1.07	0.93	26	0.94	0	X	X	H	15
48123	MB2x48/277IS-SRNK	277	2	88	0.34	1.06	0.93	27	0.93	0	X	X	H	16
F60T12 (50W) Instant Start														
48124	MB1x96/120IS-SRNK	120	1	73	0.66	1.15	0.84	28	0.92	0	X	X	I	17
48125	MB1x96/277IS-SRNK	277	1	74	0.29	1.11	0.82	27	0.92	0	X	X	I	17
48018	MB2x96/120IS-SRNK	120	2	116	1.07	0.81	0.94	22	0.90	0	X	X	I	15
48126	MB2x96/277IS-SRNK	277	2	115	0.46	0.81	0.93	22	0.90	0	X	X	I	16



Wiring Diagram 15



Wiring Diagram 16



Wiring Diagram 17

Specifications

Sound Rating: Class B
Starting Method: Instant Start
Circuit Type: Series
Input Frequency: 60 Hz
Wiring: Leads Only

UL Listed Class P, Type 1 Outdoor
CSA Certified

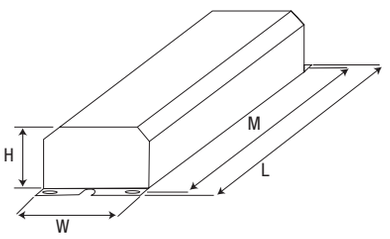
1: BEF denotes Ballast Efficacy Factor

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

For lead lengths refer to page 30.

For additional ballast case dimensions refer to page 31.

Additional product information is available at www.sylvania.com.



Dimensions (inches)					Packaging	
Dim.	L	W	H	M	Quantity	Weight (approx.)
H	9.5	3.11	1.78	8.91	6	6 lbs. ea.
I	11.75	3.11	1.78	11.14	6	8 lbs. ea.

Warranty

SYLVANIA Magnetic Ballasts are covered for 3 years by our Magnetic Ballast Limited Warranty. For details go to www.sylvania.com.

Item Number — **48122 MB 2 x 48 120 IS SRNK** — Ballasts are Individually Shrink Wrapped
Magnetic Ballast
Number of Lamps
Primary Lamp Length
Starting Method
Line Voltage

Ordering Guide

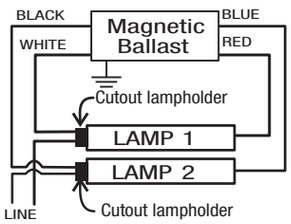
Specifications subject to change without notice.

Magnetic T12 Slimline Instant Start Fluorescent Ballasts

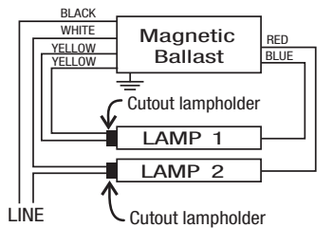
T12 Single Pin

T12 Instant Start High Power Factor

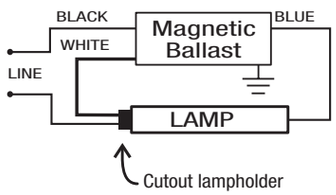
Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	No. of Lamps	Input Power (Watts)	Input Current (Amps)	BEF[1]	Ballast Factor (BF)	THD %	Power Factor	Min. Start Temp. (°F)	Certifications			Dim.	Wiring Dia.
F64T12 (52W) Instant Start															
48124	MB1x96/120IS-SRNK	120	1	78	0.70	1.15	0.90	28	0.93	0	X	X		I	17
48125	MB1x96/277IS-SRNK	277	1	78	0.30	1.13	0.88	27	0.94	0	X	X		I	17
48018	MB2x96/120IS-SRNK	120	2	132	1.21	0.77	1.02	28	0.91	0	X	X		I	15
48126	MB2x96/277IS-SRNK	277	2	125	0.50	0.78	0.97	26	0.90	0	X	X		I	16
F72T12 (55W) Instant Start															
48124	MB1x96/120IS-SRNK	120	1	85	0.76	1.11	0.94	26	0.93	0	X	X		I	17
48125	MB1x96/277IS-SRNK	277	1	87	0.33	1.14	0.99	27	0.94	0	X	X		I	17
48018	MB2x96/120IS-SRNK	120	2	132	1.18	0.76	1.00	22	0.93	0	X	X		I	15
48126	MB2x96/277IS-SRNK	277	2	131	0.52	0.75	0.98	22	0.91	0	X	X		I	16
F84T12 (70W) Instant Start															
48124	MB1x96/120IS-SRNK	120	1	90	0.80	0.98	0.88	29	0.94	50	X	X		I	17
48125	MB1x96/277IS-SRNK	277	1	89	0.34	0.92	0.82	28	0.94	50	X	X		I	17
48018	MB2x96/120IS-SRNK	120	2	152	1.32	0.61	0.92	22	0.96	50	X	X		I	15
48126	MB2x96/277IS-SRNK	277	2	148	0.57	0.61	0.90	22	0.94	50	X	X		I	16



Wiring Diagram 15



Wiring Diagram 16



Wiring Diagram 17

Specifications

Sound Rating: Class B
Starting Method: Instant Start
Circuit Type: Series
Input Frequency: 60 Hz
Wiring: Leads Only

UL Listed Class P, Type 1 Outdoor
CSA Certified

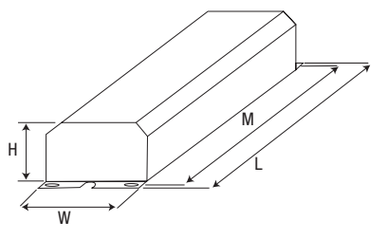
1: BEF denotes Ballast Efficacy Factor

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

For lead lengths refer to page 30.

For additional ballast case dimensions refer to page 31.

Additional product information is available at www.sylvania.com.



Dimensions (inches)					Packaging	
Dim.	L	W	H	M	Quantity	Weight (approx.)
I	11.75	3.11	1.78	11.14	6	8 lbs. ea.

Warranty

SYLVANIA Magnetic Ballasts are covered for 3 years by our Magnetic Ballast Limited Warranty. For details go to www.sylvania.com.

Ordering Guide

Specifications subject to change without notice.

Item Number — **48124 MB 1 x 96 120 IS SRNK**
- Magnetic Ballast
- Number of Lamps
- Primary Lamp Length
- Line Voltage
- Starting Method
- Ballasts are Individually Shrink Wrapped

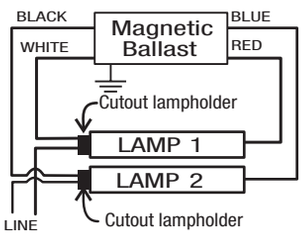
OSRAM SYLVANIA National Customer Service and Sales Center
1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

Magnetic T12 Slimline Instant Start Fluorescent Ballasts

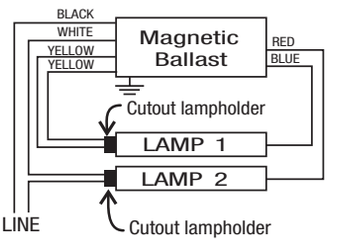
T12 Single Pin

T12 Instant Start High Power Factor

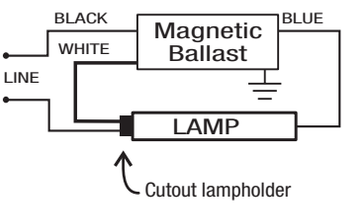
Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	No. of Lamps	Input Power (Watts)	Input Current (Amps)	BEF[1]	Ballast Factor (BF)	THD %	Power Factor	Min. Start Temp. (°F)	Certifications				Dim.	Wiring Dia.
											UL		E	CSA		
F96T12 SUPERSAVER® (60W) Instant Start																
48124	MB1x96/120IS-SRNK	120	1	87	0.78	1.07	0.93	29	0.93	60	X	X			I	17
48125	MB1x96/277IS-SRNK	277	1	86	0.33	1.08	0.93	29	0.94	60	X	X			I	17
48018	MB2x96/120IS-SRNK	120	2	135	1.25	0.69	0.93	28	0.91	60	X	X		X	I	15
48126	MB2x96/277IS-SRNK	277	2	140	0.56	0.67	0.93	26	0.90	60	X	X		X	I	16
F96T12 (75W) Instant Start																
48124	MB1x96/120IS-SRNK	120	1	101	0.90	0.92	0.93	27	0.94	50	X	X			I	17
48125	MB1x96/277IS-SRNK	277	1	101	0.39	0.92	0.93	28	0.93	50	X	X			I	17
48018	MB2x96/120IS-SRNK	120	2	160	1.39	0.58	0.93	22	0.96	50	X	X	X	X	I	15
48126	MB2x96/277IS-SRNK	277	2	162	0.60	0.57	0.93	22	0.97	50	X	X	X	X	I	16



Wiring Diagram 15



Wiring Diagram 16



Wiring Diagram 17

Specifications

Sound Rating: Class B
Starting Method: Instant Start
Circuit Type: Series
Input Frequency: 60 Hz
Wiring: Leads Only

UL Listed Class P, Type 1 Outdoor
CSA Certified

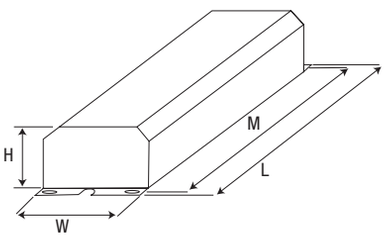
1: BEF denotes Ballast Efficacy Factor

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

For lead lengths refer to page 30.

For additional ballast case dimensions refer to page 31.

Additional product information is available at www.sylvania.com.



Dimensions (inches)					Packaging	
Dim.	L	W	H	M	Quantity	Weight (approx.)
I	11.75	3.11	1.78	11.14	6	8 lbs. ea.

Warranty

SYLVANIA Magnetic Ballasts are covered for 3 years by our Magnetic Ballast Limited Warranty. For details go to www.sylvania.com.

Ordering Guide

Specifications subject to change without notice.

Item Number — **48124 MB 1 x 96 120 IS SRNK** — Ballasts are Individually Shrink Wrapped
Magnetic Ballast
Number of Lamps
Primary Lamp Length
Starting Method
Line Voltage

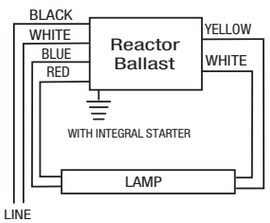
Magnetic T5 and T8 Preheat Start Fluorescent Ballasts

T5 Mini Bipin

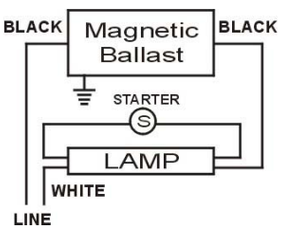
T8 Med Bipin

T5 & T8 Preheat Start Normal Power Factor

Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	No. of Lamps	Input Power (Watts)	Input Current (Amps)	BEF[1]	Ballast Factor (BF)	THD %	Power Factor	Min. Start Temp. (°F)	Certifications				Dim.	Wiring Dia.
F4T5 (4W) Preheat Start																
48475	MB1x8/120PH/TP/S-SRNK[11]	120	1	9	0.22	11.24	1.03	9	0.35	50	X	X			J	18
F6T5 (6W) Preheat Start																
48475	MB1x8/120PH/TP/S-SRNK[11]	120	1	10	0.19	10.17	1.03	10	0.42	50	X	X			J	18
F8T5 (8W) Preheat Start																
48475	MB1x8/120PH/TP/S-SRNK[11]	120	1	10	0.16	9.70	0.97	14	0.53	50	X	X			J	18
F14T8 (14W) Preheat Start																
48201	MB1x20/120PH/TP[12]	120	1	22	0.39	4.23	0.93	11	0.46	50	X	X			J	19
48202	MB1x20/120PH[12, 13]	120	1	22	0.39	4.23	0.93	11	0.46	50	X	X			K	19
F15T8 (15W) Preheat Start																
48201	MB1x20/120PH/TP[12]	120	1	22	0.37	4.09	0.90	12	0.50	50	X	X			J	19
48202	MB1x20/120PH[12, 13]	120	1	22	0.37	4.09	0.90	12	0.50	50	X	X			K	19

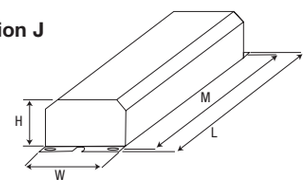


Wiring Diagram 18

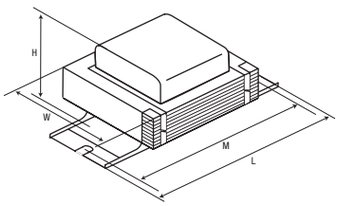


Wiring Diagram 19

Dimension J



Dimension K



Dimensions (inches)					Packaging	
Dim.	L	W	H	M	Quantity	Weight (approx.)
J	4.25	1.83	1.38	3.95	40	0.45 lbs. ea.
K	3.10	1.65	1.25	2.85	40	0.45 lbs. ea.

Specifications

Sound Rating: Class A
Starting Method: Preheat Start
Circuit Type: Series
Input Frequency: 60 Hz
Wiring: Leads Only

UL Listed Class P, Type 1 Outdoor
CSA Certified

1: BEF denotes Ballast Efficacy Factor

11: With Integral Starter

12: Starter Required

13: Not available with Class P Thermal Protection

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

For lead lengths refer to page 30.

For additional ballast case dimensions refer to page 31.

Additional product information is available at www.sylvania.com.

Warranty

SYLVANIA Magnetic Ballasts are covered for 3 years by our Magnetic Ballast Limited Warranty. For details go to www.sylvania.com.

Ordering Guide

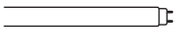
Specifications subject to change without notice.

Item Number — **48201 MB 1 x 20 120 PH TP**

- 48201 — Item Number
- MB — Magnetic Ballast
- 1 — Number of Lamps
- 20 — Primary Lamp Wattage
- 120 — Line Voltage
- PH — Starting Method
- TP — Thermal Protection

OSRAM SYLVANIA National Customer Service and Sales Center
1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

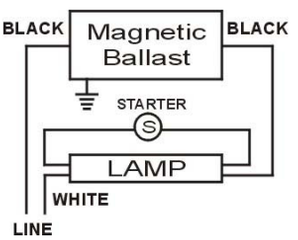
Magnetic T12
Preheat Start Fluorescent Ballasts



T12 Med Bipin

T12 Preheat Start Normal Power Factor

Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	No. of Lamps	Input Power (Watts)	Input Current (Amps)	BEF[1]	Ballast Factor (BF)	THD %	Power Factor	Min. Start Temp. (°F)	Certifications		Dim.	Wiring Dia.
F14T12 (14W) Preheat Start														
48201	MB1x20/120PH/TP[12]	120	1	22	0.42	4.32	0.95	11	0.43	50	X	X	J	19
48202	MB1x20/120PH[12, 13]	120	1	22	0.42	4.32	0.95	11	0.43	50	X	X	K	19
F15T12 (15W) Preheat Start														
48201	MB1x20/120PH/TP[12]	120	1	23	0.40	3.91	0.90	11	0.49	50	X	X	J	19
48202	MB1x20/120PH[12, 13]	120	1	23	0.40	3.91	0.90	11	0.49	50	X	X	K	19
F20T12 (20W) Preheat Start														
48201	MB1x20/120PH/TP[12]	120	1	22	0.34	3.77	0.83	10	0.54	50	X	X	J	19
48202	MB1x20/120PH[12, 13]	120	1	22	0.34	3.77	0.83	10	0.54	50	X	X	K	19



Wiring Diagram 19

Specifications

Sound Rating: Class A
Starting Method: Preheat Start
Circuit Type: Series
Input Frequency: 60 Hz
Wiring: Leads Only

UL Listed Class P, Type 1 Outdoor
CSA Certified

1: BEF denotes Ballast Efficacy Factor

12: Starter Required

13: Not available with Class P Thermal Protection

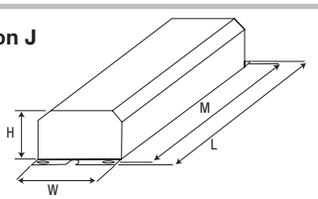
Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

For lead lengths refer to page 30.

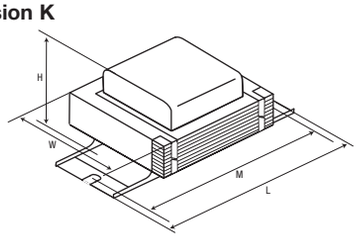
For additional ballast case dimensions refer to page 31.

Additional product information is available at www.sylvania.com.

Dimension J



Dimension K



Dimensions (inches)					Packaging	
Dim.	L	W	H	M	Quantity	Weight (approx.)
J	4.25	1.83	1.38	3.95	40	0.45 lbs. ea.
K	3.10	1.65	1.25	2.85	40	0.45 lbs. ea.

Warranty

SYLVANIA Magnetic Ballasts are covered for 3 years by our Magnetic Ballast Limited Warranty. For details go to www.sylvania.com.

Item Number — **48201 MB 1 x 20 120 PH TP**
- Magnetic Ballast
- Number of Lamps
- Primary Lamp Wattage
- Thermal Protection
- Starting Method
- Line Voltage

Ordering Guide

Specifications subject to change without notice.

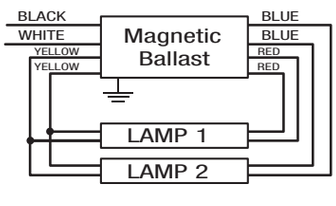
Magnetic T8 and T12 Trigger Start Fluorescent Ballasts

T8 Med Bipin

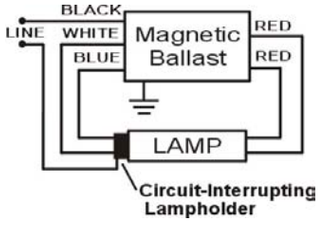
T12 Med Bipin

T8 & T12 Trigger Start Normal Power Factor

Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	No. of Lamps	Input Power (Watts)	Input Current (Amps)	BEF[1]	Ballast Factor (BF)	THD %	Power Factor	Min. Start Temp. (°F)	Certifications			Dim.	Wiring Dia.
F14T8 (14W) Trigger Start															
48200	MB1x15/120PH/TP-SRNK	120	1	30	0.70	3.17	0.95	6	0.36	50	X	X		B	3
48203	MB2x20/120PH/TP-SRNK	120	2	47	0.60	1.49	0.70	6	0.64	50	X	X		L	2
F15T8 (15W) Trigger Start															
48200	MB1x15/120PH/TP-SRNK	120	1	32	0.69	2.97	0.95	7	0.38	50	X	X		B	3
48203	MB2x20/120PH/TP-SRNK	120	2	47	0.57	1.38	0.65	7	0.68	50	X	X		L	2
F14T12 (14W) Trigger Start															
48200	MB1x15/120PH/TP-SRNK	120	1	32	0.70	2.88	0.91	9	0.37	50	X	X		B	3
48203	MB2x20/120PH/TP-SRNK	120	2	47	0.60	1.49	0.70	6	0.65	50	X	X		L	2
F15T12 (15W) Trigger Start															
48200	MB1x15/120PH/TP-SRNK	120	1	33	0.69	3.02	0.98	8	0.39	50	X	X		B	3
48203	MB2x20/120PH/TP-SRNK	120	2	46	0.57	1.41	0.65	7	0.68	50	X	X		L	2
F20T12 (20W) Trigger Start															
48200	MB1x15/120PH/TP-SRNK	120	1	33	0.65	2.53	0.83	8	0.42	50	X	X		B	3
48203	MB2x20/120PH/TP-SRNK	120	2	41	0.47	1.41	0.58	7	0.74	50	X	X		L	2



Wiring Diagram 2



Wiring Diagram 3

Specifications

Sound Rating: Class A
Starting Method: Trigger Start
Circuit Type: Series
Input Frequency: 60 Hz
Wiring: Leads Only

UL Listed Class P, Type 1 Outdoor
CSA Certified

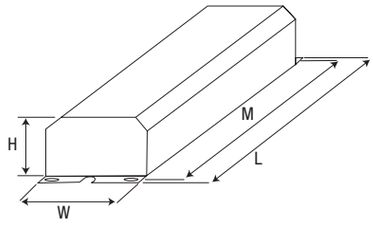
1: BEF denotes Ballast Efficacy Factor

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

For lead lengths refer to page 30.

For additional ballast case dimensions refer to page 31.

Additional product information is available at www.sylvania.com.



Dimensions (inches)					Packaging	
Dim.	L	W	H	M	Quantity	Weight (approx.)
B	6.50	1.94	1.38	6.0	16	2.3 lbs. ea.
L	6.56	2.38	1.50	6.0	16	2.9 lbs. ea.

Warranty

SYLVANIA Magnetic Ballasts are covered for 3 years by our Magnetic Ballast Limited Warranty. For details go to www.sylvania.com.

Ordering Guide

Specifications subject to change without notice.

Item Number	**48200 MB 1 x 15 120 PH TP SRNK**	Ballasts are Individually Shrink Wrapped
Magnetic Ballast		Thermal Protection
Number of Lamps		Trigger Start/Preheat Lamps
Primary Lamp Wattage		Line Voltage

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www.sylvania.com

Notes

Magnetic Fluorescent Ballast Lead Length Table

Item #	OSRAM SYLVANIA Description	Page #	LEAD LENGTHS (IN INCHES) (Tolerances ±3/8") Black	White	Red	Blue	Yellow	Blue/ White	Brown	Orange	Orange/ Black
48312	MB1x17/120RS	8-9	22"	22"	17"	17"					
48096	MB1x25/32/120RS-LW	8-9	22"	22"	26"	36"					
48240	MB1x25/32/120RS-SRNK	8-9	22"	22"	26"	36"					
48241	MB1x25/32/277RS-SRNK	8-9	22"	22"	26"	36"					
48242	MB2x25/32/120RS-SRNK	8-9	22"	22"	26"	26"	36"				
48243	MB2x25/32/277RS-SRNK	8-9	22"	22"	26"	26"	36"				
48409	MB2x30/120RS-SRNK	10	22"	22"	26"	26"	36"				
48410	MB2x30/277RS-SRNK	10	22"	22"	26"	26"	36"				
48011*	MB1x40/120RS-SRNK	10-13	22"	22"	12"	12"					
48210	MB1x40/120RES-SRNK	10, 11, 22	12"	30"	36"	30"					
48120*	MB1x40/277RS-SRNK	10-13	22"	22"	12"	12"					
48001*	MB2x40/120RS-SRNK	11-13	22"	22"	12"	12"	12"				
48397	MB2x30/40/120RS	10-13, 22	22"	22"	26"	26"	36"				
48121*	MB2x40/277RS-SRNK	11-13	22"	22"	12"	12"	12"				
48127	MB1x96/HO/120RS-SRNK	14-17	22"	22"	44"	68"					
48128	MB1x96/HO/277RS-SRNK	14-17	22"	22"	44"	68"					
48025*	MB2x96/HO/120RS-SRNK	14-17	22"	22"	12"	12"	12"				
48151	MB1/2x48/96/HO/120RS-SRNK/IN	14-17	22"	22"	44"	44"	68"				
48027	MB2x96/HO/277RS-SRNK	14-17	22"	22"	44"	44"	68"				
48225	MSB-12-0412-TP	18-19	18"	18"	33"	33"	51"				
48226	MSB-24-0620-TP	18-19	24"	24"	46"	75"	75"	46"	46"		
48227	MSB-24-1224-TP	18-19	24"	24"	32"	75"	75"	78"	52"		
48228	MSB-24-2040-TP	18-19	24"	24"	80"	80"	75"	54"	75"		
48229	MSB-46-1240-TP	18-19	24"	24"	80"	50"	70"	50"	50"	50"	50"
48232	MSB-46-2448-TP	18-19	24"	24"	80"	50"	75"	50"	50"	50"	50"
48129	MB1x96/VHO/120RS-SRNK	20-21	22"	22"	44"	68"					
48130	MB1x96/VHO/277RS-SRNK	20-21	22"	22"	44"	68"					
48131	MB2x96/VHO/120RS-SRNK	20-21	22"	22"	44"	44"	68"				
48132	MB2x96/VHO/277RS-SRNK	20-21	22"	22"	44"	44"	68"				
48230	MB1x22/120CIRC-SRNK	22	12"	12"	13"	13"					
48231	MB1x32/120CIRC-SRNK	22	12"	30"	36"	30"					
48122	MB2x48/120IS-SRNK	23	32"	32"	25"	25"					
48123	MB2x48/277IS-SRNK	23	8"	34"	25"	25"	25"				
48124	MB1x96/120IS-SRNK	23-25	8"	48"		48"					
48125	MB1x96/277IS-SRNK	23-25	8"	48"		48"					
48018*	MB2x96/120IS-SRNK	23-25	12"	12"	12"	12"					
48126*	MB2x96/277IS-SRNK	23-25	8"	12"	12"	12"	12"				
48475	MB1x8/120PH/TP/S-SRNK	26	8"	8"/10"	10"	10"	10"				
48201	MB1x20/120PH/TP	26-27	10"								
48202	MB1x20/120PH	26-27	10"								
48200	MB1x15/120PH/TP-SRNK	28	12"	12"	13"	13"					
48203	MB2x20/120PH/TP-SRNK	28	12"	12"	20"	20"	36"				

Ordering Guide

Specifications subject to change without notice.

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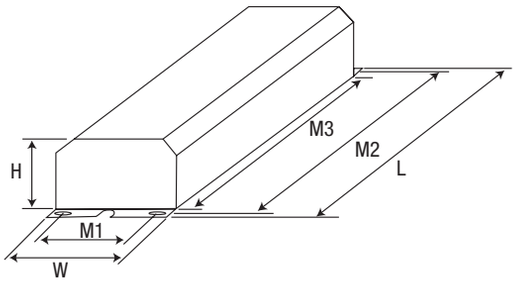
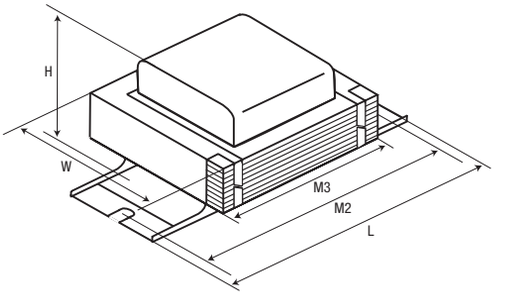
Magnetic Fluorescent Ballasts
Case Dimensions





***Drawing for Dimension K**

Dimensions (inches)						
Dim.	L	W	H	M1	M2	M3
A	9.5	2.38	1.5	1.69	8.91	8.34
B	6.5	1.94	1.38	n/a	6.0	5.28
C	11.75	3.19	2.63	2.0	11.14	10.5
D	11.75	3.19	2.63	2.0	13.14	10.5
E	14.31	3.19	2.63	2.0	13.75	13.13
F	19.12	3.19	2.66	2.0	18.63	18.0
G	14.31	3.19	2.63	2.0	13.75	13.13
H	9.5	3.11	1.78	2.0	8.91	8.31
I	11.75	3.11	1.78	2.0	11.14	10.5
J	4.25	1.83	1.38	n/a	3.95	3.1
K*	3.1	1.65	1.25	n/a	2.85	2.0
L	6.56	2.38	1.5	1.69	6.0	5.44

Refer to the individual fluorescent magnetic ballast item number on pages 6 thru 28 for additional ballast information.

Ordering Guide

Specifications subject to change without notice.

Magnetic Fluorescent Ballast to Lamp Table

Item #	OSRAM SYLVANIA Description	Lamp Type[14]	No. of Lamps	Input Voltage	Page #
T8 RAPID START					
48312	MB1x17/120RS	**F017T8**	1	120	8
		FB016T8/U	1	120	9
48096	MB1x25/32/120RS-LW	F025T8, **F032T8,** F040T8	1	120	8
		FB024T8/U, FB031T8/U, FB032T8/U	1	120	9
48240	MB1x25/32/120RS-SRNK	F025T8, **F032T8,** F040T8	1	120	8
		FB024T8/U, FB031T8/U, FB032T8/U	1	120	9
48241	MB1x25/32/277RS-SRNK	F025T8, **F032T8,** F040T8	1	277	8
		FB024T8/U, FB031T8/U, FB032T8/U	1	277	9
48242	MB2x25/32/120RS-SRNK	F025T8, **F032T8**	2	120	8
		FB024T8/U, FB031T8/U, FB032T8/U	2	120	9
48243	MB2x25/32/277RS-SRNK	F025T8, **F032T8**	2	277	8
		FB024T8/U, FB031T8/U, FB032T8/U	2	277	9
T12 and T10 RAPID START					
48011	MB1x40/120RS-SRNK	F30T12,	1	120	10
		F34T12, F40T12	1	120	11
		FB34T12/U, FB40T12/U	1	120	12
		F40T10	1	120	13
48210	MB1x40/120RES-SRNK	F30T12	1	120	10
		F40T12	1	120	11
		FC12T9, FC16T9	1	120	22
48120	MB1x40/277RS-SRNK	F30T12	1	277	10
		F34T12, F40T12	1	277	11
		FB34T12/U, FB40T12/U	1	277	12
		F40T10	1	277	13
48409	MB2x30/120RS-SRNK	**F25T12/SS, F30T12**	2	120	10
48001	MB2x40/120RS-SRNK	**F34T12, F40T12**	2	120	11
		FB34T12/U, FB40T12/U	2	120	12
		F40T10	2	120	13
48397	MB2x30/40/120RS	F25T12/SS, F30T12	2	120	10
		F34T12, F40T12	2	120	11
		FB34T12/U, FB40T12/U	2	120	12
		F40T10	2	120	13
		FC12T9 and FC16T9	2	120	22
48410	MB2x30/277RS-SRNK	**F25T12/SS, F30T12**	2	277	10
48121	MB2x40/277RS-SRNK	**F34T12, F40T12**	2	277	11
		FB34T12/U, FB40T12/U	2	277	12
		F40T10	2	277	13
T12/HO RAPID START					
48127	MB1x96/HO/120RS-SRNK	F18T12/HO, F24T12/HO, F30T12/HO	1	120	14
		F36T12/HO, F42T12/HO, F48T12/HO	1	120	15
		F60T12/HO, F64T12/HO, F72T12/HO	1	120	16
		F84T12/HO, **F96T12/HO/SS(95W), F96T12/HO**	1	120	17
48128	MB1x96/HO/277RS-SRNK	F18T12/HO, F24T12/HO, F30T12/HO	1	277	14
		F36T12/HO, F42T12/HO, F48T12/HO	1	277	15
		F60T12/HO, F64T12/HO, F72T12/HO	1	277	16
		F84T12/HO, **F96T12/HO/SS(95W), F96T12/HO**	1	277	17
48025	MB2x96/HO/120RS-SRNK	F18T12/HO, F24T12/HO, F30T12/HO	2	120	14
		F36T12/HO, F42T12/HO, F48T12/HO	2	120	15
		F60T12/HO, F64T12/HO, F72T12/HO	2	120	16
		F84T12/HO, **F96T12/HO/SS(95W), F96T12/HO**	2	120	17
48151	MB1/2x48/96/HO/120RS-SRNK/IN	F24T12/HO	2	120	14
		F48T12/HO	1	120	15
		F36T12/HO, **F48T12/HO**	2	120	15
		F60T12/HO, F72T12/HO	1	120	16
		F84T12/HO, F96T12/HO	1	120	17
48027	MB2x96/HO/277RS-SRNK	F18T12/HO, F24T12/HO, F30T12/HO	2	277	14
		F36T12/HO, F42T12/HO, F48T12/HO	2	277	15
		F60T12/HO, F64T12/HO, F72T12/HO	2	277	16
		F84T12/HO, **F96T12/HO/SS(95W), F96T12/HO**	2	277	17

14: Primary lamp type and SUPERSAVER® equivalent are in bold print.

Specifications subject to change without notice.

OSRAM SYLVANIA National Customer Service and Sales Center
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Magnetic Fluorescent Ballast to Lamp Table

Item #	OSRAM SYLVANIA Description	Lamp Type[14]	No. of Lamps	Input Voltage	Page #
T12/HO SIGN BALLASTS					
48225	MSB-12-0412-TP	Any T12/HO, (800mA) lamp within quantity of lamp and lamp length requirements.	1-2	120	18-19
48226	MSB-24-0620-TP	Any T12/HO, (800mA) lamp within quantity of lamp and lamp length requirements.	2-4	120	18-19
48227	MSB-24-1224-TP	Any T12/HO, (800mA) lamp within quantity of lamp and lamp length requirements.	2-4	120	18-19
48228	MSB-24-2040-TP	Any T12/HO, (800mA) lamp within quantity of lamp and lamp length requirements. See wiring diagram for further wiring instructions.	2-4	120	18-19
48229	MSB-46-1240-TP	Any T12/HO, (800mA) lamp within quantity of lamp and lamp length requirements. See wiring diagram for further wiring instructions.	4-6	120	18-19
48232	MSB-46-2448-TP	Any T12/HO, (800mA) lamp within quantity of lamp and lamp length requirements. See wiring diagram for further wiring instructions.	4-6	120	18-19
T12/VHO RAPID START					
48129	MB1x96/VHO/120RS-SRNK	F48T12/VHO, F60T12/VHO, F72T12/VHO **F96T12/VHO/SS, F96T12/VHO**	1 1	120 120	20 21
48130	MB1x96/VHO/277RS-SRNK	F48T12/VHO, F60T12/VHO, F72T12/VHO **F96T12/VHO/SS, F96T12/VHO**	1 1	277 277	20 21
48131	MB2x96/VHO/120RS-SRNK	F48T12/VHO, F60T12/VHO, F72T12/VHO **F96T12/VHO/SS, F96T12/VHO**	2 2	120 120	20 21
48132	MB2x96/VHO/277RS-SRNK	F48T12/VHO, F60T12/VHO, F72T12/VHO **F96T12/VHO/SS, F96T12/VHO**	2 2	277 277	20 21
T9 CIRCLINE RAPID START					
48230	MB1x22/120CIRC-SRNK	**FC8T9**	1	120	22
48231	MB1x32/120CIRC-SRNK	**FC12T9,** FC16T9	1	120	22
48210	MB1x40/120RES-SRNK	**FC12T9, FC16T9** F30T12 F40T12	1 1 1	120 120 120	22 10 11
48397	MB2x30/40/120RS	**FC12T9 & FC16T9** F25T12/SS, F30T12 F34T12, F40T12 FB34T12/U, FB40T12/U F40T10	2 2 2 2 2	120 120 120 120 120	22 10 11 12 13
T12 INSTANT START SLIMLINE					
48122	MB2x48/120IS-SRNK	**F48T12/SS(32W), F48T12**	2	120	23
48123	MB2x48/277IS-SRNK	**F48T12/SS(32W), F48T12**	2	277	23
48124	MB1x96/120IS-SRNK	F60T12 F64T12, F72T12, F84T12 **F96T12/SS, F96T12**	1 1 1	120 120 120	23 24 25
48125	MB1x96/277IS-SRNK	F60T12 F64T12, F72T12, F84T12 **F96T12/SS, F96T12**	1 1 1	277 277 277	23 24 25
48018	MB2x96/120IS-SRNK	F60T12 F64T12, F72T12, F84T12 **F96T12/SS, F96T12**	2 2 2	120 120 120	23 24 25
48126	MB2x96/277IS-SRNK	F60T12 F64T12, F72T12, F84T12 **F96T12/SS, F96T12**	2 2 2	277 277 277	23 24 25
T5, T8 and T12 PREHEAT START					
48475	MB1x8/120PH/TP/S-SRNK	F4T5, F6T5, **F8T5**	1	120	26
48201	MB1x20/120PH/TP	F14T8, F15T8 F14T12, F15T12, **F20T12**	1 1	120 120	26 27
48202	MB1x20/120PH	F14T8, F15T8 F14T12, F15T12, **F20T12**	1 1	120 120	26 27
T8 and T12 TRIGGER START					
48200	MB1x15/120PH/TP-SRNK	F14T8, F15T8, F14T12, **F15T12,** F20T12	1	120	28
48203	MB2x20/120PH/TP-SRNK	F14T8, F15T8, F14T12, F15T12, **F20T12**	2	120	28
J-Box Cover (For Sign & F-Can Ballasts)					
48275	JBox Cover				19

14: Primary lamp type and SUPERSAVER® equivalent are in bold print.

Specifications subject to change without notice.

Advance to OSRAM SYLVANIA Magnetic Fluorescent Cross Reference

ADVANCE Catalog #	Input Voltage (VAC)	No. of Lamps	OSRAM SYLVANIA Item #	OSRAM SYLVANIA Description	Page #
ASB-0412-12-BL-TP	120	1-2	48225	MSB-12-0412-TP	18-19
ASB-0620-24-BL-TP	120	2-4	48226	MSB-24-0620-TP	18-19
ASB-1224-24-BL-TP	120	2-4	48227	MSB-24-1224-TP	18-19
ASB-1240-46-BL-TP	120	4-6	48229	MSB-46-1240-TP	18-19
ASB-2040-24-BL-TP	120	2-4	48228	MSB-24-2040-TP	18-19
ASB-2448-46-BL-TP	120	4-6	48232	MSB-46-2448-TP	18-19
LC1420C	120	1	48202	MB1x20/120PH	26-27
LC1420CTP	120	1	48201	MB1x20/120PH/TP	26-27
LSX113TP	120	1	48475	MB1x8/120PH/TP/S-SRNK	26
R140TP Mark III	120	1	48011	MB1x40/120RS-SRNK	10-13
R1P817TP	120	1	48312	MB1x17/120RS	8-9
R1P825TP R1P32TP Mark III	120	1	48240	MB1x25/32/120RS-SRNK	8-9
R2E75STP Mark III	120	2	48018	MB2x96/120IS-SRNK	23-25
R2P825TP R2P32TP Mark III	120	2	48242	MB2x25/32/120RS-SRNK	8-9
R2S110TP Mark III	120	2	48025	MB2x96/HO/120RS-SRNK	14-17
R2S40TP Mark III	120	2	48001	MB2x40/120RS-SRNK	11-13
R2SP30TP Mark III	120	2	48409	MB2x30/120RS-SRNK	10
RC2S102TP	120	1	48129	MB1x96/VHO/120RS-SRNK	20-21
RC2SP40TP	120	2	48397	MB2x30/40/120RS	10-13, 22
RL140TP	120	1	48210	MB1x40/120RES-SRNK	10, 11, 22
RL2SP20TP	120	2	48203	MB2x20/120PH/TP-SRNK	28
RLCS140TPW	120	1	48231	MB1x32/120CIRC-SRNK	22
RLQ120TP	120	1	48200	MB1x15/120PH/TP-SRNK	28
RLQS122TPW	120	1	48230	MB1x22/120CIRC-SRNK	22
RS110TP	120	1	48127	MB1x96/HO/120RS-SRNK	14-17
RS110TP	120	1 or 2	48151	MB1/2x48/96/HO/120RS-SRNK/IN	14-17
RS2S200TP	120	2	48131	MB2x96/VHO/120RS-SRNK	20-21
RSM175STP	120	1	48124	MB1x96/120IS-SRNK	23-25
SM2E40STP	120	2	48122	MB2x48/120IS-SRNK	23
V140TP Mark III	277	1	48120	MB1x40/277RS-SRNK	10-13
V1P825TP V1P32TP Mark III	277	1	48241	MB1x25/32/277RS-SRNK	8-9
V2E75STP Mark III	277	2	48126	MB2x96/277IS-SRNK	23-25
V2P825TP V2P32TP Mark III	277	2	48243	MB2x25/32/277RS-SRNK	8-9
V2S110TP Mark III	277	2	48027	MB2x96/HO/277RS-SRNK	14-17
V2S40TP Mark III	277	2	48121	MB2x40/277RS-SRNK	11-13
V2SP30TP Mark III	277	2	48410	MB2x30/277RS-SRNK	10
VC2S102TP	277	1	48130	MB1x96/VHO/277RS-SRNK	20-21
VS110TP	277	1	48128	MB1x96/HO/277RS-SRNK	14-17
VS2S200TP	277	2	48132	MB2x96/VHO/277RS-SRNK	20-21
VSM175STP	277	1	48125	MB1x96/277IS-SRNK	23-25
VSM2E40STP	277	2	48123	MB2x48/277IS-SRNK	23
-----	120	1	48096	MB1x25/32/120RS-LW	8-9

Ordering Guide

Specifications subject to change without notice.

OSRAM SYLVANIA National Customer Service and Sales Center
1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

Universal Lighting Technologies to OSRAM SYLVANIA Magnetic Fluorescent Cross Reference

Universal Lighting Technologies Catalog #	Input Voltage (VAC)	No. of Lamps	OSRAM SYLVANIA Item #	OSRAM SYLVANIA Description	Page #
200H2	120	1	48202	MB1x20/120PH	26-27
200H2P	120	1	48201	MB1x20/120PH/TP	26-27
213TCP	120	2	48122	MB2x48/120IS-SRNK	23
412LSLHTCP	120	1	48011	MB1x40/120RS-SRNK	10-13
413CTCP	120	1	48210	MB1x40/120RES-SRNK	10, 11, 22
443LSLHTCP	277	2	48121	MB2x40/277RS-SRNK	11-13
445RSWSTCP	120	1	48231	MB1x32/120CIRC-SRNK	22
446LSLHTCP	120	2	48001	MB2x40/120RS-SRNK	11-13
447LRTCP	120	2	48203	MB2x20/120PH/TP-SRNK	28
458LSLHTCP	277	1	48120	MB1x40/277RS-SRNK	10-13
479LHTCP	277	1	48128	MB1x96/HO/277RS-SRNK	14-17
480SLHTCP	120	2	48025	MB2x96/HO/120RS-SRNK	14-17
481LHTCP	120	1	48127	MB1x96/HO/120RS-SRNK	14-17
487SLHTCP	277	2	48027	MB2x96/HO/277RS-SRNK	14-17
490XLHTCP	120	1 or 2	48151	MB1/2x48/96/HO/120RS-SRNK/IN	14-17
532BRTCP	277	2	48123	MB2x48/277IS-SRNK	23
546BTCP	120	1	48200	MB1x15/120PH/TP-SRNK	28
547RSWSTCP	120	1	48230	MB1x22/120CIRC-SRNK	22
573LTCP	120	2	48409	MB2x30/120RS-SRNK	10
588LTCP	277	2	48410	MB2x30/277RS-SRNK	10
707TCP	120	1	48312	MB1x17/120RS	8-9
727LTCP M132R120	120	1	48240	MB1x25/32/120RS-SRNK	8-9
728LTCP M132R277C	277	1	48241	MB1x25/32/277RS-SRNK	8-9
731LTCP M232SR120C	120	2	48242	MB2x25/32/120RS-SRNK	8-9
732LTCP M232SR277C	277	2	48243	MB2x25/32/277RS-SRNK	8-9
806SLHTCP	120	2	48018	MB2x96/120IS-SRNK	23-25
822BRTCP	120	1	48124	MB1x96/120IS-SRNK	23-25
827SLHTCP	277	2	48126	MB2x96/277IS-SRNK	23-25
828BRTCP	277	1	48125	MB1x96/277IS-SRNK	23-25
930KTCP	120	2	48131	MB2x96/VHO/120RS-SRNK	20-21
937KTCP	277	2	48132	MB2x96/VHO/277RS-SRNK	20-21
951STCP	120	1	48129	MB1x96/VHO/120RS-SRNK	20-21
957STCP	277	1	48130	MB1x96/VHO/277RS-SRNK	20-21
M132R120	120	1	48096	MB1x25/32/120RS-LW	8-9
USB-0412-12	120	1-2	48225	MSB-12-0412-TP	18-19
USB-0816-14	120	2-4	48226	MSB-24-0620-TP	18-19
USB-1024-14	120	2-4	48227	MSB-24-1224-TP	18-19
USB-1632-24	120	2-4	48228	MSB-24-2040-TP	18-19
USB-2036-46	120	4-6	48229	MSB-46-1240-TP	18-19
USB-2048-46	120	4-6	48232	MSB-46-2448-TP	18-19
W589DTCP	120	2	48397	MB2x30/40/120RS	10-13, 22
-----	120	1	48475	MB1x8/120PH/TP/S-SRNK	26

This cross reference is intended as an aid for identifying comparable products for the lamp types listed as a convenience to the user. OSRAM SYLVANIA does not warrant or guarantee the accuracy or correctness of the content. Case sizes, wiring diagrams and performance specifications may vary, please refer to manufacturers specifications. Please refer to the OSRAM SYLVANIA catalog for verification of product specifications appropriate for the applications.

Ordering Guide

Specifications subject to change without notice.

Valmont to OSRAM SYLVANIA
Magnetic Fluorescent Cross Reference

VALMONT Catalog #	Input Voltage (VAC)	No. of Lamps	OSRAM SYLVANIA Item #	OSRAM SYLVANIA Description	Page #
6G3782WF	120	2-4	48228	MSB-24-2040-TP	18-19
6G3787AWF	120	4-6	48229	MSB-46-1240-TP	18-19
6G3814WF	120	2-4	48226	MSB-24-0620-TP	18-19
6G3901WF	120	1-2	48225	MSB-12-0412-TP	18-19
6G3942AW	120	4-6	48232	MSB-46-2448-TP	18-19
6G3959WF	120	2-4	48227	MSB-24-1224-TP	18-19
89G457	120	1	48202	MB1x20/120PH	26-27
89G489	120	1	48475	MB1x8/120PH/TP/S-SRNK	26
8G1004W	120	2	48018	MB2x96/120IS-SRNK	23-25
8G1014W	277	2	48126	MB2x96/277IS-SRNK	23-25
8G1024W	120	2	48001	MB2x40/120RS-SRNK	11-13
8G1034W	277	2	48121	MB2x40/277RS-SRNK	11-13
8G1074W	120	1	48011	MB1x40/120RS-SRNK	10-13
8G1075	120	1	48210	MB1x40/120RES-SRNK	10, 11, 22
8G1084W	277	1	48120	MB1x40/277RS-SRNK	10-13
8G1085G11	120	1	48231	MB1x32/120CIRC-SRNK	22
8G1091G11	120	1	48230	MB1x22/120CIRC-SRNK	22
8G1144W	120	2	48025	MB2x96/HO/120RS-SRNK	14-17
8G1154W	277	2	48027	MB2x96/HO/277RS-SRNK	14-17
8G1201W	120	2	48131	MB2x96/VHO/120RS-SRNK	20-21
8G1211W	277	2	48132	MB2x96/VHO/277RS-SRNK	20-21
8G1600W	120	2	48122	MB2x48/120IS-SRNK	23
8G1710W	277	2	48123	MB2x48/277IS-SRNK	23
8G1762W	120	1	48124	MB1x96/120IS-SRNK	23-25
8G1764W	277	1	48125	MB1x96/277IS-SRNK	23-25
8G3560	120	1	48200	MB1x15/120PH/TP-SRNK	28
8G3900W	120	1	48127	MB1x96/HO/120RS-SRNK	14-17
8G3912	120	2	48203	MB2x20/120PH/TP-SRNK	28
8G3927WF	120	1	48129	MB1x96/VHO/120RS-SRNK	20-21
8G3971W	120	2	48409	MB2x30/120RS-SRNK	10
8G3972W	277	2	48410	MB2x30/277RS-SRNK	10
8G3990WF	277	1	48130	MB1x96/VHO/277RS-SRNK	20-21
8G4126W18	120	2	48242	MB2x25/32/120RS-SRNK	8-9
8G4136W18	277	2	48243	MB2x25/32/277RS-SRNK	8-9
8G4177W	120	1	48312	MB1x17/120RS	8-9
8G4200WF	277	1	48128	MB1x96/HO/277RS-SRNK	14-17
-----	120	1	48201	MB1x20/120PH/TP	26-27
-----	120	1	48096	MB1x25/32/120RS-LW	8-9
-----	120	1	48240	MB1x25/32/120RS-SRNK	8-9
-----	277	1	48241	MB1x25/32/277RS-SRNK	8-9
-----	120	2	48397	MB2x30/40/120RS	10-13, 22
-----	120	1 or 2	48151	MB1/2x48/96/HO/120RS-SRNK/IN	14-17

This cross reference is intended as an aid for identifying comparable products for the lamp types listed as a convenience to the user. OSRAM SYLVANIA does not warrant or guarantee the accuracy or correctness of the content. Case sizes, wiring diagrams and performance specifications may vary, please refer to manufacturers specifications. Please refer to the OSRAM SYLVANIA catalog for verification of product specifications appropriate for the applications.

Ordering Guide

Specifications subject to change without notice.

OSRAM SYLVANIA National Customer Service and Sales Center
1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

Magnetic Ballast Limited Warranty

Magnetic Ballast Limited Warranty

OSRAM SYLVANIA Products Inc. (“OS”) warrants SYLVANIA fluorescent magnetic ballasts and high intensity discharge (HID) magnetic ballasts to be free from defects in material and workmanship and to operate from the date of manufacture for the time periods specified below.

Magnetic Ballast Type	Ballast Warranty Period*
Fluorescent Magnetic	36 months
High Intensity Discharge (HID) Magnetic	24 months
Magnetic Sign	24 months

*Note - Warranty periods are based on typical 4000 hr/12 months operation; longer operating cycles may limit warranty period. Contact OS for details.

TERMS AND CONDITIONS

SYLVANIA magnetic fluorescent and HID ballasts must be installed and operated under suitable environmental conditions and in accordance with the latest National Electrical Code, Underwriters Laboratory Bulletins, ANSI Specifications, CSA standards, and in accordance with OS installation instructions, where applicable. This warranty will not apply if conditions demonstrate abnormal use or stress, such as operating temperatures in excess of maximum rated temperatures, under/over voltage conditions, excessive switching cycles or operating hours, dirty or cracked sockets, or improper lamp or ballast installation.

WARRANTY ACTIVATION / SERVICE CLAIMS

Warranty is activated after installation. Service claims can be made by contacting 1-800-654-0089 (press “2”) to initiate the process for problem resolution.

REPLACEMENT OF PRODUCT

OS shall correct any defects by replacing or repairing, at OS’s option, any ballast determined to be defective under the terms of this warranty. Note: Labor costs are not reimbursed by OS.

RETURN OF DEFECTIVE BALLAST

After contacting OS and receiving a return AUTHORIZATION NUMBER, the purchaser may be requested to promptly return the ballast at the purchaser’s expense to OS after receiving instructions as to if, when and where to ship the ballast. Failure to follow this procedure shall void this warranty.

LIMITS OF LIABILITY

The foregoing shall constitute the sole and exclusive remedy of the purchaser and the sole and exclusive liability of OS. NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS MADE OR IS TO BE IMPLIED. OS will not, under any circumstance, whether as a result of breach of contract or warranty, tort, or otherwise,be liable for any costs or damages, including lost profits or revenues, incidental, special or consequential damages.

OS reserves the right to examine all failed ballasts and reserves the right to be the sole judge as to whether any ballasts are defective and covered under this warranty. This warranty does not cover lamps operated by the ballast.

QUESTIONS? Please call customer service at 1-800-654-0089
contact your local OSRAM SYLVANIA representative.

Magnetic High Intensity Discharge (HID) Ballasts

An HID ballast must perform two basic functions for the lamp:

1. **Starting:** The ballast must provide proper voltage to start the lamp. For some lamp types the input voltage alone is sufficient to start the lamp. Other lamp types require the input voltage to the ballast to be stepped up or down to the required voltage. While a third type of lamp utilizes an ignitor to help start the lamp.
2. **Current Regulation:** Once the lamp has started, the ballast must maintain a specific current to the lamp to ensure proper operation throughout its life.

Each type of HID lamps, (metal halide, mercury vapor and high pressure sodium) have a slightly different starting voltage, lamp voltage and current characteristics that necessitate the use of different ballast designs.

Lamp starting, operation and end of life are outlined by lamp manufacturers and in accordance with ANSI specification C82.4. For OSRAM SYLVANIA data, see our latest revisions:

Product Information Specification Guides:

- Metal Halide (HID-017),
- High Pressure Sodium (HID-006),

Engineering Bulletins:

- Metal Halide (HID-010),
- High Pressure Sodium (HID-009)
- Mercury Vapor (SFA-HID-MEREB-0696)

They are on our website at *www.sylvania.com* or *www.mysylvania.com.*

Incandescent lamps operate by passing current through a tungsten filament to produce light. The filament itself limits the amount of current flowing through the lamp by its own resistance. However, HID lamps produce light by ionizing gas within an arc tube. The arc tube has a negative resistance characteristic that causes the arc to draw more and more current as the arc forms and heats up. If this current were not limited, the lamp would eventually extinguish. Because of this negative resistance, a ballast is used to regulate, (limit) the lamp current and power for proper operation.

HID lighting is best known for its outdoor applications such as street, roadway, building, parking lot and security lighting. However, it is increasingly being used in retail, warehouse and superstore settings.

HID Lamps

SYLVANIA METALARC® Metal Halide and LUMALUX® High Pressure Sodium lamps represent some of the most energy efficient, long-life light sources currently available.

METALARC® Probe Start Lamps

These metal halide lamps provide high output and high efficacy that are available in a wide range of wattages and colors. OSRAM SYLVANIA Metal Halide lamps allow designers increased flexibility to optimize their lighting solution while holding down costs. METALARC lamps have significantly higher efficacy than mercury vapor or incandescent products and have considerably better CRI than mercury vapor and high pressure sodium lamps.

To operate Metal Halide, Pulse Start Metal Halide, High Pressure Sodium and Mercury Vapor lamps in a variety of applications, SYLVANIA has enhanced the Magnetic HID Ballast offering with the new SUPER5 Kit, Pulse Start Core & Coil, F-Can and Indoor Enclosed ballasts. **The combination of SYLVANIA lamps and ballasts forms a complete lighting system.**

METALARC® Pulse Start Lamps

The advanced arc tube design of SYLVANIA METALARC PULSE START metal halide lamps makes them superior to standard metal halide probe start lamps. Initial lumen output levels are similar to standard lamps, but maintained lumen levels can be up to 30% higher. METALARC PULSE START lamp life can be up to two times the life of standard lamps and these high performance lamps reduce color temperature shift over the life of the lamp by as much as 400K. Other performance enhancements include reaching 90% of full light output significantly earlier than standard lamps and reducing hot restrike time up to 60%.

LUMALUX® High Pressure Sodium

SYLVANIA high pressure sodium (HPS) lamps offer higher efficacies than most other light sources, providing up to 140 lumens per watt. Another feature of LUMALUX lamps is the long life, (up to 24,000 hours) compared to most traditional light sources. A further improvement in HPS lamp life was achieved by LUMALUX PLUS/ECO® and LUMALUX STANDBY lamps. These lamps exceed the life of standard HPS lamps up to 25% and 67% respectively.

Mercury Vapor

SYLVANIA Mercury Vapor lamps are designed primarily for use in general lighting applications where good efficiency and long life are desired with moderate color rendering requirements.

HID Ballast Types

Core & Coil

The core and coil ballast is the most common type and it is comprised of copper coils mounted on electrical grade steel laminations. Capacitors, which are used for either lamp regulation or power factor correction may be added along with ignitors which may be used to help start the families of Pulse Start lamps. Core and coil ballasts are typically UL Recognized and therefore must be enclosed in a luminaire. This is required for the luminaire to receive UL Listing and meet CSA requirements. Class H insulation is most commonly used in core and coil ballasts which permits a maximum coil hot spot temperature of 180°C.

F-Can

SYLVANIA F-Can ballasts are designed for indoor, low noise applications and utilize the familiar fluorescent type ballast cans. Since the F-Can style ballasts are typically used indoors within a luminaire, the ballast input voltage is limited to 120 and 277 volts. Each ballast has a power factor correcting capacitor within the ballast case and an automatically re-setting thermal protector that disconnects power to the ballast in the event of excess heat within the ballast. For ballasts such as HPS and pulse start metal halide, the ignitor is built into the ballast. SYLVANIA F-Can ballasts operate a range of metal halide, pulse start metal halide and high pressure sodium lamps. These ballasts are UL listed.

Indoor Enclosed

Indoor Enclosed ballasts are used in applications where remote mounting of the ballast from the fixture is required, such as in high bay lighting found in factories.

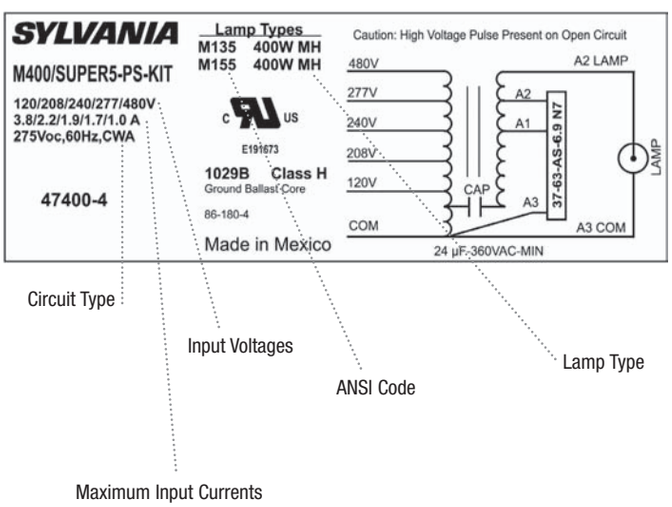
The remote location allows the ballasts to be operated in a cooler ambient

environment than the fixture. These ballasts contain a core & coil ballast and are mounted and encased in a heat dissipating resin in a metal enclosure. The capacitor and ignitor, when required are located within a separate compartment in the enclosure. Knockouts are on the ballast case to allow for electrical hookup. These ballasts are UL listed.

General Information

Ballast Descriptions

SYLVANIA magnetic HID ballast descriptions are based on the corresponding lamp description to make lamp/ballast matching and identification easier. All HID carton labels also identify the corresponding lamp/ballast matching to simplify product selection.



Ballast Date Codes

The ballast manufacturing date and location is printed on all SYLVANIA magnetic HID product labels.

Certifications

Depicts ballast is listed by Underwriters Laboratories Inc. in accordance with UL 1029 for HID ballasts.

Depicts ballast is certified by the Canadian Standards Association in accordance with CAN/CSA - 22.2 No. 74-92.

Depicts ballast is listed by Underwriters Laboratories Inc. in accordance with UL 1029 and CAN/CSA – 22.2 No.74 for Canada.

Depicts ballast is a recognized component by Underwriters Laboratories Inc. in accordance with UL 1029 for US and CAN/CSA – 22.2 No.74 for Canada.

Safety

Ballasts must be installed and operated in compliance with the National Electric Code (NEC), Underwriters Laboratories Inc. (UL) requirements and all applicable codes and regulations. Since it is possible to come in contact with potentially hazardous voltages, only qualified personnel should perform ballast installation or removal. All installation, inspection and maintenance of lighting fixtures should be done with the power to the fixture turned off.

Grounding

The core & coil or ballast case and fixture must always be grounded. The grounding helps assure safety, proper lamp starting and acceptable EMI/RFI performance. Install ballast in accordance with national and local electrical codes.

Ballast Characteristics

Lamp Starting

Mercury Vapor Lamps (Probe Start)

When starting a mercury vapor lamp, voltage is applied by the ballast between the main electrode and the adjacent starting electrode to create an initial ionization. Once sufficient ionization occurs, an arc can then form between the two main electrodes at each end of the arc tube. The ballast must then supply sufficient current during the startup to allow the lamp to reach full stabilization in an appropriate period of time.

Metal Halide Lamps (Probe Start)

A standard, probe start metal halide lamp uses the same starting principle as a mercury vapor lamp, but differs significantly in starting requirements and characteristics. Because of the presence of metal iodides in the arc tube, the voltage required to start a metal halide lamp is much higher than a mercury vapor lamp.

Metal Halide Lamps (Pulse Start)

The low-wattage metal halide lamps, (150 watts and lower) and the higher wattage pulse start metal halide lamp are designed without a starting electrode and thus require an external ignitor in the ballast circuit. This ignitor provides about 4kV pulse to start the lamp by ionizing the gas between the two main electrodes within the arc tube and initiating the arc. For additional information on starting metal halide and pulse start metal halide lamps see OSRAM SYLVANIA Engineering Bulletin HID-010.

High Pressure Sodium Lamps (Pulse Start)

High pressure sodium lamps require an external ignitor similar to the pulse start metal halide lamps to start the lamp, however the ignitor is typically only about 2.5 – 3kV. For additional information on starting high pressure sodium lamps see OSRAM SYLVANIA Engineering Bulletin HID-006.

Warm–up and Re-strike Time

HID lamps do not achieve full light output immediately. Typical mercury vapor, metal halide and high pressure sodium lamp warm up times are shown in Table 1. Because of the characteristics of the HID lamps and ballasts, HID lamps can extinguish after a momentary power interruption. The time it takes for the HID lamp types to re-strike varies by the lamp family. Typical re-strike times for mercury vapor, metal halide and high pressure sodium lamps are shown in Table 1. There is a family of HPS lamps with two parallel arc tubes which can instantly re-strike. This phenomenon is not the result of the ballast, but is inherent in the design of the lamp.

Table 1: Typical Warm-up and Re-strike Times:

HID LAMP	WARM-UP TIME	RE-STRIKE TIME
Mercury Vapor	5-7 minutes	3-6 minutes
Metal Halide (Probe Start)	3-4 minutes	10-12 minutes
Metal Halide (Pulse Start)	2-3 minutes	4-7 minutes
High Pressure Sodium	3-4 minutes	1 minute
High Pressure Sodium Standby	3–4 minutes	Instant

Ballast Operating Characteristics

A ballast must operate a lamp within ANSI prescribed wattage and voltage limits. Wattage limits for all metal halide and mercury lamps are generally ±20% of nominal wattage. A ballast must operate a nominal voltage metal halide lamp within ±5% of rated wattage with rated line voltage applied to the ballast. High pressure sodium and mercury ballasts must operate a nominal voltage lamp within ±7½% of rated wattage. Wattage limits for high pressure sodium lamps differ from metal halide and mercury lamps. HPS lamps have operating limits depicted on a voltage-wattage trapezoid plot established by ANSI. Specific requirements are found in the appropriate ANSI C78 lamp or C82 ballast specifications.

Ballast Circuits

Ballasts fall into two broad categories: lag and lead circuits. The lag (or lead) refers to the relationship of the phase angle of current relative to the voltage. Simple reactor, (R) and high reactance autotransformers, (HX) are lag circuits. The constant wattage autotransformer (CWA) ballast is a lead circuit and produces a higher open circuit peak voltage than reactor ballasts.

Reactor Ballast - (R)

A reactor ballast is the simplest type of ballast; it consists of a wire wound on an iron core placed in series with the lamp, and its only purpose is to limit lamp current. Reactor ballasts are only used when the line voltage is sufficient to start the lamp. Since reactor ballasts only perform the function of current control, it is the least expensive, smallest, lightest weight and most efficient magnetic HID ballast. However, reactor ballasts have several disadvantages:

1. A ±5% input voltage variation results in ±12% lamp wattage variation.
2. A 25% drop in input voltage may cause the HID lamp to extinguish.

3. The ballast is inherently low power factor. The reactor ballast can be corrected to high power factor, (90% or better) by the addition of an appropriately sized capacitor wired across the input to the ballast. This capacitor does not affect the lamp regulation.

4. The starting current or open circuit current may be greater than operating current. Care must be taken to size electrical circuits.

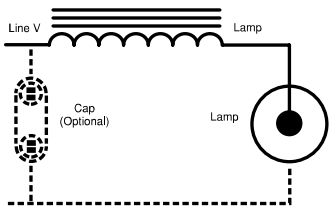


Figure 1. Typical reactor circuit with optional capacitor.

High Reactance Autotransformer – (HX)

A high reactance autotransformer is a lag-type ballast typically used in circuits where the line voltage is insufficient to start the lamp. The ballast provides two functions in one magnetic circuit. First, the output voltage is either stepped-up or down from the supply line voltage to provide the proper open circuit starting voltage. Secondly, to provide inductive reactance to limit the lamp current. The primary and secondary coils share common windings and are thus called an autotransformer. Like a reactor ballast, the autotransformer is a normal power factor ballast (50%), which can be raised to greater than 90% by addition of a capacitor across the input supply line. The operating characteristics are similar to the reactor ballast.

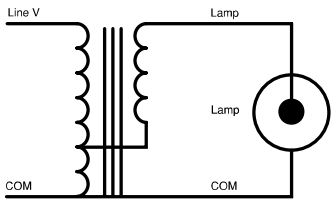


Figure 2. Typical high reactance autotransformer circuit without capacitor.

Constant Wattage Autotransformer (CWA)

This is the most commonly encountered ballast for lamp wattages greater than 150 watts, because it is the best compromise between cost and performance. A capacitor is wired in series with the lamp to make it a high power factor ballast and help regulate lamp power. Since there is more capacitive reactance than inductive reactance, the ballast is known as a lead ballast. The output voltage waveform is peaked by the insertion of one or more core slots in the secondary circuit resulting in a high peak voltage for lamp starting superimposed on a relatively low r.m.s. voltage sine-wave. This feature contributes to the cost advantage for the CWA ballasts. This peak voltage phenomenon along with the leading capacitive reactance results in a common name for the ballast: lead-peak.

There are several advantages to CWA ballasts:

1. The regulation of a CWA ballast is different from the reactor ballasts. A typical CWA ballast with a ±10% input voltage variation results in only ±5% lamp wattage variation for mercury vapor lamps and ±10% wattage variation for metal halide lamps.
2. Lamp warm-up will be slightly faster than reactor ballasts.
3. A CWA ballast can tolerate line voltage drops of 30 to 40% without lamps dropping-out vs. about 25% for reactor ballasts.
4. The operating current is typically higher than starting and open circuit currents, thus sizing of electrical circuits is easier.

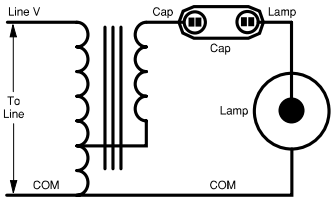


Figure 3. Typical constant wattage autotransformer circuit.

Supply Voltages

To obtain the correct lamp wattage, the input voltage required for HID ballasts is listed on the product label. The wattage output will deviate substantially if an incorrect input voltage is applied. Improper input voltage application will void the warranty on both the lamp and the ballast. SYLVANIA HID ballasts are available for nominal line voltages of 120, 208, 240, 277 & 480 and 480/120TAP.

Power Factor

Ballasts are described as normal power factor or high power factor. Normal power factor ballasts have power factors less than 90%, such as simple reactors. High power factor ballasts have power factors greater than 90%. Lag, (reactor), ballast power factor may be increased to greater than 90% by incorporating a capacitor across the input supply line. High power factor ballasts draw less current than low power factor ballasts thus allowing more fixtures per circuit. Low power factor lag circuits draw significantly more current for the same wattage compared to high power factor ballasts.

Audible Noise

The noise emitted from a ballast may be an important consideration in the selection of a ballast. SYLVANIA lists the sound rating in this catalog and on the product label for all the F-Can ballasts to assist you in selecting the appropriate ballast for the application.

Fixture Effect Voltage Rise

The rated lamp life can be affected by lamp voltage rise limits, known as fixture effect. For high pressure sodium lamps, the sodium-mercury amalgam can be affected by a luminaire reflecting energy back onto the arc tube. This extra energy will increase the lamp voltage resulting in shorter lamp life and lead to cycling for most HPS lamp types. Therefore, a fixture must be designed to prevent reflecting energy onto the arc tube. Lamp voltage rise is dependent upon the fixture design and the maximum allowed value is specified by ANSI.

Fixture Fusing

Many HID fixtures incorporate a protective fuse in the ballast compartment of a fixture. In the event of a ballast failure or other mechanism that will cause the ballast to draw excessive currents the fuse will "blow" disconnecting power to the ballast. A fuse will not stop a ballast from failing. Most fuses are rated at 77°F, (25°F) and are temperature sensitive. As the ambient temperature increases, the fuse rating decreases. Fuses are usually mounted in the ballast compartment of the fixture and must be able to sustain between 2 and 3 times the highest current the ballast will draw. The highest current draw of a ballast will result from one of the following events:

1. Lamp starting
2. Lamp operating
3. Open circuit conditions

Standard or slow-blow fuses are typically recommended due to potentially high inrush currents that can occur during lamp starting. The recommended fixture fuse rating for each ballast is indicated in the data section of the catalog.

Drop Out Voltage

A drop in line voltage can cause an HID lamp to extinguish. Magnetic HID ballasts are designed to endure fluctuations in voltages to reduce lamp outages. A CWA ballast can tolerate line dips of 30 to 40% without dropping-out versus about 25% for reactor ballasts.

UL Bench Top Rise Code

The UL Bench Top Rise Temperature Code is a UL standard for HID core & coil ballasts, which categorizes the temperature rating of the ballast. All SYLVANIA HID core & coil ballasts indicate the UL Bench Top Rise Temperature Code, represented as 1029X, on the product label. The UL HID standard is the 1029, while the X indicates the temperature code classification, as A, B, C, etc. This is used for identifying the correct temperature ballast and fixture combination. For example, if a fixture is rated for use with a 1029C ballast, then the fixture can be used with ballasts rated for "C", "B" or "A".

Table 2: UL Bench Top Rise Code:

UL BENCH TOP RISE LETTER CODE	TEMPERATURE RANGE FOR CLASS H (180°C) BALLASTS
A	< 75°C
B	75°C < 80°C
C	80°C < 85°C
D	85°C < 90°C
E	90°C < 95°C
F	95°C < 100°C

Effect of Temperature

The starting of HID lamps are sensitive to temperature. At low temperatures, the reduced mercury vapor pressure makes lamp ignition more difficult. In a hot re-strike condition, following a power interruption, the lamp must cool to reduce the arc tube pressure to allow the ballast to re-strike the lamp properly.

Once the lamp has started, the operation of HID lamps is essentially independent of ambient temperature because the outer jacket controls the arc tube's operating ambient temperature. Wattage, lumen output, and color do not vary appreciably with ambient temperature. However, ambient temperature can affect ballast performance which in turn can affect lamp operation.

To assure the proper thermal performance care should taken when designing a luminaire or when remote mounting a ballast.

High Intensity Discharge Troubleshooting Guide

OSRAM SYLVANIA is focused on helping our customers understand our products and simplify their use and application. OSI has developed an HID Troubleshooting Guide (HID-011) that is intended to provide an overview of common HID lighting system questions. This guide lists common modes of system trouble and points out most of the possible causes with respective verification/corrective action. For additional information go to *www.sylvania.com* or contact our National Customer Service Center at 1-800-LIGHTBULB (1-800-544-4828).

SYLVANIA Core & Coil Replacement Kits

SYLVANIA Core & Coil ballasts are offered in easy to use replacement kits for the range of metal halide, pulse start metal halide, high pressure sodium and mercury lamps. These ballast kits help to identify what is required for a replacement or upgrade by providing an array of components in each kit. Each kit includes a core and coil ballast, dry capacitor and ignitor (where required), brackets, mounting hardware and installation instructions. Packaged in individual boxes they are available in a wide variety of input voltages: SUPER5, MULTI, 480 and 480/120TAP. New SUPER5 Kits can be used for multiple taps styles 120/208/240/277and 480V minimizing hassles associated with selecting the wrong voltage product. All are rated for 60Hz input frequency and utilize dry film capacitors for easy and safer installation.

Capacitors

SYLVANIA supplies pre-wired dry type capacitors in all kits. Dry capacitors offer several advantages over oil filled capacitors. Dry capacitors are smaller in size, do not have to be grounded because they are mounted in a plastic case, have a maximum case temperature of 100°C and have no exposed terminals making them safer and easier to install. SYLVANIA F-Can and Indoor Enclosed ballasts contain the capacitor in the outer metal housing.

Ballast To Lamp Remote Mounting Distances

The ballast to lamp mounting distance allowed for Probe Start Metal Halide and Mercury Vapor lamps is determined by the ballast to lamp wire size. The wire size and mounting distances that these lamps can be mounted from the ballast are shown in Table 3. However, Pulse Start Metal Halide and High Pressure Sodium lamps require an ignitor to start the lamp. For ignitor based ballasts, the ignitor determines the ballast mounting distance to the lamp. For Pulse Start Ballast Technology, see individual product specification for maximum distance-to-lamp allowed.

Table 3: Ballast to Lamp Remote Mounting Distances

LAMP WATTAGE/ ANSI CODE			MAXIMUM LENGTH OF WIRE CONNECTING THE BALLAST TO THE LAMP* (FEET)				
WATTAGE	MERCURY ANSI CODE	METAL HALIDE ANSI CODE	#10 GA	#12 GA	#14 GA	#16 GA	#18 GA
100	H38	–	750	470	295	185	115
175	H39	M57	425	265	165	105	65
250	H37	M58	300	190	120	75	45
1-400	H33	M59	200	125	75	50	30
2-400	H33	M59	200	125	75	50	30
1000	H36	M47	325	205	125	80	50
1500	–	M48	225	140	85	55	35

*Based on 1% Voltage Drop of the lamp. To assure the proper thermal performance, remote mounted ballasts should be vented appropriately and mounted to a heat-dissipating material.

Ignitors

An ignitor is necessary to start certain HID lamps where the ballast itself does not have sufficient output voltage to start the lamp; these include most high pressure sodium and pulse start metal halide lamps.

Since each lamp typically has a different starting characteristic, the ballast and ignitor must be carefully matched to provide the proper pulse voltage. SYLVANIA HID Ballasts include the proper ignitor pre-wired to the ballast where required. The ignitor must be installed within the specified distance from the lamp because the ballast and ignitor function together to ensure proper starting.

Care must be taken when remote mounting a ballast with an ignitor. The ignitor pulse voltage is attenuated as the length of wire increases. The pulse from the ignitor must travel from the ignitor to the ballast and back to the lamp which actually doubles the remote mounting distance. The maximum distance-to-lamp for SYLVANIA ignitors is typically 2 feet for core & coil ballasts, however there are some ignitors that are rated up to 25 feet. SYLVANIA F-Can ballasts offer a longer maximum distance-to-lamp range of 15 - 50 feet. See individual product specification for maximum distance-to-lamp allowed. SYLVANIA also offers replacement ignitors if required.

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Magnetic HID Ballasts

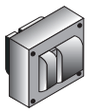
Magnetic HID Core & Coil Ballasts

Magnetic HID F-Can Ballasts

Magnetic HID Indoor Enclosed Ballasts

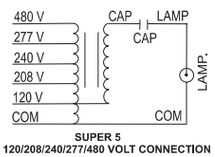
Magnetic HID Ballast Information

METALARC® Metal Halide Core & Coil Ballast Kits

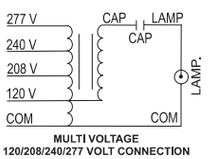


175W-250W MH C&C Kits

Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	Circuit Type	Input Power (Watts)	Max.[14] Input Current (Amps)	Nom. Open Circuit Voltage	Fuse Rating (Amps)	Ballast Dimensions (in)			Wiring Dia.	Dry Capacitor[15]		Packaging		UL Bench Top Rise Code 1029
								Fig.	A	B		Mfd	Min. V_{AC}	Qty.	Approx. Ballast Wt. (lbs ea)	
175W Metal Halide Lamp - ANSI Code M57 or Mercury Lamp - ANSI Code H39																
47243	M175/SUPER5-KIT	120/208/240/277/480	CWA	210	1.8/1.0/0.9/0.8/0.5	305	5/3/3/2/2	M	2.5	4.0	20	10	400	1	8.2	B/A/A/A/C
47735	M175/MULTI-KIT	120/208/240/277	CWA	210	1.8/1.0/0.9/0.8	305	5/3/2/2	M	2.3	3.8	21	10	400	1	7.7	B/C/C/C
47035	M175/480-KIT	480	CWA	210	0.5	305	2	M	2.5	4.0	22	10	400	1	8.2	C
47253	M175/480/120T-KIT	480/120TAP	CWA	210	0.5	305	2	M	2.5	4.0	23	10	400	1	8.2	C
47254	M175/120/277-KIT	120/277	CWA	210	1.8/0.8	305	5/2	M	2.3	3.8	24	10	400	1	8.0	B/C
250W Metal Halide Lamp - ANSI Code M58 or Mercury Lamp - ANSI Code H37																
47265	M250/SUPER5-KIT	120/208/240/277/480	CWA	290	2.5/1.5/1.3/1.1/0.6	300	8/5/5/3/2	N	1.5	3.4	20	15	400	1	10.4	A/A/A/A/A
47737	M250/MULTI-KIT	120/208/240/277	CWA	290	2.5/1.5/1.3/1.1	300	8/5/5/3	N	1.5	3.0	21	15	400	1	10.4	A/A/A/A
47611	M250/480-KIT	480	CWA	290	0.6	300	2	N	1.5	3.4	22	15	400	1	10.4	A
47268	M250/480/120T-KIT	480/120 TAP	CWA	290	0.6	300	2	N	1.5	3.4	23	15	400	1	10.0	A
47049	M250/MULTI 3X4-KIT	120/208/240/277	CWA	294	3.2/2.2/1.6/1.4	300	8/5/5/3	M	3.0	4.4	21	15	400	1	10.5	B/C/B/B
47050	M250/480-3X4-KIT	480	CWA	294	0.9	300	2	M	3.0	4.2	22	15	400	1	10.0	E



Wiring Diagram 20



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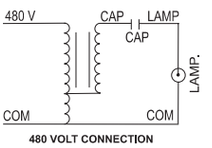

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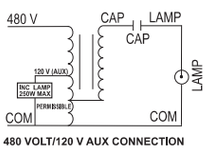

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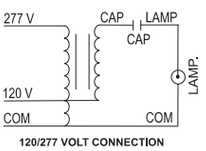


Wiring Diagram 24

Ground Ballast Core

Figure M

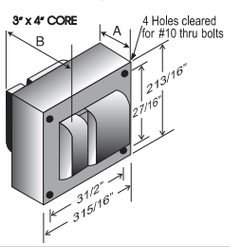
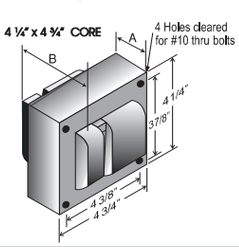
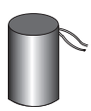


Figure N



Capacitor



Item Number — **47265 M 250 SUPER5 KIT** — Packaging, Line Voltage

Lamp Type: METALARC Metal Halide

Lamp Wattage

Specifications

Starting Method: Probe Start
Min. Starting Temp: -20°F (-30°C)
Input Frequency: 60 Hz
Power Factor: (min) 90%
Insulation Class: H (180°C)
Lead Length: 12 inches

14: Data based on highest current listed for operating, open circuit or starting current.

15: For additional information on capacitors see pages 74-77.

For information on brackets and clips see pages 74-77.

Metal Halide Magnetic Ballast Kits include core & coil, capacitors, brackets, mounting hardware and installation instructions.

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

Additional product information is available at www.sylvania.com

Warranty

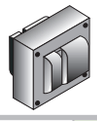
SYLVANIA magnetic ballasts are covered by our Magnetic Ballast Limited Warranty and our comprehensive Metal Halide and High Pressure Sodium Limited HID System Warranty. For Warranty details go to www.sylvania.com

Ordering Catalog

Specifications subject to change without notice.

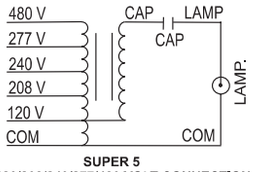
OSRAM SYLVANIA National Customer Service and Sales Center
1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

METALARC® Metal Halide Core & Coil Ballast Kits

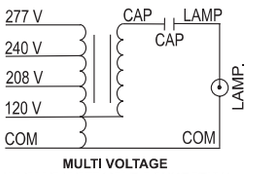


400W MH C&C Kits

Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	Circuit Type	Input Power (Watts)	Max.[14] Input Current (Amps)	Nom. Open Circuit Voltage	Fuse Rating (Amps)	Ballast Dimensions (in) Fig.	A	B	Wiring Dia.	Dry Capacitor[15] Mfd	Min. V_{AC}	Packaging Qty.	Approx. Ballast Wt. (lbs ea)	UL Bench Top Rise Code 1029
400W Metal Halide Lamp or 360W Metal Halide Lamp[16] - ANSI Code M59 or Mercury Lamp - ANSI Code H33																
47338	M400/SUPER5-KIT	120/208/240/277/480	CWA	458	4.0/2.3/2.0/1.7/1.0	300	10/7/5/5/3	N	2.2	4.2	20	24	400	1	14.0	A/A/B/B/C
47739	M400/MULTI-KIT	120/208/240/277	CWA	458	4.0/2.3/2.0/1.7	300	10/7/5/5	N	2.0	3.7	21	24	400	1	13.0	A/D/D/D
47065	M400/480-KIT	480	CWA	458	1.0	300	4	N	2.0	3.7	22	24	400	1	13.0	D
47394	M400/480/120T-KIT	480/120 TAP	CWA	458	1.0	300	3	N	2.0	3.7	23	24	400	1	13.0	D
47075	M2x400/120/240-KIT	120/240	CWA	880	7.9/4.0	630	20/10	0	3.4	5.3	25	23[17]	400	1	26.0	E/D



Wiring Diagram 20



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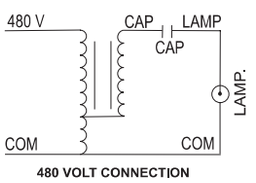

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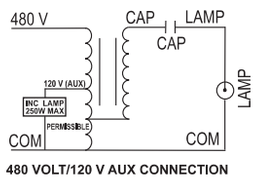
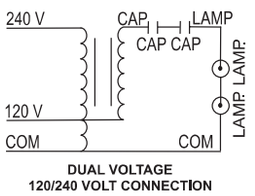


Wiring Diagram 23



Wiring Diagram 25

Ground Ballast Core

Figure N

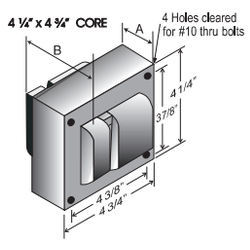
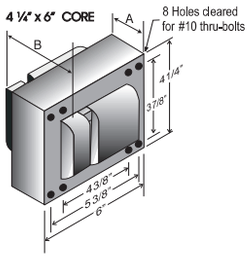


Figure O



Capacitor

Specifications

Starting Method: Probe Start
Min. Starting Temp: -20°F(-30°C)
Input Frequency: 60 Hz
Power Factor: (min) 90%
Insulation Class: H (180°C)
Lead Length: 12 inches

14: Data based on highest current listed for operating, open circuit or starting current.

15: For additional information on capacitors see pages 74-77.

16: A 360W Metal Halide lamp ANSI Code M59 operated on this ballast will result in approximately a 10% reduction in Input Power (Watts).

17: This ballast requires 2 capacitors which are included in the ballast kit.

For information on brackets and clips see pages 74-77.

Metal Halide Magnetic Ballast Kits include core & coil, capacitors, brackets, mounting hardware and installation instructions.

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

Additional product information is available at www.sylvania.com

Warranty

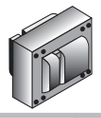
SYLVANIA magnetic ballasts are covered by our Magnetic Ballast Limited Warranty and our comprehensive Metal Halide and High Pressure Sodium Limited HID System Warranty. For Warranty details go to www.sylvania.com

Ordering Catalog

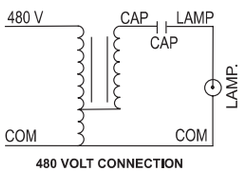
Item Number — **47338 M 400 SUPER5 KIT** — Packaging / Line Voltage
Lamp Type: METALARC Metal Halide
Lamp Wattage

Specifications subject to change without notice.

METALARC® Metal Halide Core & Coil Ballast Kits

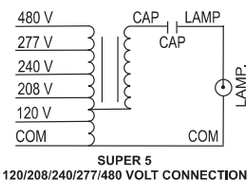


Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	Circuit Type	Input Power (Watts)	Max.[14] Input Current (Amps)	Nom. Open Circuit Voltage	Fuse Rating (Amps)	Ballast Dimensions (in) Fig.	A	B	Wiring Dia.	Dry Capacitor[15] Mfd	Min. V_{AC}	Packaging Qty.	Approx. Ballast Wt. (lbs ea)	UL Bench Top Rise Code 1029
1000W Metal Halide Lamp - ANSI Code M47 or Mercury Lamp - ANSI Code H36																
47427	M1000/SUPER5-KIT	120/208/240/277/480	CWA	1080	9.2/5.3/4.6/4.0/2.3	420	20/15/10/10/10	0	3.0	5.1	26	24	480	1	24.0	D/B B/B B
47744	M1000/MULTI-KIT	120/208/240/277	CWA	1080	9.0/5.2/4.5/3.9	421	20/15/10/10	0	2.8	4.9	27	24	480	1	22.0	C/C C/C
47655	M1000/480-KIT	480	CWA	1080	2.3	421	6	0	2.8	4.8	22	24	480	1	22.0	D
47432	M1000/480/120T-KIT	480/120 TAP	CWA	1080	2.3	421	6	0	2.8	4.8	28	24	480	1	24.0	D
1500W Metal Halide Lamp - ANSI Code M48																
46808	M1500/MULTI-KIT	120/208/240/277	CWA	1605	13.5/7.8/6.8/5.9	435	40/25/20/20	0	4.1	6.1	27	32	525	1	30.0	G/D/ D/E
47095	M1500/480-KIT	480	CWA	1605	4	435	10	0	4.1	6.1	22	32	525	1	30.0	E
47434	M1500/480/120T-KIT	480/120 TAP	CWA	1605	3.5	435	10	0	4.1	6.1	28	32	525	1	30.0	E



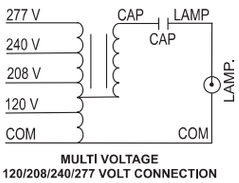
480 VOLT CONNECTION

Wiring Diagram 22



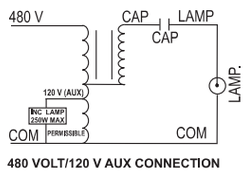
SUPER 5
120/208/240/277/480 VOLT CONNECTION

Wiring Diagram 26



MULTI VOLTAGE
120/208/240/277 VOLT CONNECTION

Wiring Diagram 27



480 VOLT/120 V AUX CONNECTION

Wiring Diagram 28

Ground Ballast Core

Specifications

Starting Method: Probe Start
Min. Starting Temp: -20°F(-30°C)
Input Frequency: 60 Hz
Power Factor: (min) 90%
Insulation Class: H (180°C)
Lead Length: 12 inches

14: Data based on highest current listed for operating, open circuit or starting current.

15: For additional information on capacitors see pages 74-77.

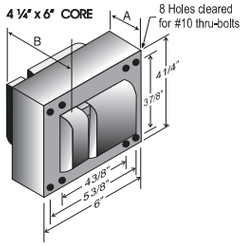
For information on brackets and clips see pages 74-77.

Metal Halide Magnetic Ballast Kits include core & coil, capacitors, brackets, mounting hardware and installation instructions.

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

Additional product information is available at www.sylvania.com

Figure O



Capacitor

Warranty

SYLVANIA magnetic ballasts are covered by our Magnetic Ballast Limited Warranty and our comprehensive Metal Halide and High Pressure Sodium Limited HID System Warranty. For Warranty details go to www.sylvania.com

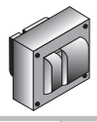
Item Number — **46808 M 1500 MULTI KIT** — Packaging
Lamp Type: METALARC Metal Halide — Line Voltage
Lamp Wattage

Ordering Catalog

Specifications subject to change without notice.

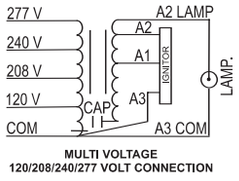
OSRAM SYLVANIA National Customer Service and Sales Center
1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

METALARC® Metal Halide Pulse Start Core & Coil Ballast Kits

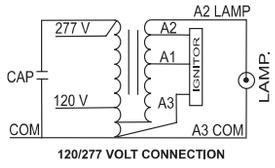


35W-70W MH PS C&C Kits

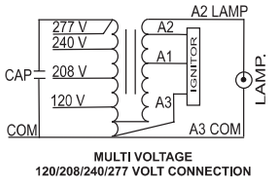
Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	Circuit Type	Input Power (Watts)	Max.[14] Input Current (Amps)	Nom. Open Circuit Voltage	Fuse Rating (Amps)	Ballast Dimensions (inches) Fig.	A	B	Wiring Dia.	Dry Capacitor[15] Mfd	Min. V_{AC}	Ignitor[18] Fig.	Max. Dist. to lamp (feet)	Packaging Qty.	Approx. Ballast Weight (lbs ea)	UL Bench Top Rise Code 1029
35W Metal Halide Pulse Start Lamp - ANSI Code M130																		
47001	M35/MULTI-HQ/CI-KIT	120/208/240/277	CWA	58	0.5/0.3 0.3/0.2	215	2/1/1/1	M	1.0	2.3	29	4.5	330	A-1	5	1	4.0	A/A/A/A
47203	M35/120/277-KIT	120/277	HX-HPF	54	1.0/0.5	235	3/1	M	1.0	2.3	30	4.5	330	A-2	15	1	4.5	A/A
50W Metal Halide Pulse Start Lamp - ANSI Code M110																		
47007	M50/MULTI-KIT	120/208/240/277	HX-HPF	67	1.3/0.8 0.7/0.6	250	3/3/2/2	M	1.1	2.4	31	6	280	A-2	5	1	4.1	B/B/B/B
47204	M50/120/277-KIT	120/277	HX-HPF	67	1.3/0.6	250	3/2	M	1.1	2.4	30	6	280	A-2	5	1	4.1	B/B
70W Metal Halide Pulse Start Lamp - ANSI Code M98																		
47013	M70/MULTI-KIT	120/208/240/277	HX-HPF	95	1.7/1.0/0.8/0.7	250	4/3/2/2	M	1.5	2.9	31	8	280	A-2	5	1	5.5	A/A/A/A
47217	M70/120/277-KIT	120/277	HX-HPF	95	1.7/1.7	250	4/2	M	1.5	2.9	30	8	280	A-2	5	1	5.5	A/A
70W Metal Halide Pulse Start Lamp - ANSI Code M98 or M139 or M85																		
47645	M70/MULTI-HQ/CI-KIT	120/208/240/277	CWA	95	0.9/0.6/0.5/0.4	215	3/2/2/1	M	1.6	2.9	29	9	300	A-2	5	1	5.8	A/A/A/A



Wiring Diagram 29



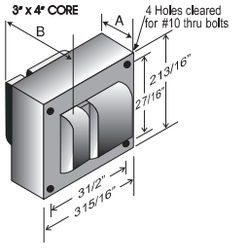
Wiring Diagram 30



Wiring Diagram 31

Ground Ballast Core

Figure M



Capacitor

Figure A-1 Ignitor

ROUND CASE

Figure A-2 Ignitor

OVAL CASE

Specifications

Starting Method: Pulse Start
Min. Starting Temp: -20°F (-30°C)
Input Frequency: 60 Hz
Power Factor: (min) 90%
Insulation Class: H (180°C)
Lead Length: 12 inches

14: Data based on highest current listed for operating, open circuit or starting current.

15: For additional information on capacitors see pages 74-77.

18: For additional information on ignitors see pages 78-79.

For information on brackets and clips see pages 74-77.

Metal Halide Pulse Start Magnetic Ballast Kits include core & coil, capacitors, ignitors, brackets, mounting hardware and installation instructions.

High voltage pulse present on open circuit.

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

Additional product information is available at www.sylvania.com

Warranty

SYLVANIA magnetic ballasts are covered by our Magnetic Ballast Limited Warranty and our comprehensive Metal Halide and High Pressure Sodium Limited HID System Warranty. For Warranty details go to www.sylvania.com

Ordering Catalog

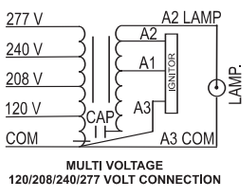
Specifications subject to change without notice.

Item Number — **47007 M 50 MULTI KIT** — Packaging
Lamp Type: METALARC Metal Halide — Line Voltage
Lamp Wattage

METALARC® Metal Halide Pulse Start Core & Coil Ballast Kits

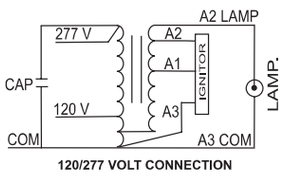
100W-150W MH PS C&C Kits

Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	Circuit Type	Input Power (Watts)	Max.[14] Input Current (Amps)	Nom. Open Circuit Voltage	Fuse Rating (Amps)	Ballast Dimensions (inches) Fig.	A	B	Wiring Dia.	Dry Capacitor[15] Mfd	Min. V_{AC}	Ignitor[18] Fig.	Max. Dist. to lamp (feet)	Packaging Qty.	Approx. Ballast Weight (lbs ea)	UL Bench Top Rise Code 1029
100W Metal Halide Pulse Start Lamp - ANSI Code M90																		
47019	M100/MULTI-KIT	120/208/240/277	HX-HPF	130	2.2/1.3/1.1/1.0	250	5/4 3/3	M	1.7	3.0	31	10	280	A-2	5	1	6.0	B/A A/A
47219	M100/120/277-KIT	120/277	HX-HPF	130	2.2/1.0	250	5/3	M	1.7	3.0	30	10	280	A-2	5	1	6.0	B/A
150W Metal Halide Pulse Start Lamp - ANSI Code M102																		
47682	M150/MULTI-PS-KIT	120/208/240/277	HX-HPF	185	3.6/2.1/1.8/1.6	260	10/5/5/4	M	2.3	3.7	31	16	280	A-2	5	1	8.2	C/B/C/C
47228	M150/120/277-PS-KIT	120/277	HX-HPF	185	3.6/1.6	260	10/4	M	2.3	3.7	30	16	280	A-2	5	1	8.2	C/C
150W Metal Halide Pulse Start Lamp - ANSI Code M102 or M142																		
47640	M150/MULTI-PS-CWA-KIT	120/208/240/277	CWA	189	1.8/1.0/0.9/0.8	215	5/3/3/2	M	2.5	3.8	29	17	330	A-2	5	1	8.3	E/D/C/C
150W Metal Halide Pulse Start Lamp - ANSI Code M81																		
47229	M150/MULTI-KIT	120/208/240/277	HX-HPF	185	3.6/2.1/1.8/1.6	245	9/6/5/4	M	2.3	3.8	31	16	280	A-2	15	1	8.5	D/D/D/D



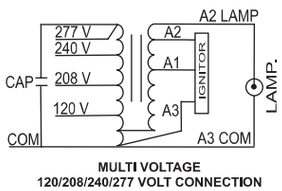
MULTI VOLTAGE
120/208/240/277 VOLT CONNECTION

Wiring Diagram 29



120/277 VOLT CONNECTION

Wiring Diagram 30

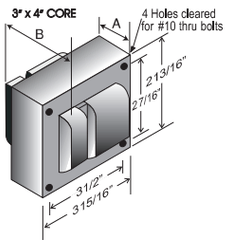


MULTI VOLTAGE
120/208/240/277 VOLT CONNECTION

Wiring Diagram 31

Ground Ballast Core

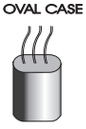
Figure M



Capacitor

Figure A-2 Ignitor

OVAL CASE



Specifications

Starting Method: Pulse Start
Min. Starting Temp: -20°F(-30°C)
Input Frequency: 60 Hz
Power Factor: (min) 90%
Insulation Class: H (180°C)
Lead Length: 12 inches

14: Data based on highest current listed for operating, open circuit or starting current.

15: For additional information on capacitors see pages 74-77.

18: For additional information on ignitors see pages 78-79.

For information on brackets and clips see pages 74-77.

Metal Halide Pulse Start Magnetic Ballast Kits include core & coil, capacitors, ignitors, brackets, mounting hardware and installation instructions.

High voltage pulse present on open circuit.

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

Additional product information is available at www.sylvania.com

Warranty

SYLVANIA magnetic ballasts are covered by our Magnetic Ballast Limited Warranty and our comprehensive Metal Halide and High Pressure Sodium Limited HID System Warranty. For Warranty details go to www.sylvania.com

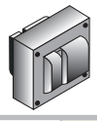
Ordering Catalog

Specifications subject to change without notice.

Item Number	47682	M	150	MULTI	PS	KIT	Packaging
Lamp Type: METALARC Metal Halide							Pulse Start
Lamp Wattage							Line Voltage

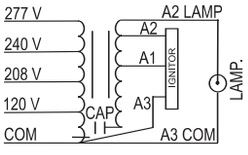
OSRAM SYLVANIA National Customer Service and Sales Center
1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

METALARC® Metal Halide Pulse Start Core & Coil Ballast Kits



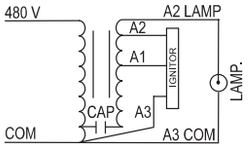
175W-200W MH PS C&C Kits

Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	Circuit Type	Input Power (Watts)	Max.[14] Input Current (Amps)	Nom. Open Circuit Voltage	Fuse Rating (Amps)	Ballast Dimensions (inches) Fig.	A	B	Wiring Dia.	Dry Capacitor[15] Mfd	Min. V_{AC}	Ignitor[18] Fig.	Max. Dist. to lamp (feet)	Packaging Qty.	Approx. Ballast Weight (lbs ea)	UL Bench Top Rise Code 1029
175W Metal Halide Pulse Start Lamp - ANSI Code M137 or M152																		
47686	M175/MULTI-PS-KIT	120/208/240/277	CWA	208	1.8/1.1/0.9/0.8	275	5/3/3/2	M	2.2	3.5	29	11	400	A-1	2	1	7.2	D/D/D/D
46801	M175/480-PS-KIT	480	CWA	208	0.5	275	2	M	2.4	3.6	32	11	400	A-1	2	1	8.5	B
200W Metal Halide Pulse Start Lamp - ANSI Code M136																		
47690	M200/MULTI-PS-KIT	120/208/240/277	CWA	232	2.0/1.2/1.0/0.9	270	6/4/3/3	M	2.5	3.6	29	12	400	A-2	2	1	8.3	B/B/A/B
46802	M200/480-PS-KIT	480	CWA	232	0.5	270	2	M	2.5	3.8	32	12	400	A-2	2	1	8.5	C
47259	M200/480/120T-PS-KIT	480/120 TAP	CWA	232	0.5	270	2	M	2.5	3.8	33	12	400	A-2	2	1	8.5	C



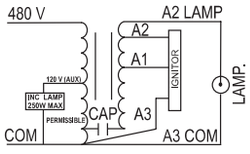
MULTI VOLTAGE
120/208/240/277 VOLT CONNECTION

Wiring Diagram 29



480 VOLT CONNECTION

Wiring Diagram 32



480 VOLT/120 V AUX CONNECTION

Wiring Diagram 33

Ground Ballast Core

Specifications

Starting Method: Pulse Start
Min. Starting Temp: -20°F (-30°C)
Input Frequency: 60 Hz
Power Factor: (min) 90%
Insulation Class: H (180°C)
Lead Length: 12 inches

14: Data based on highest current listed for operating, open circuit or starting current.

15: For additional information on capacitors see pages 74-77.

18: For additional information on ignitors see pages 78-79.

For information on brackets and clips see pages 74-77.

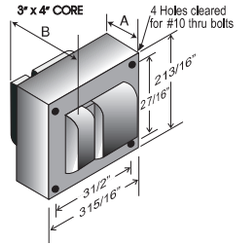
Metal Halide Pulse Start Magnetic Ballast Kits include core & coil, capacitors, ignitors, brackets, mounting hardware and installation instructions.

High voltage pulse present on open circuit.

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

Additional product information is available at www.sylvania.com

Figure M



Capacitor

Figure A-1 Ignitor
ROUND CASE

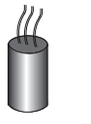
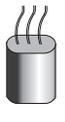


Figure A-2 Ignitor
OVAL CASE



Warranty

SYLVANIA magnetic ballasts are covered by our Magnetic Ballast Limited Warranty and our comprehensive Metal Halide and High Pressure Sodium Limited HID System Warranty. For Warranty details go to www.sylvania.com

Ordering Catalog

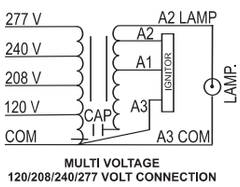
Item Number — **47686 M 175 MULTI PS KIT** — Packaging
Lamp Type: METALARC Metal Halide — Pulse Start
Lamp Wattage — Line Voltage

Specifications subject to change without notice.

METALARC® Metal Halide Pulse Start Core & Coil Ballast Kits

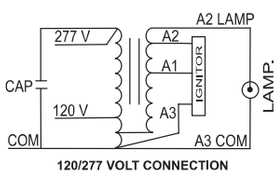
250W MH PS C&C Kits

Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	Circuit Type	Input Power (Watts)	Max.[14] Input Current (Amps)	Nom. Open Circuit Voltage	Fuse Rating (Amps)	Ballast Dimensions (inches) Fig.	A	B	Wiring Dia.	Dry Capacitor[15] Mfd	Min. V_{AC}	Ignitor[18] Fig.	Max. Dist. to lamp (feet)	Packaging Qty.	Approx. Ballast Weight (lbs ea)	UL Bench Top Rise Code 1029
250W Metal Halide Pulse Start Lamp - ANSI Code M138 or M153																		
47282	M250/SUPER5-PS-KIT	120/208/240/277/480	CWA	288	2.5/1.4/1.3/1.1/0.7	290	8/5/5/3/2	N	1.5	3.4	34	15	400	A-1	2	1	11.0	A/A/A/A/A
47112	M250/MULTI-PS-KIT	120/208/240/277	CWA	288	2.5/1.4/1.3/1.1	280	8/5/5/3	N	1.4	3.2	29	15	400	A-1	2	1	10.5	A/A/A/A
47106	M250/480-PS-KIT	480	CWA	288	0.7	290	2	N	1.5	3.4	32	15	400	A-1	2	1	11.0	A
47283	M250/480/120T-PS-KIT	480/120 TAP	CWA	288	0.7	290	2	N	1.5	3.4	33	15	400	A-1	2	1	11.0	A
250W HQI Metal Halide Lamp - ANSI Code M80																		
47273	M250/120/277-KIT	120/277	HX-HPF	290	5.5/2.3	240	15/6	N	2.6	4.3	30	25	280	A-2	5	1	15.5	A/A



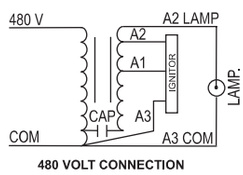
MULTI VOLTAGE
120/208/240/277 VOLT CONNECTION

Wiring Diagram 29



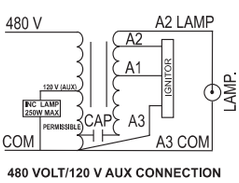
120/277 VOLT CONNECTION

Wiring Diagram 30



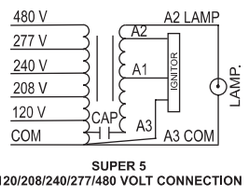
480 VOLT CONNECTION

Wiring Diagram 32



480 VOLT/120 V AUX CONNECTION

Wiring Diagram 33



SUPER 5
120/208/240/277/480 VOLT CONNECTION

Wiring Diagram 34

Ground Ballast Core

Specifications

Starting Method: Pulse Start
Min. Starting Temp: -20°F (-30°C)
Input Frequency: 60 Hz
Power Factor: (min) 90%
Insulation Class: H (180°C)
Lead Length: 12 inches

14: Data based on highest current listed for operating, open circuit or starting current.
15: For additional information on capacitors see pages 74-77.
18: For additional information on ignitors see pages 78-79.

For information on brackets and clips see pages 74-77.

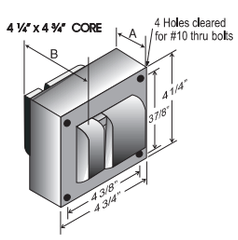
Metal Halide Pulse Start Magnetic Ballast Kits include core & coil, capacitors, ignitors, brackets, mounting hardware and installation instructions.

High voltage pulse present on open circuit.

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

Additional product information is available at www.sylvania.com

Figure N



Capacitor

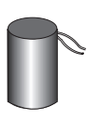


Figure A-1 Ignitor
ROUND CASE

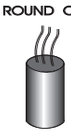


Figure A-2 Ignitor
OVAL CASE

Warranty

SYLVANIA magnetic ballasts are covered by our Magnetic Ballast Limited Warranty and our comprehensive Metal Halide and High Pressure Sodium Limited HID System Warranty. For Warranty details go to www.sylvania.com

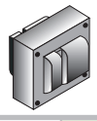
Ordering Catalog

Item Number — **47282 M 250 SUPER5 PS KIT** — Packaging
Lamp Type: METALARC Metal Halide — Pulse Start
Lamp Wattage — Line Voltage

Specifications subject to change without notice.

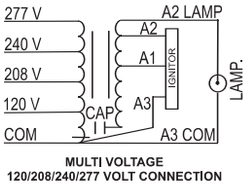
OSRAM SYLVANIA National Customer Service and Sales Center
1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

METALARC® Metal Halide Pulse Start Core & Coil Ballast Kits

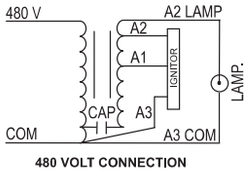


320W-350W MH PS C&C Kits

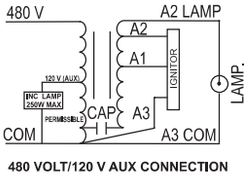
Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	Circuit Type	Input Power (Watts)	Max.[14] Input Current (Amps)	Nom. Open Circuit Voltage	Fuse Rating (Amps)	Ballast Dimensions (inches)			Wiring Dia.	Dry Capacitor[15]		Ignitor[18]		Packaging		UL Bench Top Rise Code 1029
								Fig.	A	B		Mfd	Min. V_{AC}	Fig.	Max. Dist. to lamp (feet)	Qty.	Approx. Ballast Weight (lbs ea)	
320W Metal Halide Pulse Start Lamp - ANSI Code M132 or M154																		
47676	M320/MULTI-PS-KIT	120/208/240/277	CWA	368	3.2/1.9/1.6/1.4	270	8/6/5/3	N	1.8	3.7	29	21	350	A-1	2	1	11.8	A/A/A/A
46803	M320/480-PS-KIT	480	CWA	368	0.9	270	3	N	1.8	3.5	32	21	350	A-1	2	1	11.0	A
47303	M320/480/120T-PS-KIT	480/120 TAP	CWA	368	0.8	270	3	N	1.8	3.5	33	21	350	A-1	2	1	11.0	A
350W Metal Halide Pulse Start Lamp - ANSI Code M131																		
47695	M350/MULTI-PS-KIT	120/208/240/277	CWA	400	3.4/2.0/1.7/1.5	275	10/7/5/5	N	1.8	3.7	29	22	350	A-1	2	1	11.8	C/C/C/C
47697	M350/480-PS-KIT	480	CWA	400	0.9	275	3	N	1.8	3.7	32	22	350	A-1	2	1	11.8	C
47337	M350/480/120T-PS-KIT	480/120 TAP	CWA	400	0.9	275	3	N	1.8	3.7	33	22	350	A-1	2	1	11.8	C



Wiring Diagram 29



Wiring Diagram 32



Wiring Diagram 33

Ground Ballast Core

Specifications

Starting Method: Pulse Start
Min. Starting Temp: -20°F (-30°C)
Input Frequency: 60 Hz
Power Factor: (min) 90%
Insulation Class: H (180°C)
Lead Length: 12 inches

14: Data based on highest current listed for operating, open circuit or starting current.

15: For additional information on capacitors see pages 74-77.

18: For additional information on ignitors see pages 78-79.

For information on brackets and clips see pages 74-77.

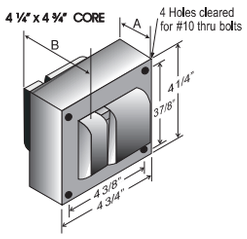
Metal Halide Pulse Start Magnetic Ballast Kits include core & coil, capacitors, ignitors, brackets, mounting hardware and installation instructions.

High voltage pulse present on open circuit.

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

Additional product information is available at www.sylvania.com

Figure N



Capacitor

Figure A-1 Ignitor

Warranty

SYLVANIA magnetic ballasts are covered by our Magnetic Ballast Limited Warranty and our comprehensive Metal Halide and High Pressure Sodium Limited HID System Warranty. For Warranty details go to www.sylvania.com

Item Number — **47676 M 320 MULTI PS KIT** — Packaging
Lamp Type: METALARC Metal Halide — Pulse Start
Lamp Wattage — Line Voltage

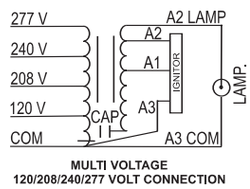
Ordering Catalog

Specifications subject to change without notice.

METALARC® Metal Halide Pulse Start Core & Coil Ballast Kits

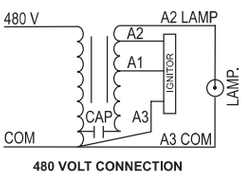
400W-450W MH PS C&C Kits

Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	Circuit Type	Input Power (Watts)	Max.[14] Input Current (Amps)	Nom. Open Circuit Voltage	Fuse Rating (Amps)	Ballast Dimensions (inches) Fig.	A	B	Wiring Dia.	Dry Capacitor[15] Mfd	Min. V_{AC}	Ignitor[18] Fig.	Max. Dist. to lamp (feet)	Packaging Qty.	Approx. Ballast Weight (lbs ea)	UL Bench Top Rise Code 1029
400W Metal Halide Pulse Start Lamp - ANSI Code M155 or M135																		
47400	M400/SUPER5-PS-KIT	120/208/240/277/480	CWA	452	3.8/2.2/1.9/1.7/1.0	275	10/7/5/5/3	N	2.0	4.1	34	24	360	A-1	2	1	14.0	B/B/B/B/B
47132	M400/MULTI-PS-KIT	120/208/240/277	CWA	452	3.8/2.2/1.9/1.7	270	10/7 5/5	N	1.8	3.7	29	24	360	A-1	2	1	11.8	E/E E/E
47138	M400/480-PS-KIT	480	CWA	452	1.0	270	3	N	1.8	3.7	32	24	360	A-1	2	1	12.0	E
47403	M400/480/120T-PS-KIT	480/120 TAP	CWA	452	1.0	275	3	N	2.0	4.1	33	24	360	A-1	2	1	14.0	B
450W Metal Halide Pulse Start Lamp - ANSI Code M144																		
47405	M450/MULTI-PS-KIT	120/208/240/277	CWA	508	4.3/2.5/2.2/1.9	275	10/8/5/5	N	2.3	4.1	29	26.5	400	A-1	2	1	15.4	C/C/C/C
46804	M450/480-PS-KIT	480	CWA	505	1.1	275	3	N	2.5	4.3	32	26.5	400	A-1	2	1	16.0	C
47408	M450/480/120T-PS-KIT	480/120 TAP	CWA	505	1.1	275	3	N	2.5	4.3	33	26.5	400	A-1	2	1	16.0	C



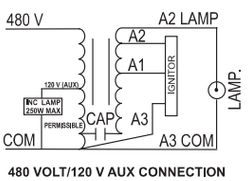
MULTI VOLTAGE
120/208/240/277 VOLT CONNECTION

Wiring Diagram 29



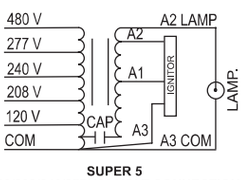
480 VOLT CONNECTION

Wiring Diagram 32



480 VOLT/120 V AUX CONNECTION

Wiring Diagram 33

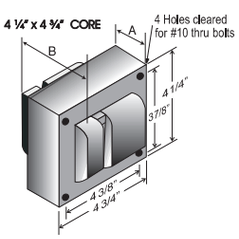


SUPER 5
120/208/240/277/480 VOLT CONNECTION

Wiring Diagram 34

Ground Ballast Core

Figure N



Capacitor

Figure A-1 Ignitor

Specifications

Starting Method: Pulse Start
Min. Starting Temp: -20°F (-30°C)
Input Frequency: 60 Hz
Power Factor: (min) 90%
Insulation Class: H (180°C)
Lead Length: 12 inches

14: Data based on highest current listed for operating, open circuit or starting current.

15: For additional information on capacitors see pages 74-77.

18: For additional information on ignitors see pages 78-79.

For information on brackets and clips see pages 74-77.

Metal Halide Pulse Start Magnetic Ballast Kits include core & coil, capacitors, ignitors, brackets, mounting hardware and installation instructions.

High voltage pulse present on open circuit.

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

Additional product information is available at www.sylvania.com

Warranty

SYLVANIA magnetic ballasts are covered by our Magnetic Ballast Limited Warranty and our comprehensive Metal Halide and High Pressure Sodium Limited HID System Warranty. For Warranty details go to www.sylvania.com

Ordering Catalog

Specifications subject to change without notice.

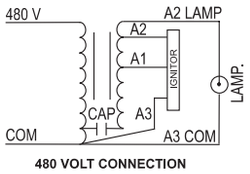
Item Number	47400	M	400	SUPER5	PS	KIT	Packaging
Lamp Type: METALARC Metal Halide							Pulse Start
Lamp Wattage							Line Voltage

OSRAM SYLVANIA National Customer Service and Sales Center
1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

METALARC® Metal Halide Pulse Start Core & Coil Ballast Kits

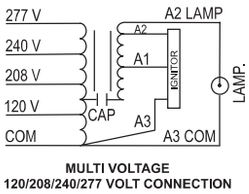
750W-1000W MH PS C&C Kits

Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	Circuit Type	Input Power (Watts)	Max.[14] Input Current (Amps)	Nom. Open Circuit Voltage	Fuse Rating (Amps)	Ballast Dimensions (inches) Fig.	A	B	Wiring Dia.	Dry Capacitor[15] Mfd	Min. V_{AC}	Ignitor[18] Fig.	Max. Dist. to lamp (feet)	Packaging Qty.	Approx. Ballast Weight (lbs ea)	UL Bench Top Rise Code 1029
750W Metal Halide Pulse Start Lamp - ANSI Code M149																		
47717	M750/MULTI-PS-KIT	120/208/240/277	CWA	818	7.0/4.0/3.5/3.0	360	20/10/10/8	0	2.4	4.4	35	23.5	480	A-2	5	1	20.0	D/D/D/D
47409	M750/120/277/347/480-PS-KIT	120/277/347/480	CWA	818	7.0/3.0/2.5/1.8	360	20/8/7/5	0	2.4	4.4	36	23.5	480	A-2	5	1	20.0	D/D/D/D
47718	M750/480-PS-KIT	480	CWA	818	1.8	360	5	0	2.4	4.4	32	23.5	480	A-2	5	1	20.0	D
1000W Metal Halide Pulse Start Lamp - ANSI Code M141																		
47416	M1000/MULTI-PS-KIT	120/208/240/277	CWA	1080	9.0/5.2/4.5/3.9	421	20/15/10/10	0	2.8	4.8	35	24	480	A-2	25	1	23.0	D/B/B/B
47417	M1000/120/277/347/480-PS-KIT	120/277/347/480	CWA	1080	9.0/3.9/3.2/2.4	421	20/10/10/6	0	3.0	5.3	36	24	480	A-2	25	1	22.0	B/C/C/B
46805	M1000/480-PS-KIT	480	CWA	1080	2.3	421	6	0	2.8	4.8	32	24	480	A-2	25	1	23.0	C



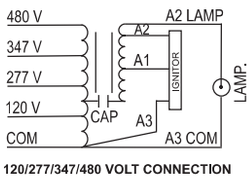
480 VOLT CONNECTION

Wiring Diagram 32



MULTI VOLTAGE
120/208/240/277 VOLT CONNECTION

Wiring Diagram 35



120/277/347/480 VOLT CONNECTION

Wiring Diagram 36

Ground Ballast Core

Specifications

Starting Method: Pulse Start
Min. Starting Temp: -20°F (-30°C)
Input Frequency: 60 Hz
Power Factor: (min) 90%
Insulation Class: H (180°C)
Lead Length: 12 inches

14: Data based on highest current listed for operating, open circuit or starting current.

15: For additional information on capacitors see pages 74-77.

18: For additional information on ignitors see pages 78-79.

For information on brackets and clips see pages 74-77.

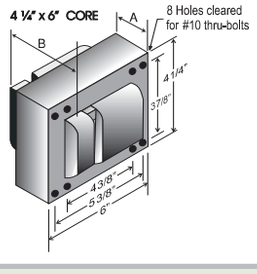
Metal Halide Pulse Start Magnetic Ballast Kits include core & coil, capacitors, ignitors, brackets, mounting hardware and installation instructions.

High voltage pulse present on open circuit.

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

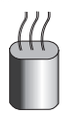
Additional product information is available at www.sylvania.com

Figure O



Capacitor

Figure A-2
Ignitor
OVAL CASE



Warranty

SYLVANIA magnetic ballasts are covered by our Magnetic Ballast Limited Warranty and our comprehensive Metal Halide and High Pressure Sodium Limited HID System Warranty. For Warranty details go to www.sylvania.com

Ordering Catalog

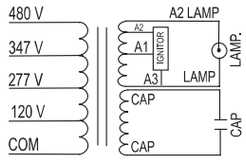
Item Number	47717	M	750	MULTI	PS	KIT	Packaging
Lamp Type: METALARC Metal Halide							Pulse Start
Lamp Wattage							Line Voltage

Specifications subject to change without notice.

METALARC® Metal Halide Pulse Start Core & Coil Regulated Lag Ballast

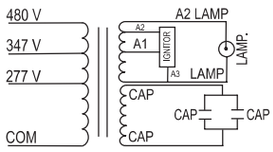
1000W-2000W MH PS RL C&C

Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	Circuit Type	Input Power (Watts)	Max.[14] Input Current (Amps)	Nom. Open Circuit Voltage	Fuse Rating (Amps)	Ballast Dimensions (inches) Fig.	A	B	Wiring Dia.	Dry Capacitor[15] Mfd	Min. V_{AC}	Ignitor[18] Fig.	Max. Dist. to lamp (feet)	Packaging Qty.	Approx. Ballast Weight (lbs ea)	UL Bench Top Rise Code 1029
1000W HQI Metal Halide Lamp																		
47089	M1000/120/277/347/480-HQI-RL	120/277/347/480	Reg. Lag	1150	9.5/4.1/3.3/2.4	255	25/12/9/7	P	3.0	6.0	37	32[17]	350	A-2	5	1	56.5	C/D/C/C
2000W HQI Metal Halide Lamp																		
47090	M2000/277/347/480-HQI-RL	277/347/480	Reg. Lag	2200	8.5/6.8/4.9	370	25/20/15	P	4.4	7.5	38	34.5[17]	525	A-2	5	1	79.0	G/G/F



120/277/347/480 VOLT CONNECTION

Wiring Diagram 37



277/347/480 VOLT CONNECTION

Wiring Diagram 38

Ground Ballast Core

Specifications

Starting Method: Pulse Start
Min. Starting Temp: -20°F (-30°C)
Input Frequency: 60 Hz
Power Factor: (min) 90%
Insulation Class: H (180°C)
Lead Length: 12 inches

14: Data based on highest current listed for operating, open circuit or starting current.

15: For additional information on capacitors see pages 74-77.

17: This ballast requires 2 capacitors which are included in the ballast kit.

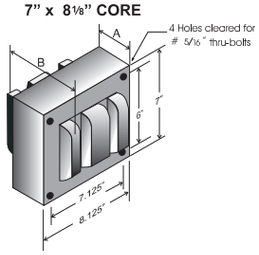
18: For additional information on ignitors see pages 78-79.

High voltage pulse present on open circuit.

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

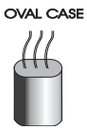
Additional product information is available at www.sylvania.com

Figure P
7" x 8⅛" CORE



Capacitor

Figure A-2
Ignitor



Warranty

SYLVANIA magnetic ballasts are covered by our Magnetic Ballast Limited Warranty and our comprehensive Metal Halide and High Pressure Sodium Limited HID System Warranty. For Warranty details go to www.sylvania.com

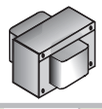
Ordering Catalog

Item Number	47089	M1000	120/277/347/480	HQI	RL	
Lamp Type: METALARC Metal Halide						Circuit - Regulated Lag
Lamp Wattage						Lamp Type
						Line Voltage

Specifications subject to change without notice.

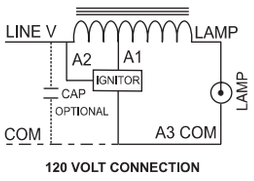
OSRAM SYLVANIA National Customer Service and Sales Center
1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

LUMALUX® High Pressure Sodium Core & Coil Reactor Ballasts



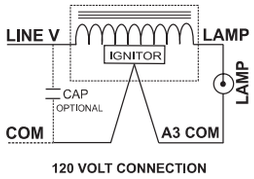
35W-150W HPS C&C Reactor

Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	Circuit Type	Input Power (Watts)	Max.[14] Input Current (Amps)	Nom. Open Circuit Voltage	Fuse Rating (Amps)	Ballast Dimensions (inches)			Wiring Dia.	Ignitor[18]		Packaging		UL Bench Top Rise Code 1029
								Fig.	A	B		Fig.	Max. Dist. to lamp (feet)	Qty.	Approx. Ballast Weight (lbs ea)	
35W High Pressure Sodium Lamp - ANSI Code S76																
47269	LU35/120R	120	R-NPF[19]	45	1.1	120	3	Q	0.7	1.8	39	A-3	2	12	1.8	B
47537	LU35/120R-INT[20]	120	R-NPF[19]	45	1.1	120	3	Q	0.7	2.2	40	Integral Ignitor	2	12	1.5	B
50W High Pressure Sodium Lamp - ANSI Code S68																
47274	LU50/120R	120	R-NPF[19]	60	1.5	120	5	Q	1.0	2.3	39	A-3	2	12	2.3	A
47548	LU50/120R-INT[20]	120	R-NPF[19]	60	1.5	120	5	Q	1.0	2.6	40	Integral Ignitor	2	12	2.1	A
70W High Pressure Sodium Lamp - ANSI Code S62																
47284	LU70/120R	120	R-NPF[19]	81	2.0	120	8	Q	1.3	2.5	39	A-3	2	12	2.7	A
47558	LU70/120R-INT[20]	120	R-NPF[19]	81	2.0	120	8	Q	1.3	2.9	40	Integral Ignitor	2	12	2.5	A
100W High Pressure Sodium Lamp - ANSI Code S54																
47304	LU100/120R	120	R-NPF[19]	120	2.7	120	10	Q	1.7	3.0	39	A-3	2	12	3.4	A
47585	LU100/120R-INT[5]	120	R-NPF[19]	120	2.7	120	10	Q	1.7	3.2	40	Integral Ignitor	2	12	3.1	A
150W High Pressure Sodium Lamp - ANSI Code S55																
47319	LU150/120R	120	R-NPF[19]	170	4.1	120	15	Q	1.9	3.2	39	A-3	2	12	3.9	B
47616	LU150/120R-INT[5]	120	R-NPF[19]	170	4.1	120	15	Q	1.9	3.6	40	Integral Ignitor	2	12	3.5	B



120 VOLT CONNECTION

Wiring Diagram 39



120 VOLT CONNECTION

Wiring Diagram 40

Ground Ballast Core

Figure Q
2⅝"x 2³⁄₁₆" CORE

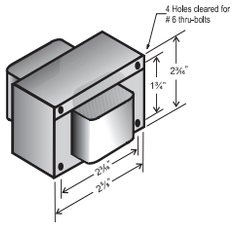
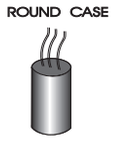


Figure A-3
Ignitor



Specifications

Starting Method: Pulse Start
Min. Starting Temp: -40°F (-40°C)
Input Frequency: 60 Hz
Power Factor: (min) 45%
Insulation Class: H (180°C)
Lead Length: 12 inches

14: Data based on highest current listed for operating, open circuit or starting current.

18: For additional information on ignitors see pages 78-79.

19: Power Factor can be corrected to high power factor by the addition of an appropriately sized capacitor wired across the input leads to the ballast. For specific capacitance values, please see our specification sheets at www.sylvania.com

20: R-INT = Reactor with Integral Ignitor

High voltage pulse present on open circuit.

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

Additional product information is available at www.sylvania.com

Warranty

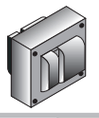
SYLVANIA magnetic ballasts are covered by our Magnetic Ballast Limited Warranty and our comprehensive Metal Halide and High Pressure Sodium Limited HID System Warranty. For Warranty details go to www.sylvania.com

Ordering Catalog

Specifications subject to change without notice.

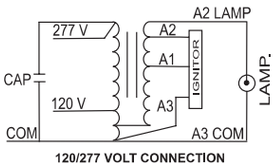
Item Number — **47269 LU 35 120 R** — Circuit - Reactor
Lamp Type: LUMALUX High Pressure Sodium — Line Voltage
Lamp Wattage

LUMALUX® High Pressure Sodium Core & Coil Ballast Kits



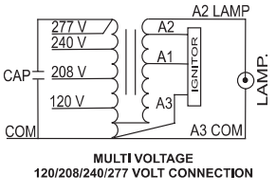
35W-100W HPS C&C Kits

Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	Circuit Type	Input Power (Watts)	Max.[14] Input Current (Amps)	Nom. Open Circuit Voltage	Fuse Rating (Amps)	Ballast Dimensions (inches)			Wiring Dia.	Dry Capacitor[15]		Ignitor[18]		Packaging		UL Bench Top Rise Code 1029
								Fig.	A	B		Mfd	Min. V_{AC}	Fig.	Max. Dist. to lamp (feet)	Qty.	Approx. Ballast Weight (lbs ea)	
35W High Pressure Sodium Lamp - ANSI Code S76																		
47271	LU35/120/240-KIT	120/240	HX-HPF	47	0.8/0.4	120	3/1	M	1.0	2.2	41	4	280	A-2	2	1	4.1	A/A
50W High Pressure Sodium Lamp - ANSI Code S68																		
47549	LU50/120/277-KIT	120/277	HX-HPF	66	1.1/0.5	120	3/1	M	1.0	2.2	30	5	280	A-2	2	1	5.0	A/A
70W High Pressure Sodium Lamp - ANSI Code S62																		
47301	LU70/MULTI-KIT	120/208/ 240/277	HX-HPF	91	1.4/0.9/ 0.7/0.6	120	5/3/ 2/2	M	1.5	2.8	31	7	280	A-2	2	1	6.1	A/A/ A/A
47579	LU70/480-KIT	480	HX-HPF	91	0.4	120	2	M	1.5	2.8	42	7	280	A-2	2	1	6.0	A
47571	LU70/120/277-KIT	120/277	HX-HPF	91	1.4/0.6	120	5/2	M	1.5	2.8	30	7	280	A-2	2	1	6.0	A/A
100W High Pressure Sodium Lamp - ANSI Code S54																		
47316	LU100/MULTI-KIT	120/208/ 240/277	HX-HPF	128	2.0/1.2/ 1.0/0.9	120	7/5/ 3/3	M	2.0	3.4	31	10	280	A-2	2	1	6.5	A/A/ A/A
47593	LU100/480-KIT	480	HX-HPF	128	0.5	120	2	M	2.0	3.4	42	10	280	A-2	2	1	6.5	A
47592	LU100/120/277-KIT	120/277	HX-HPF	128	2.0/0.9	120	7/3	M	2.0	3.4	30	10	280	A-2	2	1	6.5	A/A



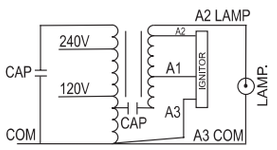
120/277 VOLT CONNECTION

Wiring Diagram 30



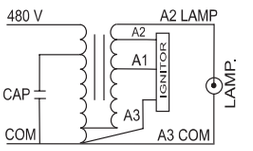
MULTI VOLTAGE
120/208/240/277 VOLT CONNECTION

Wiring Diagram 31



120/240 VOLT CONNECTION

Wiring Diagram 41

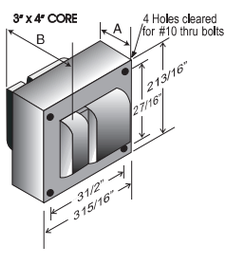


480 VOLT CONNECTION

Wiring Diagram 42

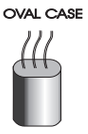
Ground Ballast Core

Figure M



Capacitor

Figure A-2 Ignitor



Specifications

Starting Method: Pulse Start
Min. Starting Temp: -40°F (-40°C)
Input Frequency: 60 Hz
Power Factor: (min) 90%
Insulation Class: H (180°C)
Lead Length: 12 inches

14: Data based on highest current listed for operating, open circuit or starting current.

15: For additional information on capacitors see pages 74-77.

18: For additional information on ignitors see pages 78-79.

For information on brackets and clips see pages 74-77.

LUMALUX High Pressure Sodium Magnetic Ballast Kits include core & coil, capacitors, ignitors, brackets, mounting hardware and installation instructions.

High voltage pulse present on open circuit.

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

Additional product information is available at www.sylvania.com

Warranty

SYLVANIA magnetic ballasts are covered by our Magnetic Ballast Limited Warranty and our comprehensive Metal Halide and High Pressure Sodium Limited HID System Warranty. For Warranty details go to www.sylvania.com

Ordering Catalog

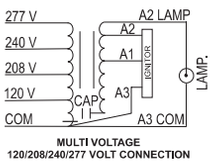
Specifications subject to change without notice.

Item Number — **47301 LU 70 MULTI KIT** — Packaging
Lamp Type: LUMALUX High Pressure Sodium — Line Voltage
Lamp Wattage

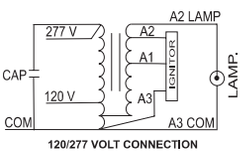
OSRAM SYLVANIA National Customer Service and Sales Center
1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

LUMALUX® High Pressure Sodium Core & Coil Ballast Kits

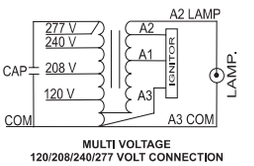
Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	Circuit Type	Input Power (Watts)	Max.[14] Input Current (Amps)	Nom. Open Circuit Voltage	Fuse Rating (Amps)	Ballast Dimensions (inches)			Wiring Dia.	Dry Capacitor[15]		Ignitor[18]		Packaging		UL Bench Top Rise Code 1029
								Fig.	A	B		Mfd	Min. V_{AC}	Fig.	Max. Dist. to lamp (feet)	Qty.	Approx. Ballast Weight (lbs ea)	
150W High Pressure Sodium Lamp - ANSI Code S55																		
47335	LU150/MULTI-KIT	120/208/240/277	HX-HPF	188	2.8/1.7/1.5/1.3	120	10/5/5/4	M	2.5	3.9	31	14	280	A-2	2	1	8.0	C/B/B/B
47619	LU150/480-KIT	480	HX-HPF	188	0.8	120	2	M	3.0	4.0	42	14	280	A-2	2	1	9.0	E
47621	LU150/480/120T-KIT	480/120 TAP	HX-HPF	188	0.8	120	2	M	3.0	4.0	43	14	280	A-2	2	1	9.0	E
47617	LU150/120/277-KIT	120/277	HX-HPF	188	2.8/1.3	120	10/4	M	2.5	3.9	30	14	280	A-2	2	1	8.0	C/B
47623	LU150/480-CWA-KIT	480	CWA	185	0.4	110	1	M	2.8	4.1	32	55	170	A-2	2	1	10.0	B
200W High Pressure Sodium Lamp - ANSI Code S66																		
47628	LU200/MULTI-KIT	120/208/240/277	CWA	230	2.0/1.1/1.0/0.9	182	6/4/3/3	N	1.2	3.0	29	28	240	A-2	2	1	9.0	B/B/A/A
47631	LU200/480-KIT	480	CWA	230	0.5	182	2	N	1.2	2.9	32	28	240	A-2	2	1	9.5	C



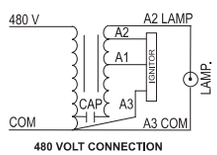
Wiring Diagram 29



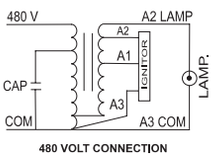
Wiring Diagram 30



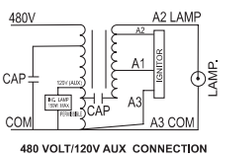
Wiring Diagram 31



Wiring Diagram 32



Wiring Diagram 42



Wiring Diagram 43

Ground Ballast Core

Figure M

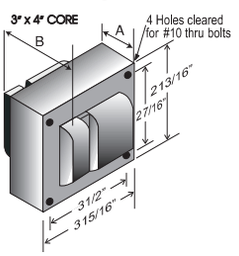
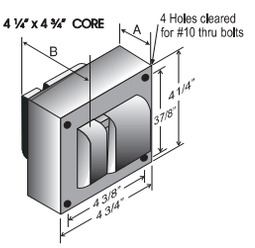


Figure N



Capacitor

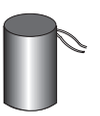
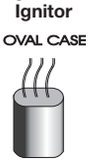


Figure A-2 Ignitor



Item Number — **47335 LU 150 MULTI KIT** — Packaging

Lamp Type: LUMALUX High Pressure Sodium — Line Voltage

Lamp Wattage

Specifications

Starting Method: Pulse Start
Min. Starting Temp: -40°F (-40°C)
Input Frequency: 60 Hz
Power Factor: (min) 90%
Insulation Class: H (180°C)
Lead Length: 12 inches

14: Data based on highest current listed for operating, open circuit or starting current.

15: For additional information on capacitors see pages 74-77.

18: For additional information on ignitors see pages 78-79.

For information on brackets and clips see pages 74-77.

LUMALUX High Pressure Sodium Magnetic Ballast Kits include core & coil, capacitors, ignitors, brackets, mounting hardware and installation instructions.

High voltage pulse present on open circuit.

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

Additional product information is available at www.sylvania.com

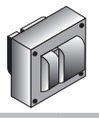
Warranty

SYLVANIA magnetic ballasts are covered by our Magnetic Ballast Limited Warranty and our comprehensive Metal Halide and High Pressure Sodium Limited HID System Warranty. For Warranty details go to www.sylvania.com

Ordering Catalog

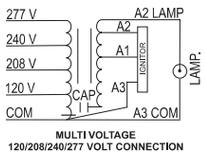
Specifications subject to change without notice.

LUMALUX® High Pressure Sodium Core & Coil Ballast Kits

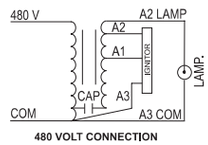


250W-310W HPS C&C Kits

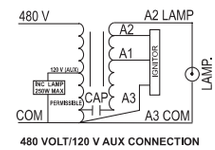
Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	Circuit Type	Input Power (Watts)	Max.[14] Input Current (Amps)	Nom. Open Circuit Voltage	Fuse Rating (Amps)	Ballast Dimensions (inches)			Wiring Dia.	Dry Capacitor[15]		Ignitor[18]		Packaging		UL Bench Top Rise Code 1029
								Fig.	A	B		Mfd	Min. V_{AC}	Fig.	Max. Dist. to lamp (feet)	Qty.	Approx. Ballast Weight (lbs ea)	
250W High Pressure Sodium Lamp - ANSI Code S50																		
47634	LU250/SUPER5-KIT	120/208/240/277/480	CWA	295	2.5/1.5/1.3/1.1/0.7	190	10/4/4/3/2	N	2.0	4.0	34	35	240	A-2	2	1	12.8	A/A/A/A/A
47357	LU250/MULTI-KIT	120/208/240/277	CWA	295	2.5/1.5/1.3/1.1	185	8/5/4/4	N	1.8	3.5	29	35	240	A-2	2	1	11.6	A/B/A/A
47358	LU250/480-KIT	480	CWA	295	0.7	185	2	N	1.8	3.5	32	35	240	A-2	2	1	12.0	B
47637	LU250/480/120T-KIT	480/120 TAP	CWA	295	0.7	185	2	N	1.8	3.5	33	35	240	A-2	2	1	12.0	B
47642	LU250/120/277-KIT	120/277	CWA	295	2.5/1.1	185	7/3	N	1.8	3.5	44	35	240	A-2	2	1	12.0	A/A
310W High Pressure Sodium Lamp - ANSI Code S67																		
47643	LU310/MULTI-KIT	120/208/240/277	CWA	355	3.0/1.7/1.5/1.3	185	8/5/5/5	N	2.2	4.0	29	45	280	A-2	2	1	14.0	C/B/B/B
47644	LU310/480-KIT	480	CWA	355	0.8	185	2	N	2.2	3.8	32	45	280	A-2	2	1	14.3	D



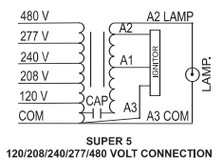
Wiring Diagram 29



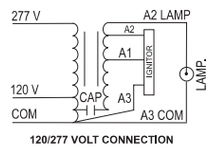
Wiring Diagram 32



Wiring Diagram 33



Wiring Diagram 34



Wiring Diagram 44

Ground Ballast Core

Specifications

Starting Method: Pulse Start
Min. Starting Temp: -40°F (-40°C)
Input Frequency: 60 Hz
Power Factor: (min) 90%
Insulation Class: H (180°C)
Lead Length: 12 inches

14: Data based on highest current listed for operating, open circuit or starting current.

15: For additional information on capacitors see pages 74-77.

18: For additional information on ignitors see pages 78-79.

For information on brackets and clips see pages 74-77.

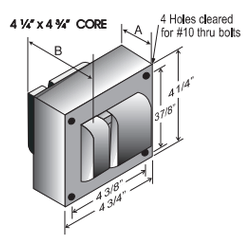
LUMALUX High Pressure Sodium Magnetic Ballast Kits include core & coil, capacitors, ignitors, brackets, mounting hardware and installation instructions.

High voltage pulse present on open circuit.

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

Additional product information is available at www.sylvania.com

Figure N



Capacitor

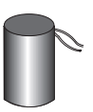
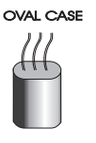


Figure A-2 Ignitor



Warranty

SYLVANIA magnetic ballasts are covered by our Magnetic Ballast Limited Warranty and our comprehensive Metal Halide and High Pressure Sodium Limited HID System Warranty. For Warranty details go to www.sylvania.com

Ordering Catalog

Specifications subject to change without notice.

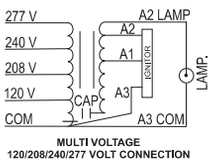
Item Number — **47634 LU 250 SUPER5 KIT** — Packaging
Lamp Type: LUMALUX High Pressure Sodium — Line Voltage
Lamp Wattage

OSRAM SYLVANIA National Customer Service and Sales Center
1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

LUMALUX® High Pressure Sodium Core & Coil Ballast Kits

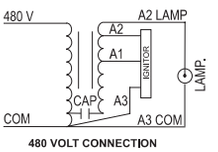
400W HPS C&C Kits

Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	Circuit Type	Input Power (Watts)	Max.[14] Input Current (Amps)	Nom. Open Circuit Voltage	Fuse Rating (Amps)	Ballast Dimensions (inches)			Wiring Dia.	Dry Capacitor[15]		Ignitor[18]		Packaging		UL Bench Top Rise Code 1029
								Fig.	A	B		Mfd	Min. V_{AC}	Fig.	Max. Dist. to lamp (feet)	Qty.	Approx. Ballast Weight (lbs ea)	
400W High Pressure Sodium Lamp - ANSI Code S51																		
47647	LU400/SUPER5-KIT	120/208/240/277/480	CWA	464	3.8/2.2/1.9/1.7/1.0	190	10/6/5/5/3	N	2.7	4.8	34	55	240	A-2	2	1	16.5	C/C/C/C C
47364	LU400/MULTI-KIT	120/208/240/277	CWA	464	3.9/2.3/2.0/1.7	190	10/8/5/5	N	2.3	4.0	29	55	240	A-2	2	1	14.6	D/D/D/D
47376	LU400/480-KIT	480	CWA	464	1.0	190	3	N	2.3	4.0	32	55	240	A-2	2	1	15.0	C
47657	LU400/480/120T-KIT	480/120 TAP	CWA	464	1.0	190	3	N	2.3	4.0	33	55	240	A-2	2	1	15.0	C
47656	LU400/120/277-KIT	120/277	CWA	464	3.9/1.7	190	10/5	N	2.3	4.0	44	55	240	A-2	2	1	15.0	D/D



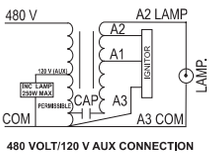
MULTI VOLTAGE
120/208/240/277 VOLT CONNECTION

Wiring Diagram 29



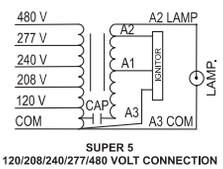
480 VOLT CONNECTION

Wiring Diagram 32



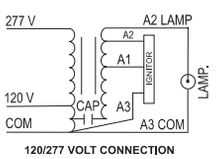
480 VOLT/120 V AUX CONNECTION

Wiring Diagram 33



SUPER 5
120/208/240/277/480 VOLT CONNECTION

Wiring Diagram 34



120/277 VOLT CONNECTION

Wiring Diagram 44

Specifications

Starting Method: Pulse Start
Min. Starting Temp: -40°F (-40°C)
Input Frequency: 60 Hz
Power Factor: (min) 90%
Insulation Class: H (180°C)
Lead Length: 12 inches

14: Data based on highest current listed for operating, open circuit or starting current.

15: For additional information on capacitors see pages 74-77.

18: For additional information on ignitors see pages 78-79.

For information on brackets and clips see pages 74-77.

LUMALUX High Pressure Sodium Magnetic Ballast Kits include core & coil, capacitors, ignitors, brackets, mounting hardware and installation instructions.

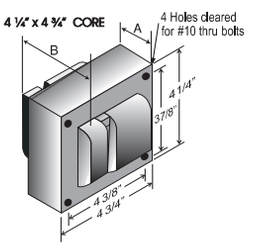
High voltage pulse present on open circuit.

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

Additional product information is available at www.sylvania.com

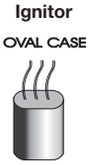
Ground Ballast Core

Figure N



Capacitor

Figure A-2 Ignitor



Warranty

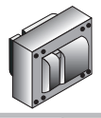
SYLVANIA magnetic ballasts are covered by our Magnetic Ballast Limited Warranty and our comprehensive Metal Halide and High Pressure Sodium Limited HID System Warranty. For Warranty details go to www.sylvania.com

Item Number — **47647 LU 400 SUPER5 KIT** — Packaging
Lamp Type: LUMALUX High Pressure Sodium — Line Voltage
Lamp Wattage

Ordering Catalog

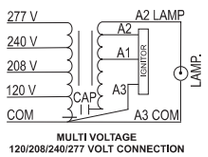
Specifications subject to change without notice.

LUMALUX® High Pressure Sodium Core & Coil Ballast Kits

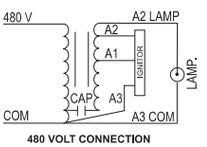


750W-1000W HPS C&C Kits

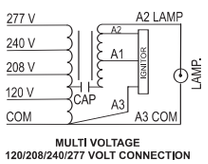
Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	Circuit Type	Input Power (Watts)	Max.[14] Input Current (Amps)	Nom. Open Circuit Voltage	Fuse Rating (Amps)	Ballast Dimensions (inches)			Wiring Dia.	Dry Capacitor[15]		Ignitor[18]		Packaging		UL Bench Top Rise Code 1029
								Fig.	A	B		Mfd	Min. V_{AC}	Fig.	Max. Dist. to lamp (feet)	Qty.	Approx. Ballast Weight (lbs ea)	
750W High Pressure Sodium Lamp - ANSI Code S111																		
47712	LU750/MULTI-KIT	120/208/240/277	CWA	830	6.8/4.0/3.5/3.1	220	20/10/10/10	0	3.2	5.2	29	37.5[17]	280	A-2	5	1	25.5	B/A/B/B
47658	LU750/480-KIT	480	CWA	830	1.8	220	5	0	3.2	5.2	32	37.5[17]	280	A-2	5	1	25.0	A
1000W High Pressure Sodium Lamp - ANSI Code S52																		
47659	LU1000/SUPER5-KIT	120/208/240/277/480	CWA	1100	9.5/5.5/4.7/4.1/2.4	440	25/15/12/10/6	0	4.0	6.3	45	26	525	A-2	2	1	31.0	C/B/B/B/A
47389	LU1000/MULTI-KIT	120/208/240/277	CWA	1100	9.5/5.5/4.8/4.1	435	25/15/10/10	0	3.8	6.0	35	26	525	A-2	2	1	29.0	D/C/D/D
47391	LU1000/480-KIT	480	CWA	1100	2.4	435	6	0	3.8	6.0	32	26	525	A-2	2	1	29.0	D



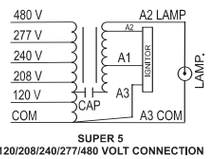
Wiring Diagram 29



Wiring Diagram 32



Wiring Diagram 35



Wiring Diagram 45

Ground Ballast Core

Specifications

Starting Method: Pulse Start
Min. Starting Temp: -40°F (-40°C)
Input Frequency: 60 Hz
Power Factor: (min) 90%
Insulation Class: H (180°C)
Lead Length: 12 inches

14: Data based on highest current listed for operating, open circuit or starting current.

15: For additional information on capacitors see pages 74-77.

17: This ballast requires 2 capacitors which are included in the ballast kit.

18: For additional information on ignitors see pages 78-79.

For information on brackets and clips see pages 74-77.

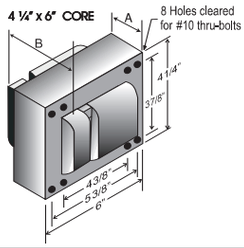
LUMALUX High Pressure Sodium Magnetic Ballast Kits include core & coil, capacitors, ignitors, brackets, mounting hardware and installation instructions.

High voltage pulse present on open circuit.

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

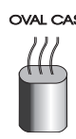
Additional product information is available at www.sylvania.com

Figure O



Capacitor

Figure A-2 Ignitor



Warranty

SYLVANIA magnetic ballasts are covered by our Magnetic Ballast Limited Warranty and our comprehensive Metal Halide and High Pressure Sodium Limited HID System Warranty. For Warranty details go to www.sylvania.com

Item Number — **47659 LU 1000 SUPER5 KIT** — Packaging
Lamp Type: LUMALUX High Pressure Sodium — Line Voltage
Lamp Wattage

Ordering Catalog

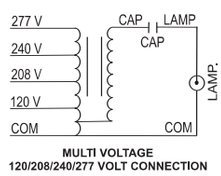
Specifications subject to change without notice.

OSRAM SYLVANIA National Customer Service and Sales Center
1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

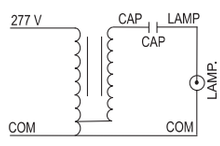
Mercury Vapor
Core & Coil Ballast Kits

50W-100W Mercury C&C Kits

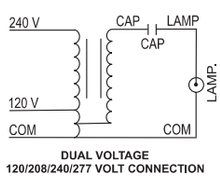
Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	Circuit Type	Input Power (Watts)	Max.[14] Input Current (Amps)	Nom. Open Circuit Voltage	Fuse Rating (Amps)	Ballast Dimensions (in)			Wiring Dia.	Dry Capacitor[15]		Packaging		UL Bench Top Rise Code 1029
								Fig.	A	B		Mfd	Min. V_{AC}	Qty.	Approx. Ballast Wt. (lbs ea)	
50W Mercury Lamp - ANSI Code H46																
46518	H50/MULTI-KIT	120/208/240/277	CWA	68	0.6/0.4/0.3/0.3	235	2/1/1/1	M	0.8	2.4	46	7	280	1	3.8	A/A/A/A
75W Mercury Lamp - ANSI Code H43																
46519	H75/MULTI-KIT	120/208/240/277	CWA	92	0.8/0.5/0.4/0.4	250	3/2/1/1	M	1.0	2.4	46	8	280	1	4.5	A/A/A/A
100W Mercury Lamp - ANSI Code H38 or H44																
46522	H100/MULTI-KIT	120/208/240/277	CWA	120	1.1/0.6/0.5/0.5	250	3/2/2/2	M	1.2	2.6	46	10	280	1	5.0	A/A/A/A
47472	H100/277-KIT	277	CWA	120	0.5	250	2	M	1.2	2.6	47	10	280	1	5.0	A
47471	H100/DUAL-KIT	120/240	CWA	120	1.1/0.5	250	3/2	M	1.2	2.6	48	10	280	1	5.0	A/A



Wiring Diagram 46



Wiring Diagram 47



Wiring Diagram 48

Ground Ballast Core

Specifications

Starting Method: Probe Start
Min. Starting Temp: -20°F (-30°C)
Input Frequency: 60 Hz
Power Factor: (min) 90%
Insulation Class: H (180°C)
Lead Length: 12 inches

14: Data based on highest current listed for operating, open circuit or starting current.

15: For additional information on capacitors see pages 74-77.

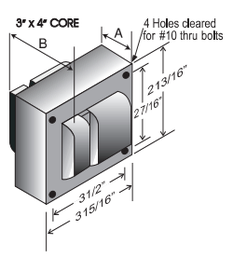
For information on brackets and clips see pages 74-77.

Mercury Vapor Ballast Kits include core & coil, capacitors, brackets, mounting hardware and installation instructions.

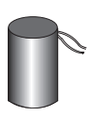
Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

Additional product information is available at www.sylvania.com

Figure M



Capacitor



Warranty

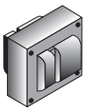
SYLVANIA magnetic ballasts are covered by our Magnetic Ballast Limited Warranty. For Warranty details go to www.sylvania.com

Ordering Catalog

Item Number — **46519 H 75 MULTI KIT** — Packaging
Lamp Type: Mercury Vapor — Line Voltage
Lamp Wattage

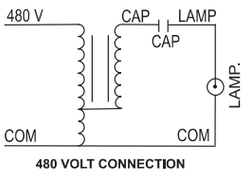
Specifications subject to change without notice.

Mercury Vapor Core & Coil Ballast Kits



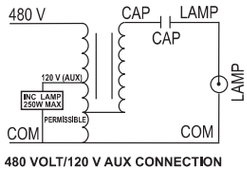
175W-250W Mercury C&C Kits

Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	Circuit Type	Input Power (Watts)	Max.[14] Input Current (Amps)	Nom. Open Circuit Voltage	Fuse Rating (Amps)	Ballast Dimensions (in)			Wiring Dia.	Dry Capacitor[15]		Packaging		UL Bench Top Rise Code 1029
								Fig.	A	B		Mfd	Min. V_{AC}	Qty.	Approx. Ballast Wt. (lbs ea)	
175W Mercury Lamp - ANSI Code H39																
47489	H175/MULTI-KIT	120/208/240/277	CWA	205	1.9/1.1/0.9/0.8	250	5/3/3/2	M	1.6	3.0	46	17.5	240	1	6.2	A/A/A/A
47490	H175/480-KIT	480	CWA	205	0.5	250	2	M	1.8	3.0	22	17.5	240	1	6.6	A
250W Mercury Lamp - ANSI Code H37																
47499	H250/MULTI-KIT	120/208/240/277	CWA	285	2.6/1.5/1.3/1.1	260	8/5/5/3	M	2.5	4.0	46	22.5	280	1	8.6	D/D/D/D
47500	H250/480-KIT	480	CWA	285	0.6	270	2	M	2.3	3.7	22	22.5	280	1	8.0	E
46531	H250/480/120T-KIT	480/120 TAP	CWA	285	0.6	270	2	M	2.3	3.7	23	22.5	280	1	8.0	E



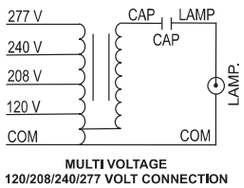
480 VOLT CONNECTION

Wiring Diagram 22



480 VOLT/120 V AUX CONNECTION

Wiring Diagram 23



MULTI VOLTAGE
120/208/240/277 VOLT CONNECTION

Wiring Diagram 46

Ground Ballast Core

Specifications

Starting Method: Probe Start
Min. Starting Temp: -20°F (-30°C)
Input Frequency: 60 Hz
Power Factor: (min) 90%
Insulation Class: H (180°C)
Lead Length: 12 inches

14: Data based on highest current listed for operating, open circuit or starting current.

15: For additional information on capacitors see pages 74-77.

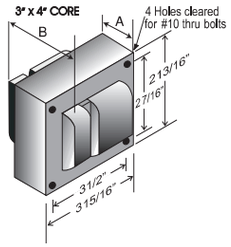
For information on brackets and clips see pages 74-77.

Mercury Vapor Ballast Kits include core & coil, capacitors, brackets, mounting hardware and installation instructions.

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

Additional product information is available at www.sylvania.com

Figure M



Capacitor

Warranty

SYLVANIA magnetic ballasts are covered by our Magnetic Ballast Limited Warranty. For Warranty details go to www.sylvania.com

Ordering Catalog

Item Number — **47499 H 250 MULTI KIT** — Packaging
Lamp Type: Mercury Vapor — Line Voltage
Lamp Wattage

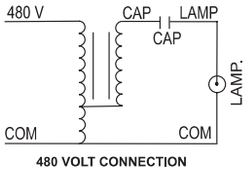
Specifications subject to change without notice.

OSRAM SYLVANIA National Customer Service and Sales Center
1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

Mercury Vapor Core & Coil Ballast Kits

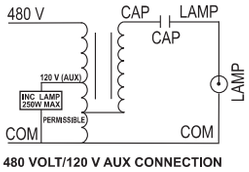
400W-1000W Mercury C&C Kits

Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	Circuit Type	Input Power (Watts)	Max.[14] Input Current (Amps)	Nom. Open Circuit Voltage	Fuse Rating (Amps)	Ballast Dimensions (in)			Wiring Dia.	Dry Capacitor[15]		Packaging		UL Bench Top Rise Code 1029
								Fig.	A	B		Mfd	Min. V_{AC}	Qty.	Approx. Ballast Wt. (lbs ea)	
400W Mercury Lamp - ANSI Code H33																
47509	H400/MULTI-KIT	120/208/240/277	CWA	454	3.9/2.2/1.9/1.7	250	10/8/5/5	N	1.6	3.4	46	35	240	1	11.7	B/B/B/A
47510	H400/480-KIT	480	CWA	454	1.0	250	4	N	1.6	3.4	22	35	240	1	11.3	D
46533	H400/480/120T-KIT	480/120 TAP	CWA	454	1.0	250	4	N	1.6	3.4	23	35	240	1	11.3	D
47517	H2X400/120-KIT	120	CWA	880	7.8	495	20	0	2.9	4.4	49	32[17]	300	1	22.0	C
47518	H2X400/277-KIT	277	CWA	880	3.4	495	10	0	2.9	4.7	50	32[17]	300	1	22.5	C
1000W Mercury Lamp - ANSI Code H36																
47524	H1000/MULTI-KIT	120/208/240/277	CWA	1080	9.2/5.3/4.6/4.0	420	20/15/10/10	0	2.9	4.9	46	24	480	1	23.0	C/C/C/C
47525	H1000/480-KIT	480	CWA	1080	2.3	420	10	0	2.9	4.7	22	24	480	1	23.5	A



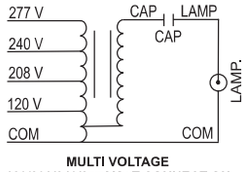
480 VOLT CONNECTION

Wiring Diagram 22



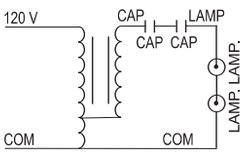
480 VOLT/120 V AUX CONNECTION

Wiring Diagram 23



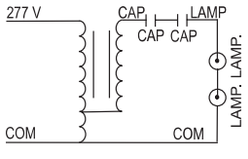
MULTI VOLTAGE
120/208/240/277 VOLT CONNECTION

Wiring Diagram 46



120 VOLT CONNECTION

Wiring Diagram 49



277 VOLT CONNECTION

Wiring Diagram 50

Ground Ballast Core

Specifications

Starting Method: Probe Start
Min. Starting Temp: -20°F (-30°C)
Input Frequency: 60 Hz
Power Factor: (min) 90%
Insulation Class: H (180°C)
Lead Length: 12 inches

14: Data based on highest current listed for operating, open circuit or starting current.

15: For additional information on capacitors see pages 74-77.

17: This ballast requires 2 capacitors which are included in the ballast kit.

For information on brackets and clips see pages 74-77.

Mercury Vapor Ballast Kits include core & coil, capacitors, brackets, mounting hardware and installation instructions.

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

Additional product information is available at www.sylvania.com

Figure N

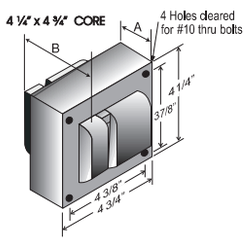
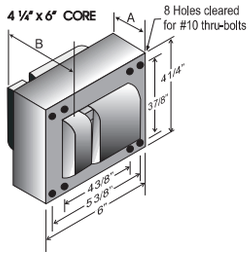


Figure O



Capacitor

Warranty

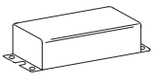
SYLVANIA magnetic ballasts are covered by our Magnetic Ballast Limited Warranty. For Warranty details go to www.sylvania.com

Item Number — **47509 H 400 MULTI KIT** — Packaging
Lamp Type: Mercury Vapor — Line Voltage
Lamp Wattage

Ordering Catalog

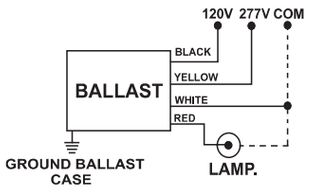
Specifications subject to change without notice.

METALARC® Metal Halide F-Can Ballasts



175W-400W MH F-CAN

Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	Circuit Type	Input Power (Watts)	Max.[14] Input Current (Amps)	Nom. Open Circuit Voltage	Fuse Rating (Amps)	Ballast Dimensions (inches) Overall Length	Case Length	Mtg. Dim.	Max. Ballast Dist. to Lamp (feet)	Packaging Qty.	Approx. Ballast Wt. (lbs ea)
175W Metal Halide Lamp - ANSI Code M57 or Mercury Lamp - ANSI Code H39													**Sound Rating B**
47743	M175/120/277/F-CAN	120/277	CWA	205	1.8/0.8	310	5/3	11.75	10.50	11.13	see pg. 44	1	13.0
250W Metal Halide Lamp - ANSI Code M58 or Mercury Lamp ANSI Code H37													**Sound Rating B**
47751	M250/120/277/F-CAN	120/277	CWA	295	2.6/1.1	310	8/4	14.30	13.13	13.75	see pg. 44	1	15.5
400W Metal Halide Lamp or 360W Metal Halide Lamp[16] - ANSI Code M59 or Mercury Lamp - ANSI Code H33													**Sound Rating C**
47759	M400/120/277/F-CAN	120/277	CWA	460	3.9/1.7	300	10/5	19.20	18.00	18.63	see pg. 44	1	22.5



120/277 VOLT CONNECTION

Wiring Diagram 51

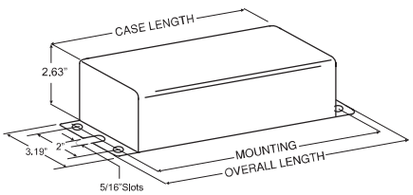


Figure R

Specifications

Starting Method: Probe Start
Min. Starting Temp: -20°F (-30°C)
Input Frequency: 60 Hz
Power Factor: (min) 90%
Insulation Class: A (105°C)
Lead Length: 12 inches
Indoor, Outdoor Type 1

14: Data based on highest current listed for operating, open circuit or starting current.

16: A 360W Metal Halide lamp ANSI Code M59 operated on this ballast will result in approximately a 10% reduction in Input Power (Watts).

F-Can ballast contains an auto reset thermal protector.

Ballast is suitable for recessed use.

Do not install insulation within 3 inches of ballast sides or above ballast in such a manner to entrap heat.

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

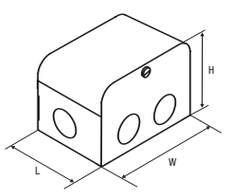
Additional product information is available at www.sylvania.com

Ordering Information:
Description: JBOX COVER
Item #: 48275

Dimensions:
Length: 2.9"
Width: 3.14"
Height: 2.575"
Diameter: 0.867"

Packaging:
Quantity: 2
Weight: 0.38 lbs each

J-BOX COVER
Cover for Sign & F-Can Ballasts



Warranty

SYLVANIA magnetic ballasts are covered by our Magnetic Ballast Limited Warranty and our comprehensive Metal Halide and High Pressure Sodium Limited HID System Warranty. For Warranty details go to www.sylvania.com

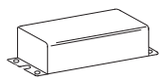
Ordering Catalog

Item Number — **47759 M 400 120/277 F-CAN** — Ballast Type
Lamp Type: METALARC Metal Halide — Line Voltage
Lamp Wattage

Specifications subject to change without notice.

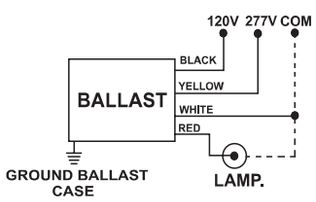
OSRAM SYLVANIA National Customer Service and Sales Center
1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

METALARC® Metal Halide Pulse Start F-Can Ballasts



35W-150W MH PS F-CAN

Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	Circuit Type	Input Power (Watts)	Max.[14] Input Current (Amps)	Nom. Open Circuit Voltage	Fuse Rating (Amps)	Ballast Dimensions (inches) Overall Length	Case Length	Mtg. Dim.	Max. Ballast Dist. to Lamp (feet)	Packaging Qty.	Approx. Ballast Wt. (lbs ea)
35W Metal Halide Pulse Start Lamp - ANSI Code M130													**Sound Rating A**
47680	M35/120/277/F-CAN	120/277	HX-HPF	54	1.1/0.5	235	3/1	11.75	10.50	11.13	15	1	9.0
50W Metal Halide Pulse Start Lamp - ANSI Code M110													**Sound Rating B**
47195	M50/120/277/F-CAN	120/277	HX-HPF	67	1.3/0.6	250	3/2	11.75	10.50	11.13	50	1	8.5
70W Metal Halide Pulse Start Lamp - ANSI Code M139													**Sound Rating B**
47693	M70/120/277/F-CAN	120/277	HX-HPF	95	2.0/0.9	240	6/3	11.75	10.50	11.13	5	1	11.4
70W Metal Halide Pulse Start Lamp - ANSI Code M98 or M143													**Sound Rating B**
47694	M70/120/277/F-CAN	120/277	HX-HPF	94	2.0/0.9	250	5/2	11.75	10.50	11.13	50	1	11.5
100W Metal Halide Pulse Start Lamp - ANSI Code M90													**Sound Rating B**
47734	M100/120/277/F-CAN	120/277	HX-HPF	125	2.5/1.1	260	8/4	11.75	10.50	11.13	50	1	11.6
150W Metal Halide Pulse Start Lamp - ANSI Code M102 or M142													**Sound Rating B**
47738	M150-PS/120/277/F-CAN	120/277	CWA	185	1.6/0.7	210	5/3	14.30	13.13	13.75	50	1	16.0



120/277 VOLT CONNECTION

Wiring Diagram 51

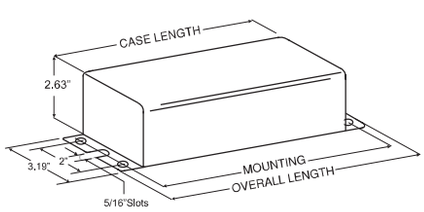


Figure R

Specifications

Starting Method: Pulse Start
Min. Starting Temp: -20°F (-30°C)
Input Frequency: 60 Hz
Power Factor: (min) 90%
Insulation Class: A (105°C)
Lead Length: 12 inches
UL
Indoor, Outdoor Type 1

14: Data based on highest current listed for operating, open circuit or starting current.

F-Can ballast contains an auto reset thermal protector.

Ballast is suitable for recessed use.

Do not install insulation within 3 inches of ballast sides or above ballast in such a manner to entrap heat.

Use 4KV pulse rated lampholder

The ignitor is included as part of the potted assembly.

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

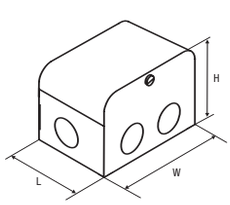
Additional product information is available at www.sylvania.com

Ordering Information:
Description: JBOX COVER
Item #: 48275

Dimensions:
Length: 2.9"
Width: 3.14"
Height: 2.575"
Diameter: 0.867"

Packaging:
Quantity: 2
Weight: 0.38 lbs each

J-BOX COVER
Cover for Sign & F-Can Ballasts



Warranty

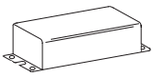
SYLVANIA magnetic ballasts are covered by our Magnetic Ballast Limited Warranty and our comprehensive Metal Halide and High Pressure Sodium Limited HID System Warranty. For Warranty details go to www.sylvania.com

Item Number — **47738 M 150 PS 120/277 F-CAN** — Ballast Type
Lamp Type: METALARC Metal Halide — Line Voltage
Lamp Wattage — Pulse Start

Ordering Catalog

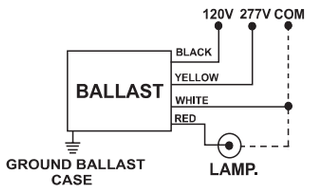
Specifications subject to change without notice.

METALARC® Metal Halide Pulse Start F-Can Ballasts



175W-400W MH PS F-CAN

Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	Circuit Type	Input Power (Watts)	Max.[14] Input Current (Amps)	Nom. Open Circuit Voltage	Fuse Rating (Amps)	Ballast Dimensions (inches) Overall Length	Case Length	Mtg. Dim.	Max. Ballast Dist. to Lamp (feet)	Packaging Qty.	Approx. Ballast Wt. (lbs ea)
175W Metal Halide Pulse Start Lamp - ANSI Code M137 or M152													**Sound Rating B**
47741	M175-PS/120/277/F-CAN	120/277	CWA	210	2.2/1.0	280	5/3	14.30	13.13	13.75	50	1	14.0
200W Metal Halide Pulse Start Lamp - ANSI Code M136													**Sound Rating B**
47747	M200-PS/120/277/F-CAN	120/277	CWA	240	2.1/0.9	280	6/3	11.75	10.50	11.13	50	1	13.0
250W Metal Halide Pulse Start Lamp - ANSI Code M138 or M153													**Sound Rating B**
47749	M250-PS/120/277/F-CAN	120/277	CWA	295	2.7/1.2	300	8/3	14.30	13.13	13.75	50	1	16.0
320W Metal Halide Pulse Start Lamp - ANSI Code M132 or M154													**Sound Rating C**
47753	M320-PS/120/277/F-CAN	120/277	CWA	375	3.4/1.5	300	8/3	19.20	18.00	18.63	50	1	21.8
400W Metal Halide Pulse Start Lamp - ANSI Code M155 or M135													**Sound Rating C**
47757	M400-PS/120/277/F-CAN	120/277	CWA	465	4.1/1.8	285	10/4	19.20	18.00	18.63	50	1	22.5



120/277 VOLT CONNECTION

Wiring Diagram 51

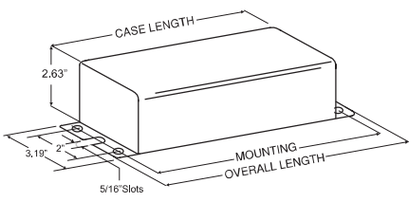


Figure R

Specifications

Starting Method: Pulse Start
Min. Starting Temp: -20°F (-30°C)
Input Frequency: 60 Hz
Power Factor: (min) 90%
Insulation Class: A (105°C)
Lead Length: 12 inches
Indoor, Outdoor Type 1

14: Data based on highest current listed for operating, open circuit or starting current.

F-Can ballast contains an auto reset thermal protector.

Ballast is suitable for recessed use.

Do not install insulation within 3 inches of ballast sides or above ballast in such a manner to entrap heat.

Use 4KV pulse rated lampholder

The ignitor is included as part of the potted assembly.

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

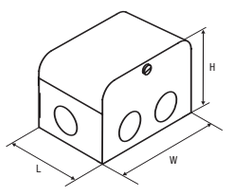
Additional product information is available at www.sylvania.com

Ordering Information:
Description: JBOX COVER
Item #: 48275

Dimensions:
Length: 2.9"
Width: 3.14"
Height: 2.575"
Diameter: 0.867"

Packaging:
Quantity: 2
Weight: 0.38 lbs each

J-BOX COVER
Cover for Sign & F-Can Ballasts



Warranty

SYLVANIA magnetic ballasts are covered by our Magnetic Ballast Limited Warranty and our comprehensive Metal Halide and High Pressure Sodium Limited HID System Warranty. For Warranty details go to www.sylvania.com

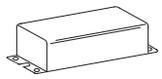
Item Number — **47757 M 400 PS 120/277 F-CAN** — Ballast Type
Lamp Type: METALARC Metal Halide — Line Voltage
Lamp Wattage — Pulse Start

Ordering Catalog

Specifications subject to change without notice.

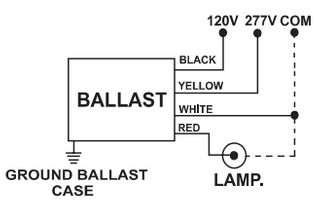
OSRAM SYLVANIA National Customer Service and Sales Center
1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

LUMALUX® High Pressure Sodium F-Can Ballasts



35W-250W HPS F-CAN

Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	Circuit Type	Input Power (Watts)	Max.[14] Input Current (Amps)	Nom. Open Circuit Voltage	Fuse Rating (Amps)	Ballast Dimensions (inches)			Max. Ballast Dist. to Lamp (feet)	Packaging	
								Overall Length	Case Length	Mtg. Dim.		Qty.	Approx. Ballast Wt. (lbs ea)
35W High Pressure Sodium Lamp - ANSI Code S76													**Sound Rating B**
47761	LU35/120/277/F-CAN	120/277	HX-HPF	47	0.8/0.4	120	3/1	11.75	10.50	11.13	15	1	9.0
50W High Pressure Sodium Lamp - ANSI Code S68													**Sound Rating B**
47762	LU50/120/277/F-CAN	120/277	HX-HPF	65	1.1/0.5	125	3/1	11.75	10.50	11.13	15	1	9.0
70W High Pressure Sodium Lamp - ANSI Code S62													**Sound Rating B**
47763	LU70/120/277/F-CAN	120/277	HX-HPF	90	1.5/0.7	120	5/2	11.75	10.50	11.13	30	1	11.8
100W High Pressure Sodium Lamp - ANSI Code S54													**Sound Rating B**
47764	LU100/120/277/F-CAN	120/277	HX-HPF	125	2.0/0.9	120	6/3	11.75	10.50	11.13	30	1	12.2
150W High Pressure Sodium Lamp - ANSI Code S55													**Sound Rating B**
47765	LU150/120/277/F-CAN	120/277	HX-HPF	185	3.1/1.3	120	9/4	14.30	13.13	13.75	30	1	15.3
250W High Pressure Sodium Lamp - ANSI Code S50													**Sound Rating B**
47777	LU250/120/277/F-CAN	120/277	CWA	298	2.5/1.1	190	8/3	19.20	18.00	18.63	50	1	21.0



120/277 VOLT CONNECTION

Wiring Diagram 51

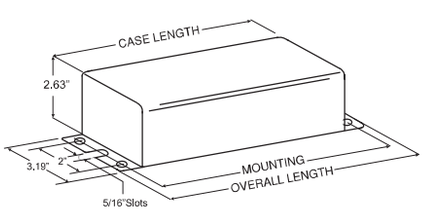


Figure R

Specifications

Starting Method: Pulse Start
Min. Starting Temp: -20°F (-30°C)
Input Frequency: 60 Hz
Power Factor: (min) 90%
Insulation Class: A (105°C)
Lead Length: 12 inches
Indoor, Outdoor Type 1

14: Data based on highest current listed for operating, open circuit or starting current.

F-Can ballast contains an auto reset thermal protector.

Ballast is suitable for recessed use.

Do not install insulation within 3 inches of ballast sides or above ballast in such a manner to entrap heat.

Use 4KV pulse rated lampholder

The ignitor is included as part of the potted assembly.

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

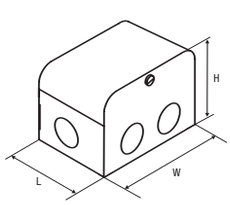
Additional product information is available at www.sylvania.com

Ordering Information:
Description: JBOX COVER
Item #: 48275

Dimensions:
Length: 2.9"
Width: 3.14"
Height: 2.575"
Diameter: 0.867"

Packaging:
Quantity: 2
Weight: 0.38 lbs each

J-BOX COVER
Cover for Sign & F-Can Ballasts



Warranty

SYLVANIA magnetic ballasts are covered by our Magnetic Ballast Limited Warranty and our comprehensive Metal Halide and High Pressure Sodium Limited HID System Warranty. For Warranty details go to www.sylvania.com

Item Number — **47777 LU 250 120/277 F-CAN** — Ballast Type
Lamp Type: LUMALUX High Pressure Sodium — Line Voltage
Lamp Wattage

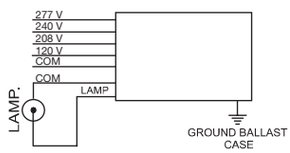
Ordering Catalog

Specifications subject to change without notice.

METALARC® Metal Halide Indoor Enclosed Ballasts

175W-1000W MH Indoor Enclosed

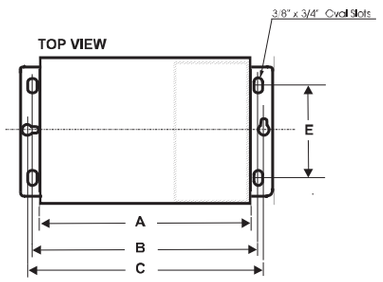
Item #	OSRAM SYLVANIA Description	Input Voltage (V_{AC})	Circuit Type	Input Power (Watts)	Max.[14] Input Current (Amps)	Nom. Open Circuit Voltage	Fuse Rating (Amps)	Ballast Dimensions Case Style	Wiring Dia.	Max. Ambient Temp.	Max. Ballast Dist. to Lamp (feet)	Packaging Qty.	Packaging Approx. Ballast Wt. (lbs ea)
175W Metal Halide Lamp - ANSI Code M57 or Mercury Lamp - ANSI Code H39													
47153	M175/MULTI-I/D	120/208/240/277	CWA	210	1.8/1.0/0.9/0.8	305	5/3/2/2	S	52	65°C	see pg. 44	1	19.6
250W Metal Halide Lamp - ANSI Code M58 or Mercury Lamp - ANSI Code H37													
47158	M250/MULTI-I/D	120/208/240/277	CWA	290	2.5/1.5/1.3/1.1	300	8/5/5/3	S	52	65°C	see pg. 44	1	22.3
400W Metal Halide Lamp or 360W Metal Halide Lamp[16] - ANSI Code M59 or Mercury Lamp - ANSI Code H33													
47172	M400/MULTI-I/D	120/208/240/277	CWA	458	4.0/2.3/2.0/1.7	300	10/7/5/5	T	52	55°C	see pg. 44	1	30.0
1000W Metal Halide Lamp - ANSI Code M47 or Mercury Lamp - ANSI Code H36													
47207	M1000/MULTI-I/D	120/208/240/277	CWA	1080	9.0/5.2/4.5/3.9	421	20/15/10/10	T	52	55°C	see pg. 44	1	37.0



MULTI VOLTAGE
120/208/240/277 VOLT CONNECTION

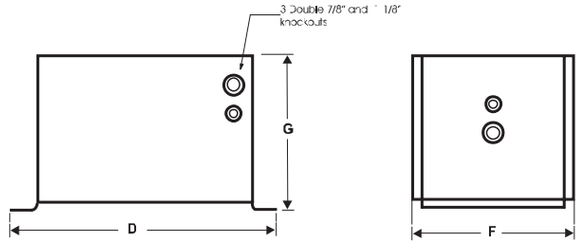
Wiring Diagram 52

Case Style



DIMENSIONAL REFERENCE

CASE STYLE	A	B	C	D	E	F	G
S	11.4"	12.0"	12.8"	13.8"	3.3"	6.6"	5.0"
T	12.1"	12.7"	13.4"	14.4"	3.3"	7.5"	6.0"



Specifications

Starting Method: Probe Start
Min. Starting Temp: -20°F (-30°C)
Input Frequency: 60 Hz
Power Factor: (min) 90%
Insulation Class: H (180°C)

c UL us

14: Data based on highest current listed for operating, open circuit or starting current.

16: A 360W Metal Halide lamp ANSI Code M59 operated on this ballast will result in approximately a 10% reduction in Input Power (Watts).

The Capacitor is included as part of the potted assembly.

Mount units a minimum of 12" apart.

Make connections with wire rated for 90°C Minimum

Insulate unused leads individually for 600V.

Ballast is compatible with other manufacturer's equivalent lamp types that meet ANSI standards.

Additional product information is available at www.sylvania.com

Warranty

SYLVANIA magnetic ballasts are covered by our Magnetic Ballast Limited Warranty and our comprehensive Metal Halide and High Pressure Sodium Limited HID System Warranty. For Warranty details go to www.sylvania.com

Ordering Catalog

Specifications subject to change without notice.

Item Number — **47158 M 250 MULTI I/D** — Ballast Type - Indoor Enclosed
Lamp Type: METALARC Metal Halide — Line Voltage
Lamp Wattage

OSRAM SYLVANIA National Customer Service and Sales Center
1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

Notes:

SYLVANIA Lamp & Ballast Kits

The SYLVANIA high intensity discharge lamp and ballast kits combine premium metal halide and high pressure sodium lamps with high quality magnetic ballasts in one simple package.

Each lamp and ballast kit comes with one metal halide or high pressure sodium lamp along with the corresponding multi-tap or SUPER5 ANSI-rated magnetic ballast. Mounting brackets and hardware completes the kit to ensure quick installation and unnecessary return trips for additional parts.

Ideal for situations where quick lamp & ballast replacement is needed, these kits offer the perfect, one-stop system solution.

- Lamp and ballast kits include:
  - 1 lamp
  - 1 multi-tap or SUPER5 ANSI rated ballast, c UL us
  - Capacitor
  - Ignitor (when required)
  - Mounting brackets and hardware
  - Installation Instructions

- Premium METALARC® metal halide lamp technology
- Superior performance LUMALUX® high pressure sodium lamps
- All HID lamps offer long life and high efficacy
- Multi-tap ballast for 120, 208, 240 and 277V applications, minimize the hassles associated with selecting the wrong voltage product
- SUPER5 ballast for 120, 208, 240, 277, and 480V applications, minimize the hassles associated with selecting the wrong-voltage product.
- Reduce return trips for additional parts with one box containing everything you need
- Single point of contact for lamp and ballast questions, technical and warranty issues

Applications

Indoor and outdoor, industrial and commercial, schools/universities, shopping malls, warehouses, retail facilities, area lighting, street lighting, manufacturing facilities, parking lots and garages.

WARRANTY:

SYLVANIA magnetic ballasts are covered by our Magnetic Ballast Limited Warranty and our comprehensive Metal Halide and High Pressure Sodium Limited HID System Warranty. For Warranty details go to www.sylvania.com

SPECIFICATIONS:

Information in this catalog subject to change at anytime without prior notice.

OSRAM SYLVANIA National Customer Service and Sales Center
1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

SYLVANIA Lamp & Ballast Kits

Watts	Lamp & Ballast Kit Item #	OSRAM SYLVANIA Description	ANSI Code	Pkg. Qty.	Ballast Product #	Ballast Page #	Input Voltage (V_{AC})	Circuit Type	Lamp Product #[23]	Bulb	Lamp Base[24]	Fix Req
METALARC® METAL HALIDE LAMP & BALLAST KITS												
Lamp & Ballast Kits include SYLVANIA METALARC® Metal Halide lamp												
175	64782	M175/U LAMP/SUPER5 BALLAST KIT	M57/E	1	47243	46	120/208/240/277/480	CWA	64471	BT28	Mogul	E[22]
250	64784	M250/U LAMP/SUPER5 BALLAST KIT	M58/E	1	47265	46	120/208/240/277/480	CWA	64457	BT28	Mogul	E[22]
360	64847	MS360/SS LAMP/SUPER5 BALLAST KIT	M59/S	1	47338[16]	47	120/208/240/277/480	CWA	64655	BT37	Mogul	S[21]
400	64781	M400/U LAMP/SUPER5 BALLAST KIT	M59/S	1	47338	47	120/208/240/277/480	CWA	64490	BT37	Mogul	S[21]
1000	64848	M1000/U LAMP/SUPER5 BALLAST KIT	M47/S	1	47427	48	120/208/240/277/480	CWA	64468	BT56	Mogul	S[21]
LUMALUX® HIGH PRESSURE SODIUM LAMP & BALLAST KITS												
Lamp & Ballast Kits include SYLVANIA LUMALUX® High Pressure Sodium lamp												
100	67621	LU100/ECO LAMP/MULTI-BALLAST KIT	S54	1	47316	58	120/208/240/277	HX-HPF[25]	67514	ET23.5	Mogul	0
150	67629	LU150/55/ECO LAMP/MULTI BALLAST KIT	S55	1	47335	59	120/208/240/277	HX-HPF[25]	67516	ET23.5	Mogul	0
250	67622	LU250/ECO LAMP/SUPER5 BALLAST KIT	S50	1	47634	60	120/208/240/277/480	CWA[25]	67578	ET18	Mogul	0
400	67623	LU400/ECO LAMP/SUPER5 BALLAST KIT	S51	1	47647	61	120/208/240/277/480	CWA[25]	67533	ET18	Mogul	0
1000	67664	LU1000 LAMP/SUPER5 BALLAST KIT	S52	1	47659	62	120/208/240/277/480	CWA[25]	67307	E25	Mogul	0

16: A 360W Metal Halide lamp ANSI Code M59 operated on this ballast will result in approximately a 10% reduction in Input Power (Watts).

21: S = When operated within 15 degrees of vertical, this lamp may be operated in an open luminaire provided the installation is not near people or flammable or combustible material, othewise it must be operated in a suitably enclosed luminaire. See lamp warning. The 360W, 400W and 1000W METALARC lamps may be operated in enclosed or OPEN fixtures.

22: E = Lamp classified as E-type are to be used ONLY in suitably enclosed luminaires. See lamp warning.

23: All metal halide and high pressure sodium lamps may be operated in any position except for 360W lamps, which operates base-up through horizontal.

24: For lamp wattages of 360W and greater, it is recommended that lampholders with nickel plated copper alloy center contacts (with spring) should be used rather than contacts made of stainless steel.

25: Use with 4000V pulse rated sockets only.

Additional product information is available at www.sylvania.com

Hg LAMP CONTAINS MERCURY
Manage in Accordance with Disposal Laws
See: www.lamprecycle.org or 1-866-666-6850

ORDERING GUIDE

M M = METALARC MS = METALARC SUPER LU = LUMALUX	175 Wattage: 100, 150, 175, 250, 360, 400 or 1000 watts	/	SS SUPERSAVER	/	U Operating Position: Universal or BU-HOR	/ MULTI/SUPER5-BALLAST KIT MULTI-TAP or SUPER5 Ballast Kit

WARNING:

Metal halide lamps can cause serious skin burn and eye inflammation from shortwave Ultraviolet radiation if the outer envelope of the lamp is broken or punctured. Do not use where people will remain for more than a few minutes unless adequate shielding or other safety precautions are used. Lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available.

SPECIFICATIONS:

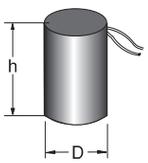
Information in this catalog subject to change at anytime without prior notice.

Magnetic High Intensity Discharge Capacitors and Kit Accessories

SYLVANIA supplies pre-wired dry type capacitors in all kits. The dry film capacitor thermal plastic maximum case temperature is 100°C. They contain no oil, are furnished with 12" leads and include integral resistor where required. Dry film capacitors contain no PCB's.

Item #	OSRAM SYLVANIA Description	ANSI Code	Capacitor				Bracket Type	Page #
			Mfd (±3%)	Min V_{AC}	Height (h) inches	Diameter (D) inches		
METALARC® Metal Halide Core & Coil Ballast Kits								
47243	M175/SUPER5-KIT	M57 or H39	10	400	3.90	1.38	B-1	46
47735	M175/MULTI-KIT	M57 or H39	10	400	3.90	1.38	B-1	46
47035	M175/480-KIT	M57 or H39	10	400	3.90	1.38	B-1	46
47253	M175/480/120T-KIT	M57 or H39	10	400	3.90	1.38	B-1	46
47254	M175/120/277-KIT	M57 or H39	10	400	3.90	1.38	B-1	46
47265	M250/SUPER5-KIT	M58 or H37	15	400	3.75	1.50	B-2	46
47737	M250/MULTI-KIT	M58 or H37	15	400	3.75	1.50	B-2	46
47611	M250/480-KIT	M58 or H37	15	400	3.75	1.50	B-2	46
47268	M250/480/120T-KIT	M58 or H37	15	400	3.75	1.50	B-2	46
47049	M250/MULTI 3X4-KIT	M58 or H37	15	400	3.75	1.50	B-1	46
47050	M250/480-3X4-KIT	M58 or H37	15	400	3.75	1.50	B-1	46
47338	M400/SUPER5-KIT	M59 or H33	24	400	3.85	1.75	B-2	47
47739	M400/MULTI-KIT	M59 or H33	24	400	3.85	1.75	B-2	47
47065	M400/480-KIT	M59 or H33	24	400	3.85	1.75	B-2	47
47394	M400/480/120T-KIT	M59 or H33	24	400	3.85	1.75	B-2	47
47075	M2x400/120/240-KIT (Kit contains two capacitors)	M59 or H33	23	400	3.85	1.75	B-2	47
47427	M1000/SUPER5-KIT	M47 or H36	24	480	5.00	2.20	B-2	48
47744	M1000/MULTI-KIT	M47 or H36	24	480	5.00	2.20	B-2	48
47655	M1000/480-KIT	M47 or H36	24	480	5.00	2.20	B-2	48
47432	M1000/480/120T-KIT	M47 or H36	24	480	5.00	2.20	B-2	48
46808	M1500/MULTI-KIT	M48	32	525	4.90	2.63	B-2	48
47095	M1500/480-KIT	M48	32	525	4.90	2.63	B-2	48
47434	M1500/480/120T-KIT	M48	32	525	4.90	2.63	B-2	48
METALARC® Metal Halide Pulse Start Core & Coil Ballast Kits								
47001	M35/MULTI-HQ/CI-KIT	M130	4.5	330	2.75	1.38	B-1	49
47203	M35/120/277-KIT	M130	4.5	330	2.75	1.38	B-1	49
47007	M50/MULTI-KIT	M110	6	280	2.90	1.38	B-1	49
47204	M50/120/277-KIT	M110	6	280	2.90	1.38	B-1	49
47013	M70/MULTI-KIT	M98	8	280	2.90	1.38	B-1	49
47217	M70/120/277-KIT	M98	8	280	2.90	1.38	B-1	49
47645	M70/MULTI-HQ/CI-KIT	M98 or M139 or M85	9	300	2.70	1.50	B-1	49
47019	M100/MULTI-KIT	M90	10	280	2.90	1.50	B-1	50
47219	M100/120/277-KIT	M90	10	280	2.90	1.50	B-1	50
47682	M150/MULTI-PS-KIT	M102	16	280	3.75	1.50	B-1	50
47228	M150/120/277-PS-KIT	M102	16	280	3.75	1.50	B-1	50
47640	M150/MULTI-PS-CWA-KIT	M102 or M142	17	330	3.90	1.50	B-1	50
47229	M150/MULTI-KIT	M81	16	280	3.75	1.50	B-1	50
47686	M175/MULTI-PS-KIT	M137 or M152	11	400	3.75	1.50	B-1	51
46801	M175/480-PS-KIT	M137 or M152	11	400	3.75	1.50	B-1	51

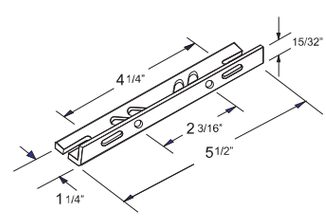
Capacitor



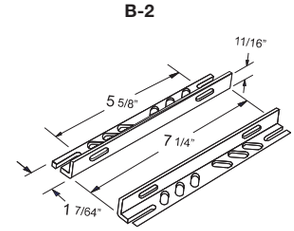
Mounting Clip

MOUNTING CLIP for round case
(For capacitors and ignitors)

B-1



B-2



Specifications subject to change without notice.

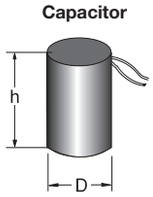
OSRAM SYLVANIA National Customer Service and Sales Center
1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

Magnetic High Intensity Discharge Capacitors and Kit Accessories

SYLVANIA supplies pre-wired dry type capacitors in all kits. The dry film capacitor thermal plastic maximum case temperature is 100°C. They contain no oil, are furnished with 12" leads and include integral resistor where required. Dry film capacitors contain no PCB's.

Item #	OSRAM SYLVANIA Description	ANSI Code	Capacitor				Bracket Type	Page #
			Mfd (±3%)	Min V_{AC}	Height (h) inches	Diameter (D) inches		
METALARC® Metal Halide Pulse Start Core & Coil Ballast Kits (continued)								
47690	M200/MULTI-PS-KIT	M136	12	400	3.75	1.48	B-1	51
46802	M200/480-PS-KIT	M136	12	400	3.75	1.48	B-1	51
47259	M200/480/120T-PS-KIT	M136	12	400	3.75	1.48	B-1	51
47282	M250/SUPER5-PS-KIT	M138 or M153	15	400	3.75	1.50	B-2	52
47112	M250/MULTI-PS-KIT	M138 or M153	15	400	3.75	1.50	B-2	52
47106	M250/480-PS-KIT	M138 or M153	15	400	3.75	1.50	B-2	52
47283	M250/480/120T-PS-KIT	M138 or M153	15	400	3.75	1.50	B-2	52
47273	M250/120/277-KIT	M80	25	280	3.75	1.75	B-2	52
47676	M320/MULTI-PS-KIT	M132 or M154	21	350	4.85	1.45	B-2	53
46803	M320/480-PS-KIT	M132 or M154	21	350	4.85	1.45	B-2	53
47303	M320/480/120T-PS-KIT	M132 or M154	21	350	4.85	1.45	B-2	53
47695	M350/MULTI-PS-KIT	M131	22	350	3.93	1.60	B-2	53
47697	M350/480-PS-KIT	M131	22	350	3.93	1.60	B-2	53
47337	M350/480/120T-PS-KIT	M131	22	350	3.93	1.60	B-2	53
47400	M400/SUPER5-PS-KIT	M155 or M135	24	360	3.85	1.75	B-2	54
47132	M400/MULTI-PS-KIT	M155 or M135	24	360	3.85	1.75	B-2	54
47138	M400/480-PS-KIT	M155 or M135	24	360	3.85	1.75	B-2	54
47403	M400/480/120T-PS-KIT	M155 or M135	24	360	3.85	1.75	B-2	54
47405	M450/MULTI-PS-KIT	M144	26.5	400	3.90	1.81	B-2	54
46804	M450/480-PS-KIT	M144	26.5	400	3.90	1.81	B-2	54
47408	M450/480/120T-PS-KIT	M144	26.5	400	3.90	1.81	B-2	54
47717	M750/MULTI-PS-KIT	M149	23.5	480	5.00	2.20	B-2	55
47409	M750/120/277/347/480-PS-KIT	M149	23.5	480	5.00	2.20	B-2	55
47718	M750/480-PS-KIT	M149	23.5	480	5.00	2.20	B-2	55
47416	M1000/MULTI-PS-KIT	M141	24	480	5.00	2.20	B-2	55
47417	M1000/120/277/347/480-PS-KIT	M141	24	480	5.00	2.20	B-2	55
46805	M1000/480-PS-KIT	M141	24	480	5.00	2.20	B-2	55
47089	M1000/102/277/347/480-HQI-RL (contains two capacitors)	—	32	350	4.70	1.75	—	56
47090	M2000/277/347/480-HQI-RL (contains two capacitors)	—	34.5	525	4.90	2.63	—	56
LUMALUX® High Pressure Sodium Core & Coil Ballast Kits								
47271	LU35/120/240-KIT	S76	4	280	2.90	1.38	B-1	58
47549	LU50/120/277-KIT	S68	5	280	2.90	1.38	B-1	58
47301	LU70/MULTI-KIT	S62	7	280	2.90	1.38	B-1	58
47579	LU70/480-KIT	S62	7	280	2.90	1.38	B-1	58
47571	LU70/120/277-KIT	S62	7	280	2.90	1.38	B-1	58
47316	LU100/MULTI-KIT	S54	10	280	2.90	1.50	B-1	58
47593	LU100/480-KIT	S54	10	280	2.90	1.50	B-1	58
47592	LU100/120/277-KIT	S54	10	280	2.90	1.50	B-1	58

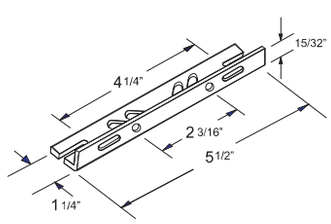
Capacitor



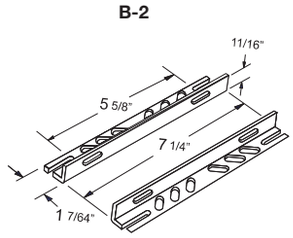
Mounting Clip

MOUNTING CLIP for round case
(For capacitors and ignitors)

B-1



B-2



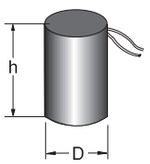
Specifications subject to change without notice.

Magnetic High Intensity Discharge Capacitors and Kit Accessories

SYLVANIA supplies pre-wired dry type capacitors in all kits. The dry film capacitor thermal plastic maximum case temperature is 100°C. They contain no oil, are furnished with 12" leads and include integral resistor where required. Dry film capacitors contain no PCB's.

Item #	OSRAM SYLVANIA Description	ANSI Code	Capacitor				Bracket Type	Page #
			Mfd (±3%)	Min V_{AC}	Height (h) inches	Diameter (D) inches		
LUMALUX® High Pressure Sodium Core & Coil Ballast Kits								
47335	LU150/MULTI-KIT	S55	14	280	2.90	1.50	B-1	59
47619	LU150/480-KIT	S55	14	280	2.90	1.50	B-1	59
47621	LU150/480/120T-KIT	S55	14	280	2.90	1.50	B-1	59
47617	LU150/120/277-KIT	S55	14	280	2.90	1.50	B-1	59
47623	LU150/480-CWA-KIT	S55	55	170	5.00	1.75	B-1	59
47628	LU200/MULTI-KIT	S66	28	240	3.75	1.75	B-2	59
47631	LU200/480-KIT	S66	28	240	3.75	1.75	B-2	59
47634	LU250/SUPER5-KIT	S50	35	240	5.00	1.75	B-2	60
47357	LU250/MULTI-KIT	S50	35	240	5.00	1.75	B-2	60
47358	LU250/480-KIT	S50	35	240	5.00	1.75	B-2	60
47637	LU250/480/120T-KIT	S50	35	240	5.00	1.75	B-2	60
47642	LU250/120/277-KIT	S50	35	240	5.00	1.75	B-2	60
47643	LU310/MULTI-KIT	S67	45	280	4.88	1.75	B-2	60
47644	LU310/480-KIT	S67	45	280	4.88	1.75	B-2	60
47647	LU400/SUPER5-KIT	S51	55	240	5.00	1.75	B-2	61
47364	LU400/MULTI-KIT	S51	55	240	5.00	1.75	B-2	61
47376	LU400/480-KIT	S51	55	240	5.00	1.75	B-2	61
47657	LU400/480/120T-KIT	S51	55	240	5.00	1.75	B-2	61
47656	LU400/120/277-KIT	S51	55	240	5.00	1.75	B-2	61
47712	LU750/MULTI-KIT	S111	37.5	280	5.00	1.75	B-2	62
47658	LU750/480-KIT	S111	37.5	280	5.00	1.75	B-2	62
47659	LU1000/SUPER5-KIT	S52	26	525	4.90	2.63	B-2	62
47389	LU1000/MULTI-KIT	S52	26	525	4.90	2.63	B-2	62
47391	LU1000/480-KIT	S52	26	525	4.90	2.63	B-2	62
MERCURY CORE & COIL BALLAST KITS								
46518	H50/MULTI-KIT	H46	7	280	2.90	1.38	B-1	63
46519	H75/MULTI-KIT	H43	8	280	2.90	1.38	B-1	63
46522	H100/MULTI-KIT	H38 or H44	10	280	2.90	1.50	B-1	63
47472	H100/277-KIT	H38 or H44	10	280	2.90	1.50	B-1	63
47471	H100/DUAL-KIT	H38 or H44	10	280	2.90	1.50	B-1	63
47489	H175/MULTI-KIT	H39	17.5	240	3.75	1.50	B-1	64
47490	H175/480-KIT	H39	17.5	240	3.75	1.50	B-1	64
47499	H250/MULTI-KIT	H37	22.5	280	3.75	1.75	B-1	64
47500	H250/480-KIT	H37	22.5	280	3.75	1.75	B-1	64
46531	H250/480/120T-KIT	H37	22.5	280	3.75	1.75	B-1	64
47509	H400/MULTI-KIT	H33	35	240	5.00	1.75	B-2	65
47510	H400/480-KIT	H33	35	240	5.00	1.75	B-2	65
46533	H400/480/120T-KIT	H33	35	240	5.00	1.75	B-2	65
47517	H2X400/120-KIT (Kit contains two capacitors)	H33	32	300	3.90	1.81	B-2	65
47518	H2X400/277-KIT (Kit contains two capacitors)	H33	32	300	3.90	1.81	B-2	65
47524	H1000/MULTI-KIT	H36	24	480	5.00	2.20	B-2	65
47525	H1000/480-KIT	H36	24	480	5.00	2.20	B-2	65

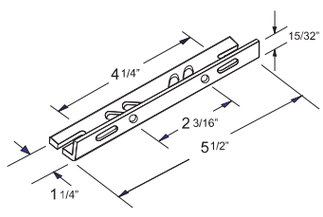
Capacitor



Mounting Clip

MOUNTING CLIP for round case
(For capacitors and ignitors)

B-1



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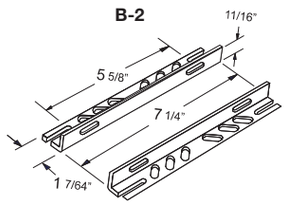


Specifications subject to change without notice.

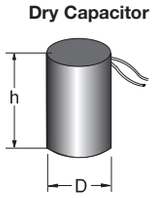
OSRAM SYLVANIA National Customer Service and Sales Center
1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

Magnetic High Intensity Discharge Replacement Capacitors

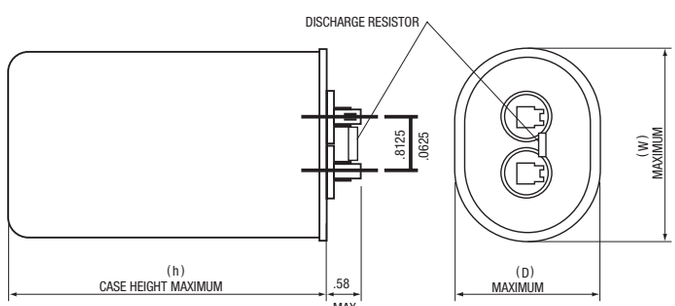
Replacement capacitors type, size and performance specification may vary. Please contact 1-800-LIGHTBULB or www.sylvania.com for additional information on replacement capacitors.

Item #	OSRAM SYLVANIA Replacement Capacitor Description	Replacement Capacitor						Capacitor Type	OSRAM SYLVANIA Ballast for Replacement Capacitors
		Mfd	Min V_{AC}	Diameter (D) inches	Height (h) inches	Width (W) inches	Shape		
47912	CAP 24Mfd 480VAC	24	480	1.97	3.94	2.97	Oval	Oil	47400 *(M400/SUPER5-PS-KIT)*, 47132 *(M400/MULTI-PS-KIT)*, 47138 *(M400/480-PS-KIT)*, 47403 *(M400/480/120T-PS-KIT)*, 47338 *(M400/SUPER5-KIT)*, 47739 *(M400/MULTI-KIT)*, 47065 *(M400/480-KIT)*, 47394 *(M400/480/120T-KIT)*, 47427 *(M1000/SUPER5-KIT)*, 47744 *(M1000/MULTI-KIT)*, 47655 *(M1000/480-KIT)*, 47432 *(M1000/480/120T-KIT)*, 47416 *(M1000/MULTI-PS-KIT)*, 47417 *(M1000/120/277/347/480-PS-KIT)*, 46805 *(M1000/480-PS-KIT)*, 47524 *(H1000/MULTI-KIT)*, 47525 *(H1000/480-KIT)*
47920	CAP 26Mfd 525VAC	26	525	1.97	4.31	2.97	Oval	Oil	47659 *(LU1000/SUPER5-KIT)*, 47389 *(LU1000/MULTI-KIT)*, 47391 *(LU1000/480-KIT)*
47926	CAP 40Mfd 280VAC	40	280	1.80	3.68	—	Cylindrical	Dry	—
47927	CAP 52Mfd 280VAC	52	280	1.80	4.68	—	Cylindrical	Dry	—
47932	CAP 35Mfd 280VAC	35	280	1.61	3.68	—	Cylindrical	Dry	47634 *(LU250/SUPER5-KIT)*, 47357 *(LU250/MULTI-KIT)*, 47358 *(LU250/480-KIT)*, 47642 *(LU250/120/277-KIT)*, 47637 *(LU250/480/120T-KIT)*, 47509 *(H400/MULTI-KIT)*, 47510 *(H400/480-KIT)*, 46533 *(H400/480/120T-KIT)*
47938	CAP 28Mfd 330VAC	28	330	1.80	3.68	—	Cylindrical	Dry	47628 *(LU200/MULTI-KIT)*, 47631 *(LU200/480-KIT)*
47942	CAP 55Mfd 300VAC	55	300	1.80	4.68	—	Cylindrical	Dry	47623 *(LU150/480-CWA-KIT)*, 47647 *(LU400/SUPER5-KIT)*, 47364 *(LU400/MULTI-KIT)*, 47376 *(LU400/480-KIT)*, 47657 *(LU400/480/120T-KIT)*, 47656 *(LU400/120/277-KIT)*
47952	CAP 10Mfd 400VAC	10	400	1.62	2.75	2.75	Oval	Oil	47019 *(M100/MULTI-KIT)*, 47219 *(M100/120/277-KIT)*, 47316 *(LU100/MULTI-KIT)*, 47593 *(LU100/480-KIT)*, 47592 *(LU100/120/277-KIT)*, 46522 *(H100/MULTI-KIT)*, 47472 *(H100/277-KIT)*, 47471 *(H100/DUAL-KIT)*, 47243 *(M175/SUPER5-KIT)*, 47735 *(M175/MULTI-KIT)*, 47035 *(M175/480-KIT)*, 47253 *(M175/480/120T-KIT)*, 47254 *(M175/120/277-KIT)*
47954	CAP 15Mfd 400VAC	15	400	1.97	2.75	2.97	Oval	Oil	47265 *(M250/SUPER5-KIT)*, 47737 *(M250/MULTI-KIT)*, 47611 *(M250/480-KIT)*, 47268 *(M250/480/120T-KIT)*, 47049 *(M250/MULTI 3X4-KIT)*, 47050 *(M250/480-3X4-KIT)*, 47282 *(M250/SUPER5-PS-KIT)*, 47112 *(M250/MULTI-PS-KIT)*, 47106 *(M250/480-PS-KIT)*, 47283 *(M250/480/120T-PS-KIT)*

Dry Capacitor



Oil Filled Replacement Capacitor



Specifications subject to change without notice.

Magnetic High Intensity Discharge Ignitors

For SYLVANIA HID Ballasts Only

Item #	OSRAM SYLVANIA Description	ANSI Code	Ignitor Dimensions (inches)					Page #	Replacement Ignitor Item #	OSRAM SYLVANIA Replacement Ignitor Description
			Figure	Diameter (D)	Height (H)	Length (L)	Max. Distance to lamp (feet)			
METALARC® METAL HALIDE PULSE START CORE & COIL BALLAST KITS										
47001	M35/MULTI-HQ/CI-KIT	M130	A-1	1.38	1.96	—	5	49	—	—
47203	M35/120/277-KIT	M130	A-2	1.17	2.50	1.90	15	49	—	—
47007	M50/MULTI-KIT	M110	A-2	1.17	2.50	1.90	5	49	47996	356-AS-100-MH
47204	M50/120/277-KIT	M110	A-2	1.17	2.50	1.90	5	49	47996	356-AS-100-MH
47013	M70/MULTI-KIT	M98	A-2	1.17	2.50	1.90	5	49	47996	356-AS-100-MH
47217	M70/120/277-KIT	M98	A-2	1.17	2.50	1.90	5	49	47996	356-AS-100-MH
47645	M70/MULTI-HQ/CI-KIT	M98 or M139 or M85	A-2	1.17	2.50	1.90	5	49	—	—
47019	M100/MULTI-KIT	M90	A-2	1.17	2.50	1.90	5	50	47996	356-AS-100-MH
47219	M100/120/277-KIT	M90	A-2	1.17	2.50	1.90	5	50	47996	356-AS-100-MH
47682	M150/MULTI-PS-KIT	M102	A-2	1.17	2.50	1.90	5	50	47996	356-AS-100-MH
47228	M150/120/277-PS-KIT	M102	A-2	1.17	2.50	1.90	5	50	47996	356-AS-100-MH
47640	M150/MULTI-PS-CWA-KIT	M102 or M142	A-2	1.17	2.50	1.90	5	50	—	—
47229	M150/MULTI-KIT	M81	A-2	1.17	2.50	1.90	15	50	—	—
47686	M175/MULTI-PS-KIT	M137 or M152	A-1	1.38	1.96	—	2	51	47997	37-63-AS-6.9-N7
46801	M175/480-PS-KIT	M137 or M152	A-1	1.38	1.96	—	2	51	47997	37-63-AS-6.9-N7
47690	M200/MULTI-PS-KIT	M136	A-2	1.17	2.50	1.90	2	51	—	—
46802	M200/480/-PS-KIT	M136	A-2	1.17	2.50	1.90	2	51	—	—
47259	M200/480/120T-PS-KIT	M136	A-2	1.17	2.50	1.90	2	51	—	—
47282	M250/SUPER5-PS-KIT	M138 or M153	A-1	1.38	1.96	—	2	52	47997	37-63-AS-6.9-N7
47112	M250/MULTI-PS-KIT	M138 or M153	A-1	1.38	1.96	—	2	52	47997	37-63-AS-6.9-N7
47106	M250/480-PS-KIT	M138 or M153	A-1	1.38	1.96	—	2	52	47997	37-63-AS-6.9-N7
47283	M250/480/120T-PS-KIT	M138 or M153	A-1	1.38	1.96	—	2	52	47997	37-63-AS-6.9-N7
47273	M250/120/277-KIT	M80	A-2	1.17	2.50	1.90	5	52	—	—
47676	M320/MULTI-PS-KIT	M132 or M154	A-1	1.38	1.96	—	2	53	47997	37-63-AS-6.9-N7
46803	M320/480-PS-KIT	M132 or M154	A-1	1.38	1.96	—	2	53	47997	37-63-AS-6.9-N7
47303	M320/480/120T-PS-KIT	M132 or M154	A-1	1.38	1.96	—	2	53	47997	37-63-AS-6.9-N7
47695	M350/MULTI-PS-KIT	M131	A-1	1.38	1.96	—	2	53	47997	37-63-AS-6.9-N7
47697	M350/480-PS-KIT	M131	A-1	1.38	1.96	—	2	53	47997	37-63-AS-6.9-N7
47337	M350/480/120T-PS-KIT	M131	A-1	1.38	1.96	—	2	53	47997	37-63-AS-6.9-N7
47400	M400/SUPER5-PS-KIT	M155 or M135	A-1	1.38	1.96	—	2	54	47997	37-63-AS-6.9-N7
47132	M400/MULTI-PS-KIT	M155 or M135	A-1	1.38	1.96	—	2	54	47997	37-63-AS-6.9-N7
47138	M400/480-PS-KIT	M155 or M135	A-1	1.38	1.96	—	2	54	47997	37-63-AS-6.9-N7
47403	M400/480/120T-PS-KIT	M155 or M135	A-1	1.38	1.96	—	2	54	47997	37-63-AS-6.9-N7
47405	M450/MULTI-PS-KIT	M144	A-1	1.38	1.96	—	2	54	47997	37-63-AS-6.9-N7
46804	M450/480-PS-KIT	M144	A-1	1.38	1.96	—	2	54	47997	37-63-AS-6.9-N7
47408	M450/480/120T-PS-KIT	M144	A-1	1.38	1.96	—	2	54	47997	37-63-AS-6.9-N7
47717	M750/MULTI-PS-KIT	M149	A-2	1.17	2.50	1.90	5	55	47998	356-AS-751-MH
47409	M750/120/277/347/480-PS-KIT	M149	A-2	1.17	2.50	1.90	5	55	47998	356-AS-751-MH
47718	M750/480-PS-KIT	M149	A-2	1.17	2.50	1.90	5	55	47998	356-AS-751-MH
47416	M1000/MULTI-PS-KIT	M141	A-2	1.17	2.50	1.90	25	55	—	—
47417	M1000/120/277/347/480-PS-KIT	M141	A-2	1.17	2.50	1.90	25	55	—	—
46805	M1000/480-PS-KIT	M141	A-2	1.17	2.50	1.90	25	55	—	—
47089	M1000/120/277/347/480-HQI-RL	—	A-2	1.17	2.50	1.90	5	56	—	—
47090	M2000/277/347/480-HQI-RL	—	A-2	1.17	2.50	1.90	5	56	—	—

Figure A-1

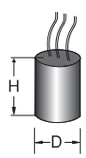


Figure A-2

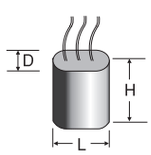
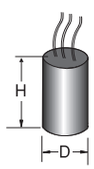
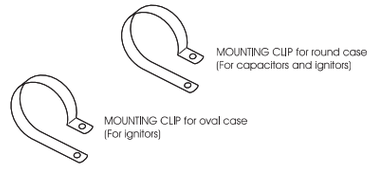


Figure A-3





Ignitors thermal plastic case, max. temp. 110°C

Specifications subject to change without notice.

OSRAM SYLVANIA National Customer Service and Sales Center
1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

Magnetic High Intensity Discharge Ignitors

For SYLVANIA HID Ballasts Only

Item #	OSRAM SYLVANIA Description	ANSI Code	Ignitor Dimensions (inches)					Page #	Replacement Ignitor Item #	OSRAM SYLVANIA Replacement Ignitor Description
			Figure	Diameter (D)	Height (H)	Length (L)	Max. Distance to lamp (feet)			
LUMALUX® HIGH PRESSURE SODIUM CORE & COIL REACTOR BALLAST										
47269	LU35/120R	S76	A-3	1.38	2.40	—	2	57	—	—
47274	LU50/120R	S68	A-3	1.38	2.40	—	2	57	—	—
47284	LU70/120R	S62	A-3	1.38	2.40	—	2	57	—	—
47304	LU100/120R	S54	A-3	1.38	2.40	—	2	57	—	—
47319	LU150/120R	S55	A-3	1.38	2.40	—	2	57	—	—
LUMALUX® HIGH PRESSURE SODIUM CORE & COIL BALLAST KITS										
47271	LU35/120/240-KIT	S76	A-2	1.17	2.50	1.90	2	58	47843	37-63-AS-9.1-N7
47549	LU50/120/277-KIT	S68	A-2	1.17	2.50	1.90	2	58	47843	37-63-AS-9.1-N7
47301	LU70/MULTI-KIT	S62	A-2	1.17	2.50	1.90	2	58	47843	37-63-AS-9.1-N7
47579	LU70/480-KIT	S62	A-2	1.17	2.50	1.90	2	58	47843	37-63-AS-9.1-N7
47571	LU70/120/277-KIT	S62	A-2	1.17	2.50	1.90	2	58	47843	37-63-AS-9.1-N7
47316	LU100/MULTI-KIT	S54	A-2	1.17	2.50	1.90	2	58	47843	37-63-AS-9.1-N7
47593	LU100/480-KIT	S54	A-2	1.17	2.50	1.90	2	58	47843	37-63-AS-9.1-N7
47592	LU100/120/277-KIT	S54	A-2	1.17	2.50	1.90	2	58	47843	37-63-AS-9.1-N7
47335	LU150/MULTI-KIT	S55	A-2	1.17	2.50	1.90	2	59	47843	37-63-AS-9.1-N7
47619	LU150/480-KIT	S55	A-2	1.17	2.50	1.90	2	59	47843	37-63-AS-9.1-N7
47621	LU150/480/120T-KIT	S55	A-2	1.17	2.50	1.90	2	59	47843	37-63-AS-9.1-N7
47617	LU150/120/277-KIT	S55	A-2	1.17	2.50	1.90	2	59	47843	37-63-AS-9.1-N7
47623	LU150/480-CWA-KIT	S55	A-2	1.17	2.50	1.90	2	59	47843	37-63-AS-9.1-N7
47628	LU200/MULTI-KIT	S66	A-2	1.17	2.50	1.90	2	59	47844	37-63-AS-6.9-N6
47631	LU200/480-KIT	S66	A-2	1.17	2.50	1.90	2	59	47844	37-63-AS-6.9-N6
47634	LU250/SUPER5-KIT	S50	A-2	1.17	2.50	1.90	2	60	47844	37-63-AS-6.9-N6
47357	LU250/MULTI-KIT	S50	A-2	1.17	2.50	1.90	2	60	47844	37-63-AS-6.9-N6
47358	LU250/480-KIT	S50	A-2	1.17	2.50	1.90	2	60	47844	37-63-AS-6.9-N6
47637	LU250/480/120T-KIT	S50	A-2	1.17	2.50	1.90	2	60	47844	37-63-AS-6.9-N6
47642	LU250/120/277-KIT	S50	A-2	1.17	2.50	1.90	2	60	47844	37-63-AS-6.9-N6
47643	LU310/MULTI-KIT	S67	A-2	1.17	2.50	1.90	2	60	47844	37-63-AS-6.9-N6
47644	LU310/480-KIT	S67	A-2	1.17	2.50	1.90	2	60	47844	37-63-AS-6.9-N6
47647	LU400/SUPER5-KIT	S51	A-2	1.17	2.50	1.90	2	61	47844	37-63-AS-6.9-N6
47364	LU400/MULTI-KIT	S51	A-2	1.17	2.50	1.90	2	61	47844	37-63-AS-6.9-N6
47376	LU400/480-KIT	S51	A-2	1.17	2.50	1.90	2	61	47844	37-63-AS-6.9-N6
47657	LU400/480/120T-KIT	S51	A-2	1.17	2.50	1.90	2	61	47844	37-63-AS-6.9-N6
47656	LU400/120/277-KIT	S51	A-2	1.17	2.50	1.90	2	61	47844	37-63-AS-6.9-N6
47712	LU750/MULTI-KIT	S111	A-2	1.17	2.50	1.90	5	62	47847	356-AS-7.9
47658	LU750/480-KIT	S111	A-2	1.17	2.50	1.90	5	62	47847	356-AS-7.9
47659	LU1000/SUPER5-KIT	S52	A-2	1.17	2.50	1.90	2	62	—	—
47389	LU1000/MULTI-KIT	S52	A-2	1.17	2.50	1.90	2	62	—	—
47391	LU1000/480-KIT	S52	A-2	1.17	2.50	1.90	2	62	—	—

Figure A-1

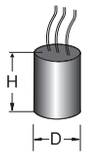


Figure A-2

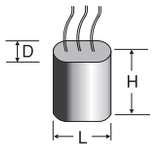
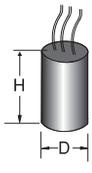
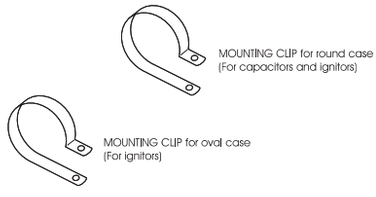


Figure A-3





Ignitors thermal plastic case, max. temp. 110°C

Specifications subject to change without notice.

Magnetic High Intensity Discharge Ballast to Lamp Table

Item #	OSRAM SYLVANIA Description	Ballast Type	Circuit Type	Input Voltage (VAC)	Page #
METALARC® METAL HALIDE BALLASTS					
175W Metal Halide Lamp - ANSI Code M57 or Mercury Lamp - ANSI Code H39					
47243	M175/SUPER5-KIT	Core & Coil Kit	CWA	120/208/240/277/480	46
47735	M175/MULTI-KIT	Core & Coil Kit	CWA	120/208/240/277	46
47035	M175/480-KIT	Core & Coil Kit	CWA	480	46
47253	M175/480/120T-KIT	Core & Coil Kit	CWA	480/120TAP	46
47254	M175/120/277-KIT	Core & Coil Kit	CWA	120/277	46
47743	M175/120/277/F-CAN	F-CAN	CWA	120/277	66
47153	M175/MULTI-I/D	Indoor Enclosed	CWA	120/208/240/277	70
250W Metal Halide Lamp - ANSI Code M58 or Mercury Lamp - ANSI Code H37					
47265	M250/SUPER5-KIT	Core & Coil Kit	CWA	120/208/240/277/480	46
47737	M250/MULTI-KIT	Core & Coil Kit	CWA	120/208/240/277	46
47611	M250/480-KIT	Core & Coil Kit	CWA	480	46
47268	M250/480/120T-KIT	Core & Coil Kit	CWA	480/120TAP	46
47049	M250/MULTI 3X4-KIT	Core & Coil Kit	CWA	120/208/240/277	46
47050	M250/480-3X4-KIT	Core & Coil Kit	CWA	480	46
47751	M250/120/277/F-CAN	F-CAN	CWA	120/277	66
47158	M250/MULTI-I/D	Indoor Enclosed	CWA	120/208/240/277	70
400W Metal Halide Lamp or 360W Metal Halide Lamp - ANSI Code M59 or Mercury Lamp - ANSI Code H33					
47338	M400/SUPER5-KIT	Core & Coil Kit	CWA	120/208/240/277/480	47
47739	M400/MULTI-KIT	Core & Coil Kit	CWA	120/208/240/277	47
47065	M400/480-KIT	Core & Coil Kit	CWA	480	47
47394	M400/480/120T-KIT	Core & Coil Kit	CWA	480/120TAP	47
47075	M2x400/120/240-KIT	Core & Coil Kit	CWA	120/240	47
47759	M400/120/277/F-CAN	F-CAN	CWA	120/277	66
47172	M400/MULTI-I/D	Indoor Enclosed	CWA	120/208/240/277	70
1000W Metal Halide Lamp - ANSI Code M47 or Mercury Lamp - ANSI Code H36					
47427	M1000/SUPER5-KIT	Core & Coil Kit	CWA	120/208/240/277/480	48
47744	M1000/MULTI-KIT	Core & Coil Kit	CWA	120/208/240/277	48
47655	M1000/480-KIT	Core & Coil Kit	CWA	480	48
47432	M1000/480/120T-KIT	Core & Coil Kit	CWA	480/120TAP	48
47207	M1000/MULTI-I/D	Indoor Enclosed	CWA	120/208/240/277	70
1500W Metal Halide Lamp - ANSI Code M48					
46808	M1500/MULTI-KIT	Core & Coil Kit	CWA	120/208/240/277	48
47095	M1500/480-KIT	Core & Coil Kit	CWA	480	48
47434	M1500/480/120T-KIT	Core & Coil Kit	CWA	480/120TAP	48
METALARC METAL HALIDE PULSE START BALLASTS					
35W Metal Halide Pulse Start Lamp - ANSI Code M130					
47001	M35/MULTI-HQ/CI-KIT	Pulse Start Core & Coil Kit	CWA	120/208/240/277	49
47203	M35/120/277-KIT	Pulse Start Core & Coil Kit	HX-HPF	120/277	49
47680	M35/120/277/F-CAN	Pulse Start F-CAN	HX-HPF	120/277	67
50W Metal Halide Pulse Start Lamp - ANSI Code M110					
47007	M50/MULTI-KIT	Pulse Start Core & Coil Kit	HX-HPF	120/208/240/277	49
47204	M50/120/277-KIT	Pulse Start Core & Coil Kit	HX-HPF	120/277	49
47195	M50/120/277/F-CAN	Pulse Start F-CAN	HX-HPF	120/277	67
70W Metal Halide Pulse Start Lamp - ANSI Code M98					
47013	M70/MULTI-KIT	Pulse Start Core & Coil Kit	HX-HPF	120/208/240/277	49
47217	M70/120/277-KIT	Pulse Start Core & Coil Kit	HX-HPF	120/277	49
70W Metal Halide Pulse Start Lamp - ANSI Code M98 or M139 or M85					
47645	M70/MULTI-HQ/CI-KIT	Pulse Start Core & Coil Kit	CWA	120/208/240/277	49
70W Metal Halide Pulse Start Lamp - ANSI Code M139					
47693	M70/120/277/F-CAN	Pulse Start F-CAN	HX-HPF	120/277	67
70W Metal Halide Pulse Start Lamp - ANSI Code M98 or M143					
47694	M70/120/277/F-CAN	Pulse Start F-CAN	HX-HPF	120/277	67
100W Metal Halide Pulse Start Lamp - ANSI Code M90					
47019	M100/MULTI-KIT	Pulse Start Core & Coil Kit	HX-HPF	120/208/240/277	50
47219	M100/120/277-KIT	Pulse Start Core & Coil Kit	HX-HPF	120/277	50
47734	M100/120/277/F-CAN	Pulse Start F-CAN	HX-HPF	120/277	67

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Magnetic High Intensity Discharge Ballast to Lamp Table

Item #	OSRAM SYLVANIA Description	Ballast Type	Circuit Type	Input Voltage (V_{AC})	Page #
METALARC® METAL HALIDE PULSE START BALLASTS *(continued)*					
150W Metal Halide Pulse Start Lamp - ANSI Code M102					
47682	M150/MULTI-PS-KIT	Pulse Start Core & Coil Kit	HX-HPF	120/208/240/277	50
47228	M150/120/277-PS-KIT	Pulse Start Core & Coil Kit	HX-HPF	120/277	50
150W Metal Halide Pulse Start Lamp - ANSI Code M102 or M142					
47640	M150/MULTI-PS-CWA-KIT	Pulse Start Core & Coil Kit	CWA	120/208/240/277	50
47738	M150-PS/120/277/F-CAN	Pulse Start F-CAN	CWA	120/277	67
150W Metal Halide Pulse Start Lamp - ANSI Code M81					
47229	M150/MULTI-KIT	Pulse Start Core & Coil Kit	HX-HPF	120/208/240/277	50
175W Metal Halide Pulse Start Lamp - ANSI Code M137 or M152					
47686	M175/MULTI-PS-KIT	Pulse Start Core & Coil Kit	CWA	120/208/240/277	51
46801	M175/480-PS-KIT	Pulse Start Core & Coil Kit	CWA	480	51
47741	M175-PS/120/277/F-CAN	Pulse Start F-CAN	CWA	120/277	68
200W Metal Halide Pulse Start Lamp - ANSI Code M136					
47690	M200/MULTI-PS-KIT	Pulse Start Core & Coil Kit	CWA	120/208/240/277	51
46802	M200/480-PS-KIT	Pulse Start Core & Coil Kit	CWA	480	51
47259	M200/480/120T-PS-KIT	Pulse Start Core & Coil Kit	CWA	480/120TAP	51
47747	M200-PS/120/277/F-CAN	Pulse Start F-CAN	CWA	120/277	68
250W Metal Halide Pulse Start Lamp - ANSI Code M138 or M153					
47282	M250/SUPER5-PS-KIT	Pulse Start Core & Coil Kit	CWA	120/208/240/277/480	52
47112	M250/MULTI-PS-KIT	Pulse Start Core & Coil Kit	CWA	120/208/240/277	52
47106	M250/480-PS-KIT	Pulse Start Core & Coil Kit	CWA	480	52
47283	M250/480/120T-PS-KIT	Pulse Start Core & Coil Kit	CWA	480/120TAP	52
47749	M250-PS/120/277/F-CAN	Pulse Start F-CAN	CWA	120/277	68
250W HQI Metal Halide Lamp - ANSI Code M80					
47273	M250/120/277-KIT	Pulse Start Core & Coil Kit	HX-HPF	120/277	52
320W Metal Halide Pulse Start Lamp - ANSI Code M132 or M154					
47676	M320/MULTI-PS-KIT	Pulse Start Core & Coil Kit	CWA	120/208/240/277	53
46803	M320/480-PS-KIT	Pulse Start Core & Coil Kit	CWA	480	53
47303	M320/480/120T-PS-KIT	Pulse Start Core & Coil Kit	CWA	480/120TAP	53
47753	M320-PS/120/277/F-CAN	Pulse Start F-CAN	CWA	120/277	68
350W Metal Halide Pulse Start Lamp - ANSI Code M131					
47695	M350/MULTI-PS-KIT	Pulse Start Core & Coil Kit	CWA	120/208/240/277	53
47697	M350/480-PS-KIT	Pulse Start Core & Coil Kit	CWA	480	53
47337	M350/480/120T-PS-KIT	Pulse Start Core & Coil Kit	CWA	480/120TAP	53
400W Metal Halide Pulse Start Lamp - ANSI Code M155 or M135					
47400	M400/SUPER5-PS-KIT	Pulse Start Core & Coil Kit	CWA	120/208/240/277/480	54
47132	M400/MULTI-PS-KIT	Pulse Start Core & Coil Kit	CWA	120/208/240/277	54
47138	M400/480-PS-KIT	Pulse Start Core & Coil Kit	CWA	480	54
47403	M400/480/120T-PS-KIT	Pulse Start Core & Coil Kit	CWA	480/120TAP	54
47757	M400-PS/120/277/F-CAN	Pulse Start F-CAN	CWA	120/277	68
450W Metal Halide Pulse Start Lamp - ANSI Code M144					
47405	M450/MULTI-PS-KIT	Pulse Start Core & Coil Kit	CWA	120/208/240/277	54
46804	M450/480-PS-KIT	Pulse Start Core & Coil Kit	CWA	480	54
47408	M450/480/120T-PS-KIT	Pulse Start Core & Coil Kit	CWA	480/120TAP	54
750W Metal Halide Pulse Start Lamp - ANSI Code M149					
47717	M750/MULTI-PS-KIT	Pulse Start Core & Coil Kit	CWA	120/208/240/277	55
47409	M750/120/277/347/480-PS-KIT	Pulse Start Core & Coil Kit	CWA	120/277/347/480	55
47718	M750/480-PS-KIT	Pulse Start Core & Coil Kit	CWA	480	55
1000W Metal Halide Pulse Start Lamp - ANSI Code M141					
47416	M1000/MULTI-PS-KIT	Pulse Start Core & Coil Kit	CWA	120/208/240/277	55
47417	M1000/120/277/347/480-PS-KIT	Pulse Start Core & Coil Kit	CWA	120/277/347/480	55
46805	M1000/480-PS-KIT	Pulse Start Core & Coil Kit	CWA	480	55
1000W HQI Metal Halide Lamp					
47089	M1000/102/277/347/480-HQI-RL	Pulse Start Core & Coil	Reg. Lag	120/277/347/480	56
2000W HQI Metal Halide Lamp					
47090	M2000/277/347/480-HQI-RL	Pulse Start Core & Coil	Reg. Lag	277/347/480	56

Specifications subject to change without notice.

Magnetic High Intensity Discharge Ballast to Lamp Table

Item #	OSRAM SYLVANIA Description	Ballast Type	Circuit Type	Input Voltage (VAC)	Page #
LUMALUX® HIGH PRESSURE SODIUM CORE & COIL REACTOR BALLASTS					
35W High Pressure Sodium Lamp - ANSI Code S76					
47269	LU35/120R	Reactor	R-NPF	120	57
47537	LU35/120R-INT	Reactor	R-NPF	120	57
47271	LU35/120/240-KIT	Pulse Start Core & Coil Kit	HX-HPF	120/240	58
47761	LU35/120/277/F-CAN	Pulse Start F-CAN	HX-HPF	120/277	69
50W High Pressure Sodium Lamp - ANSI Code S68					
47274	LU50/120R	Reactor	R-NPF	120	57
47548	LU50/120R-INT	Reactor	R-NPF	120	57
47549	LU50/120/277-KIT	Pulse Start Core & Coil Kit	HX-HPF	120/277	58
47762	LU50/120/277/F-CAN	Pulse Start F-CAN	HX-HPF	120/277	69
70W High Pressure Sodium Lamp - ANSI Code S62					
47284	LU70/120R	Reactor	R-NPF	120	57
47558	LU70/120R-INT	Reactor	R-NPF	120	57
47301	LU70/MULTI-KIT	Pulse Start Core & Coil Kit	HX-HPF	120/208/240/277	58
47579	LU70/480-KIT	Pulse Start Core & Coil Kit	HX-HPF	480	58
47571	LU70/120/277-KIT	Pulse Start Core & Coil Kit	HX-HPF	120/277	58
47763	LU70/120/277/F-CAN	Pulse Start F-CAN	HX-HPF	120/277	69
100W High Pressure Sodium Lamp - ANSI Code S54					
47304	LU100/120R	Reactor	R-NPF	120	57
47585	LU100/120R-INT	Reactor	R-NPF	120	57
47316	LU100/MULTI-KIT	Pulse Start Core & Coil Kit	HX-HPF	120/208/240/277	58
47593	LU100/480-KIT	Pulse Start Core & Coil Kit	HX-HPF	480	58
47592	LU100/120/277-KIT	Pulse Start Core & Coil Kit	HX-HPF	120/277	58
47764	LU100/120/277/F-CAN	Pulse Start F-CAN	HX-HPF	120/277	69
150W High Pressure Sodium Lamp - ANSI Code S55					
47319	LU150/120R	Reactor	R-NPF	120	57
47616	LU150/120R-INT	Reactor	R-NPF	120	57
47335	LU150/MULTI-KIT	Pulse Start Core & Coil Kit	HX-HPF	120/208/240/277	59
47619	LU150/480-KIT	Pulse Start Core & Coil Kit	HX-HPF	480	59
47621	LU150/480/120T-KIT	Pulse Start Core & Coil Kit	HX-HPF	480/120TAP	59
47617	LU150/120/277-KIT	Pulse Start Core & Coil Kit	HX-HPF	120/277	59
47623	LU150/480-CWA-KIT	Pulse Start Core & Coil Kit	CWA	480	59
47765	LU150/120/277/F-CAN	Pulse Start F-CAN	HX-HPF	120/277	69
200W High Pressure Sodium Lamp - ANSI Code S66					
47628	LU200/MULTI-KIT	Pulse Start Core & Coil Kit	CWA	120/208/240/277	59
47631	LU200/480-KIT	Pulse Start Core & Coil Kit	CWA	480	59
250W High Pressure Sodium Lamp - ANSI Code S50					
47634	LU250/SUPER5-KIT	Pulse Start Core & Coil Kit	CWA	120/208/240/277/480	60
47357	LU250/MULTI-KIT	Pulse Start Core & Coil Kit	CWA	120/208/240/277	60
47358	LU250/480-KIT	Pulse Start Core & Coil Kit	CWA	480	60
47637	LU250/480/120T-KIT	Pulse Start Core & Coil Kit	CWA	480/120TAP	60
47642	LU250/120/277-KIT	Pulse Start Core & Coil Kit	CWA	120/277	60
47777	LU250/120/277/F-CAN	Pulse Start F-CAN	CWA	120/277	69
310W High Pressure Sodium Lamp - ANSI Code S67					
47643	LU310/MULTI-KIT	Pulse Start Core & Coil Kit	CWA	120/208/240/277	60
47644	LU310/480-KIT	Pulse Start Core & Coil Kit	CWA	480	60
400W High Pressure Sodium Lamp - ANSI Code S51					
47647	LU400/SUPER5-KIT	Pulse Start Core & Coil Kit	CWA	120/208/240/277/480	61
47364	LU400/MULTI-KIT	Pulse Start Core & Coil Kit	CWA	120/208/240/277	61
47376	LU400/480-KIT	Pulse Start Core & Coil Kit	CWA	480	61
47657	LU400/480/120T-KIT	Pulse Start Core & Coil Kit	CWA	480/120TAP	61
47656	LU400/120/277-KIT	Pulse Start Core & Coil Kit	CWA	120/277	61
750W High Pressure Sodium Lamp - ANSI Code S111					
47712	LU750/MULTI-KIT	Pulse Start Core & Coil Kit	CWA	120/208/240/277	62
47658	LU750/480-KIT	Pulse Start Core & Coil Kit	CWA	480	62
1000W High Pressure Sodium Lamp - ANSI Code S52					
47659	LU1000/SUPER5-KIT	Pulse Start Core & Coil Kit	CWA	120/208/240/277/480	62
47389	LU1000/MULTI-KIT	Pulse Start Core & Coil Kit	CWA	120/208/240/277	62
47391	LU1000/480-KIT	Pulse Start Core & Coil Kit	CWA	480	62

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Magnetic High Intensity Discharge Ballast to Lamp Table

Item #	OSRAM SYLVANIA Description	Ballast Type	Circuit Type	Input Voltage (V_{AC})	Page #
MERCURY CORE & COIL BALLASTS					
50W Mercury Lamp - ANSI Code H46					
46518	H50/MULTI-KIT	Core & Coil Kit	CWA	120/208/240/277	63
75W Mercury Lamp - ANSI Code H43					
46519	H75/MULTI-KIT	Core & Coil Kit	CWA	120/208/240/277	63
100W Mercury Lamp - ANSI Code H38 or H44					
46522	H100/MULTI-KIT	Core & Coil Kit	CWA	120/208/240/277	63
47472	H100/277-KIT	Core & Coil Kit	CWA	277	63
47471	H100/DUAL-KIT	Core & Coil Kit	CWA	120/240	63
175W Mercury Lamp - ANSI Code H39					
47489	H175/MULTI-KIT	Core & Coil Kit	CWA	120/208/240/277	64
47490	H175/480-KIT	Core & Coil Kit	CWA	480	64
250W Mercury Lamp - ANSI Code H37					
47499	H250/MULTI-KIT	Core & Coil Kit	CWA	120/208/240/277	64
47500	H250/480-KIT	Core & Coil Kit	CWA	480	64
46531	H250/480/120T-KIT	Core & Coil Kit	CWA	480/120TAP	64
400W Mercury Lamp - ANSI Code H33					
47509	H400/MULTI-KIT	Core & Coil Kit	CWA	120/208/240/277	65
47510	H400/480-KIT	Core & Coil Kit	CWA	480	65
46533	H400/480/120T-KIT	Core & Coil Kit	CWA	480/120TAP	65
47517	H2X400/120-KIT	Core & Coil Kit	CWA	120	65
47518	H2X400/277-KIT	Core & Coil Kit	CWA	277	65
1000W Mercury Lamp - ANSI Code H36					
47524	H1000/MULTI-KIT	Core & Coil Kit	CWA	120/208/240/277	65
47525	H1000/480-KIT	Core & Coil Kit	CWA	480	65

ADVANCE to OSRAM SYLVANIA
Magnetic HID Cross Reference

ADVANCE Catalog #	Input Voltage (V_{AC})	Circuit Type	ANSI Code	OSRAM SYLVANIA Item #	OSRAM SYLVANIA Description	Page #
71A2080	120/208/240/277	CWA	H43	46519	H75/MULTI-KIT	63
71A2501	120/240	CWA	H38 or H44	47471	H100/DUAL-KIT	63
71A2591 & 71A2571-001D	120/208/240/277	CWA	H38 or H44	46522	H100/MULTI-KIT	63
71A3042 & 71A3042 -001D	480	CWA	H39	47490	H175/480-KIT	64
71A3092 & 71A3072-001D	120/208/240/277	CWA	H39	47489	H175/MULTI-KIT	64
71A3542 & 71A3542-001D	480	CWA	H37	47500	H250/480-KIT	64
71A3542T	480/120TAP	CWA	H37	46531	H250/480/120T-KIT	64
71A3592 & 71A3572-001D	120/208/240/277	CWA	H37	47499	H250/MULTI-KIT	64
71A4041 & 71A4041-001D	480	CWA	H33	47510	H400/480-KIT	65
71A4041T	480/120TAP	CWA	H33	46533	H400/480/120T-KIT	65
71A4091 & 71A4071-001D	120/208/240/277	CWA	H33	47509	H400/MULTI-KIT	65
71A5040-001	480	CWA	H36	47525	H1000/480-KIT	65
71A5070-001	120/208/240/277	CWA	H36	47524	H1000/MULTI-KIT	65
71A5081	120/277	HX-HPF	M130	47203	M35/120/277-KIT	49
71A5181	120/277	HX-HPF	M110	47204	M50/120/277-KIT	49
71A5282	120/277	HX-HPF	M98	47217	M70/120/277-KIT	49
71A5292 & 71A5292-001D	120/208/240/277	HX-HPF	M98	47013	M70/MULTI-KIT	49
71A5380	120/277	HX-HPF	M90	47219	M100/120/277-KIT	50
71A5390 & 71A5390-001D	120/208/240/277	HX-HPF	M90	47019	M100/MULTI-KIT	50
71A5482	120/277	HX-HPF	M102	47228	M150/120/277-PS-KIT	50
71A5490	120/208/240/277	HX-HPF	M81	47229	M150/MULTI-KIT	50
71A5492	120/208/240/277	HX-HPF	M102	47682	M150/MULTI-PS-KIT	50
71A5540 & 71A5540-001D	480	CWA	M57 or H39	47035	M175/480-KIT	46
71A5540T	480/120TAP	CWA	M57 or H39	47253	M175/480/120T-KIT	46
71A5580	120/277	CWA	M57 or H39	47254	M175/120/277-KIT	46
71A5590 & 71A5570-001D	120/208/240/277	CWA	M57 or H39	47735	M175/MULTI-KIT	46
71A5593 & 71A5593-001D	120/208/240/277	CWA	M137 or M152	47686	M175/MULTI-PS-KIT	51
71A5642T	480/120TAP	CWA	M136	47259	M200/480/120T-PS-KIT	51
71A5692 & 71A5692-001D	120/208/240/277	CWA	M136	47690	M200/MULTI-PS-KIT	51
71A5740 & 71A5740-001D	480	CWA	M58 or H37	47611	M250/480-KIT	46
71A5740T	480/120TAP	CWA	M58 or H37	47268	M250/480/120T-KIT	46
71A5741 & 71A5741-001D	480	CWA	M58 or H37	47050	M250/480-3X4-KIT	46
71A5742T	480/120TAP	CWA	M138 or M153	47283	M250/480/120T-PS-KIT	52
71A5750 & 71A5750-001D	120/208/240/277/480	CWA	M58 or H37	47265	M250/SUPER5-KIT	46
71A5790 & 71A5770-001D	120/208/240/277	CWA	M58 or H37	47737	M250/MULTI-KIT	46
71A5791 & 71A5771-001D	120/208/240/277	CWA	M58 or H37	47049	M250/MULTI 3X4-KIT	46
71A5792 & 71A5792-001D	120/208/240/277	CWA	M138 or M153	47112	M250/MULTI-PS-KIT	52
71A5842T & 71A5842-001DT	480/120TAP	CWA	M132 or M154	47303	M320/480/120T-PS-KIT	53
71A5880	120/277	HX-HPF	M80	47273	M250/120/277-KIT	52
71A5892 & 71A5892-001D	120/208/240/277	CWA	M132 or M154	47676	M320/MULTI-PS-KIT	53
71A5943T	480/120TAP	CWA	M131	47337	M350/480/120T-PS-KIT	53
71A5993 & 71A5993-001D	120/208/240/277	CWA	M131	47695	M350/MULTI-PS-KIT	53
71A6041 & 71A6041-001D	480	CWA	M59 or H33	47065	M400/480-KIT	47
71A6041T	480/120TAP	CWA	M59 or H33	47394	M400/480/120T-KIT	47
71A6042T	480/120TAP	CWA	M155 or M135	47403	M400/480/120T-PS-KIT	54

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ADVANCE Catalog #	Input Voltage (V_{AC})	Circuit Type	ANSI Code		OSRAM SYLVANIA Item #	OSRAM SYLVANIA Description	Page #
71A6051 & 71A6051-001D	120/208/ 240/277/480	CWA	M59 or H33		47338	M400/SUPER5-KIT	47
71A6091 & 71A6071-001D	120/208/240/277	CWA	M59 or H33		47739	M400/MULTI-KIT	47
71A6092 & 71A6092-001D	120/208/240/277	CWA	M155 or M135		47132	M400/MULTI-PS-KIT	54
71A6343T	480/120TAP	CWA	M144		47408	M450/480/120T-PS-KIT	54
71A6393	120/208/240/277	CWA	M144		47405	M450/MULTI-PS-KIT	54
71A64E2	120/208/240/277	CWA	M149		47717	M750/MULTI-PS-KIT	55
71A64F2T	120/277/347/480	CWA	M149		47409	M750/120/277/347/480-PS-KIT	55
71A6542 & 71A6542-001	480	CWA	M47 or H36		47655	M1000/480-KIT	48
71A6542T	480/120TAP	CWA	M47 or H36		47432	M1000/480/120T-KIT	48
71A6552 & 71A6552-001	120/208/240/277/480	CWA	M47 or H36		47427	M1000/SUPER5-KIT	48
71A6592 & 71A6572-001	120/208/240/277	CWA	M47 or H36		47744	M1000/MULTI-KIT	48
71A6593	120/208/240/277	CWA	M141		47416	M1000/MULTI-PS-KIT	55
71A65F3T	120/277/347/480	CWA	M141		47417	M1000/120/277/347/480-PS-KIT	55
71A6742 & 71A6742-001	480	CWA	M48		47095	M1500/480-KIT	48
71A6792 & 71A6772-001	120/208/240/277	CWA	M48		46808	M1500/MULTI-KIT	48
71A7707	120	R-NPF	S76		47269	LU35/120R	57
71A7707B	120	R-NPF	S76		47537	LU35/120R-INT	57
71A7991 & 71A7971-001D	120/208/240/277	HX-HPF	S62		47301	LU70/MULTI-KIT	58
71A7801 & 71A7801-001D	120/277	HX-HPF	S68		47549	LU50/120/277-KIT	58
71A7807	120	R-NPF	S68		47274	LU50/120R	57
71A7807B	120	R-NPF	S68		47548	LU50/120R-INT	57
71A7901	120/277	HX-HPF	S62		47571	LU70/120/277-KIT	58
71A7907	120	R-NPF	S62		47284	LU70/120R	57
71A7907B	120	R-NPF	S62		47558	LU70/120R-INT	57
71A7941	480	HX-HPF	S62		47579	LU70/480-KIT	58
71A8001	120/277	HX-HPF	S54		47592	LU100/120/277-KIT	58
71A8007	120	R-NPF	S54		47304	LU100/120R	57
71A8007B	120	R-NPF	S54		47585	LU100/120R-INT	57
71A8041 & 71A8041-001D	480	HX-HPF	S54		47593	LU100/480-KIT	58
71A8091 & 71A8071-001D	120/208/240/277	HX-HPF	S54		47316	LU100/MULTI-KIT	58
71A8102	120/277	HX-HPF	S55		47617	LU150/120/277-KIT	59
71A8107	120	R-NPF	S55		47319	LU150/120R	57
71A8107B	120	R-NPF	S55		47616	LU150/120R-INT	57
71A8142 & 71A8142-001D	480	HX-HPF	S55		47619	LU150/480-KIT	59
71A8142T	480/120TAP	HX-HPF	S55		47621	LU150/480/120T-KIT	59
71A8148	480	CWA	S55		47623	LU150/480-CWA-KIT	59
71A8192 & 71A8172-001D	120/208/240/277	HX-HPF	S55		47335	LU150/MULTI-KIT	59
71A8241 & 71A8241-001D	480	CWA	S50		47358	LU250/480-KIT	60
71A8241T	480/120TAP	CWA	S50		47637	LU250/480/120T-KIT	60
71A8251 & 71A8251-001D	120/208/240/277/480	CWA	S50		47634	LU250/SUPER5-KIT	60
71A8281	120/277	CWA	S50		47642	LU250/120/277-KIT	60
71A8291 & 71A8271-001D	120/208/240/277	CWA	S50		47357	LU250/MULTI-KIT	60
71A8341	480	CWA	S67		47644	LU310/480-KIT	60
71A8391 & 71A8371-001D	120/208/240/277	CWA	S67		47643	LU310/MULTI-KIT	60
71A8443 & 71A8443-001D	480	CWA	S51		47376	LU400/480-KIT	61
71A8443T	480/120TAP	CWA	S51		47657	LU400/480/120T-KIT	61
71A8453 & 71A8453-001D	120/208/240/277/480	CWA	S51		47647	LU400/SUPER5-KIT	61
71A8493 & 71A8473-001D	120/208/240/277	CWA	S51		47364	LU400/MULTI-KIT	61
71A86E5	120/208/240/277	CWA	S111		47712	LU750/MULTI-KIT	62
71A8743 & 71A8743-001	480	CWA	S52		47391	LU1000/480-KIT	62

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71A8753 & 71A8753-001	120/208/240/277/480	CWA	S52	47659	LU1000/SUPER5-KIT	62
71A8793 & 71A8773-001	120/208/240/277	CWA	S52	47389	LU1000/MULTI-KIT	62
71A8940 & 71A8940-001D	480	CWA	S66	47631	LU200/480-KIT	59
71A8990 & 71A8970-001D	120/208/240/277	CWA	S66	47628	LU200/MULTI-KIT	59
72C5081-NP	120/277	HX-HPF	M130	47680	M35/120/277/F-CAN	67
72C5181-NP & 72C5181-NP-001	120/277	HX-HPF	M110	47195	M50/120/277/F-CAN	67
72C5281-NP	120/277	HX-HPF	M139	47693	M70/120/277/F-CAN	67
72C5282-NP & 72C5282-NP-001	120/277	HX-HPF	M98 or M143	47694	M70/120/277/F-CAN	67
72C5381-NP & 72C5381-NP-001	120/277	HX-HPF	M90	47734	M100/120/277/F-CAN	67
72C5581-NP & 72C5581-NP-001	120/277	CWA	M57 or H39	47743	M175/120/277/F-CAN	66
72C5582-NP & 72C5582-NP-001	120/277	CWA	M137 or M152	47741	M175-PS/120/277/F-CAN	68
72C5782-NP & 72C5782-NP-001	120/277	CWA	M58 or H37	47751	M250/120/277/F-CAN	66
72C5783-NP & 72C5783-NP-001	120/277	CWA	M138 or M153	47749	M250-PS/120/277/F-CAN	68
72C5882-NP & 72C5882-NP-001	120/277	CWA	M132 or M154	47753	M320-PS/120/277/F-CAN	68
72C6082-NP & 72C6082-NP-001	120/277	CWA	M59 or H33	47759	M400/120/277/F-CAN	66
72C6182-NP & 72C6182-NP-001	120/277	CWA	M155 or M135	47757	M400-PS/120/277/F-CAN	68
72C7884-NP & 72C7884-NP-001	120/277	HX-HPF	S68	47762	LU50/120/277/F-CAN	69
72C7984-NP & 72C7984-NP-001	120/277	HX-HPF	S62	47763	LU70/120/277/F-CAN	69
72C8084-NP & 72C8084-NP-001	120/277	HX-HPF	S54	47764	LU100/120/277/F-CAN	69
72C885-NP	120/277	HX-HPF	S55	47765	LU150/120/277/F-CAN	69
78E5590-001	120/208/240/277	CWA	H39	47153	M175/MULTI-I/D	70
78E5790-001	120/208/240/277	CWA	M58 or H37	47158	M250/MULTI-I/D	70
78E6091-001	120/208/240/277	CWA	M59 or H33	47172	M400/MULTI-I/D	70
78E6592-001	120/208/240/277	CWA	M47 or H36	47207	M1000/MULTI-I/D	70
—	277	CWA	H38 or H44	47472	H100/277-KIT	63
—	120	CWA	H33	47517	H2X400/120-KIT	65
—	277	CWA	H33	47518	H2X400/277-KIT	65
—	120/208/240/277	CWA	H46	46518	H50/MULTI-KIT	63
—	120/277	CWA	S50	47777	LU250/120/277/F-CAN	69
—	120/240	HX-HPF	S76	47271	LU35/120/240-KIT	58
—	120/277	HX-HPF	S76	47761	LU35/120/277/F-CAN	69
—	120/277	CWA	S51	47656	LU400/120/277-KIT	61
—	480	CWA	S111	47658	LU750/480-KIT	62
—	120/277/347/480	Reg. Lag	—	47089	M1000/120/277/347/480-HQI-RL	56
—	480	CWA	M141	46805	M1000/480-PS-KIT	55
—	120/208/240/277	CWA	M102 or M142	47640	M150/MULTI-PS-CWA-KIT	50
—	480/120TAP	CWA	M48	47434	M1500/480/120T-KIT	48
—	120/277	CWA	M102 or M142	47738	M150-PS/120/277/F-CAN	67
—	480	CWA	M137 or M152	46801	M175/480-PS-KIT	51
—	120/208/240/277/480	CWA	M57 or H39	47243	M175/SUPER5-KIT	46
—	480	CWA	M136	46802	M200/480-PS-KIT	51
—	277/347/480	Reg. Lag	—	47090	M2000/277/347/480-HQI-RL	56
—	120/277	CWA	M136	47747	M200-PS/120/277/F-CAN	68
—	480	CWA	M138 or M153	47106	M250/480-PS-KIT	52
—	120/208/240/277/480	CWA	M138 or M153	47282	M250/SUPER5-PS-KIT	52
—	120/240	CWA	M59 or H33	47075	M2x400/120/240-KIT	47
—	480	CWA	M132 or M154	46803	M320/480-PS-KIT	53
—	120/208/240/277	CWA	M130	47001	M35/MULTI-HQ/CI-KIT	49
—	480	CWA	M131	47697	M350/480-PS-KIT	53
—	480	CWA	M155 or M135	47138	M400/480-PS-KIT	54
—	120/208/240/277/480	CWA	M155 or M135	47400	M400/SUPER5-PS-KIT	54
—	480	CWA	M144	46804	M450/480-PS-KIT	54
—	120/208/240/277	HX-HPF	M110	47007	M50/MULTI-KIT	49
—	120/208/240/277	CWA	M98 or M139 or M85	47645	M70/MULTI-HQ/CI-KIT	49
—	480	CWA	M149	47718	M750/480-PS-KIT	55

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Universal Lighting Technologies to OSRAM SYLVANIA Magnetic HID Cross Reference

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1110-245SC-TC	120/277	CWA	M57 or H39		47743	M175/120/277/F-CAN	66
1110-246C-TC	120/277	CWA	M58 or H37		47751	M250/120/277/F-CAN	66
1110-247SC-TC	120/277	CWA	M59 or H33		47759	M400/120/277/F-CAN	66
11210-236C-TC	120/277	HX-HPF	M110		47195	M50/120/277/F-CAN	67
11210-239C-TC	120/277	HX-HPF	M90		47734	M100/120/277/F-CAN	67
11210-506C-TC	120/277	HX-HPF	M98 or M143		47694	M70/120/277/F-CAN	67
1220-246C-TC	120/277	CWA	S50		47777	LU250/120/277/F-CAN	69
12210-236C-TC	120/277	HX-HPF	S68		47762	LU50/120/277/F-CAN	69
12210-237C-TC	120/277	HX-HPF	S62		47763	LU70/120/277/F-CAN	69
12210-239C-TC	120/277	HX-HPF	S54		47764	LU100/120/277/F-CAN	69
12210-241C-TC	120/277	HX-HPF	S55		47765	LU150/120/277/F-CAN	69
12210-261C-TC	120/277	HX-HPF	S76		47761	LU35/120/277/F-CAN	69
1233-10U	120	R-NPF	S54		47304	LU100/120R	57
1233-142U	120	R-NPF	S62		47284	LU70/120R	57
1233-154U	120	R-NPF	S55		47319	LU150/120R	57
1233-251U	120	R-NPF	S76		47269	LU35/120R	57
1233-35U	120	R-NPF	S68		47274	LU50/120R	57
337-1750	120/208/240/277	CWA	M58 or H37		47158	M250/MULTI-I/D	70
337-1770	120/208/240/277	CWA	H39		47153	M175/MULTI-I/D	70
337-1780	120/208/240/277	CWA	M59 or H33		47172	M400/MULTI-I/D	70
337-1790	120/208/240/277	CWA	M47 or H36		47207	M1000/MULTI-I/D	70
H1000MLTAC5M & H1000MLTAC5M-500K	120/208/240/277	CWA	H36		47524	H1000/MULTI-KIT	65
H100MLTAC3M & H100MLTAC3M-500K	120/208/240/277	CWA	H38 or H44		46522	H100/MULTI-KIT	63
M175ML5AC3M & M175ML5AC3M-500K	120/208/240/277/480	CWA	M57 or H39		47243	M175/SUPER5-KIT	46
H175MLTAC3M & H175MLTAC3M-500K	120/208/240/277	CWA	H39		47489	H175/MULTI-KIT	64
H25048TAC3M & H25048TAC3M-500K	480/120TAP	CWA	H37		46531	H250/480/120T-KIT	64
H250MLTAC3M & H250MLTAC3M-500K	120/208/240/277	CWA	H37		47499	H250/MULTI-KIT	64
H40048TAC4M & H40048TAC4M-500K	480/120TAP	CWA	H33		46533	H400/480/120T-KIT	65
H400MLTAC4M & H400MLTAC4M-500K	120/208/240/277	CWA	H33		47509	H400/MULTI-KIT	65
M1000480AC5M & M1000480AC5M-500K	480	CWA	M47 or H36		47655	M1000/480-KIT	48
M100048TAC5M & M100048TAC5M-500K	480/120TAP	CWA	M47 or H36		47432	M1000/480/120T-KIT	48
M1000ML5AC5M & M1000ML5AC5M-500K	120/208/240/277/480	CWA	M47 or H36		47427	M1000/SUPER5-KIT	48
M1000MLTAC5M & M1000MLTAC5M-500K	120/208/240/277	CWA	M47 or H36		47744	M1000/MULTI-KIT	48
M100MLTLC3M & M100MLTLC3M-500K	120/208/240/277	HX-HPF	M90		47019	M100/MULTI-KIT	50
M1500480AC5M & M1500480AC5M-500K	480	CWA	M48		47095	M1500/480-KIT	48
M150048TAC5M & M150048TAC5M-500K	480/120TAP	CWA	M48		47434	M1500/480/120T-KIT	48
M1500MLTAC5M & M1500MLTAC5M-500K	120/208/240/277	CWA	M48		46808	M1500/MULTI-KIT	48
M150MLTLC3D & M150MLTLC3D-500K	120/208/240/277	HX-HPF	M81		47229	M150/MULTI-KIT	50
M150MLTLC3M & M150MLTLC3M-500K	120/208/240/277	HX-HPF	M102		47682	M150/MULTI-PS-KIT	50
M17548TAC3M & M17548TAC3M-500K	480/120TAP	CWA	M57 or H39		47253	M175/480/120T-KIT	46
M175MLTAC3M & M175MLTAC3M-500K	120/208/240/277	CWA	M57 or H39		47735	M175/MULTI-KIT	46
M25048TAC4M & M25048TAC4M-500K	480/120TAP	CWA	M58 or H37		47268	M250/480/120T-KIT	46
M250ML5AC4M & M250ML5AC4M-500K	120/208/240/277/480	CWA	M58 or H37		47265	M250/SUPER5-KIT	46
M250MLTAC3M & M250MLTAC3M-500K	120/208/240/277	CWA	M58 or H37		47049	M250/MULTI 3X4-KIT	46
M250MLTAC4M & M250MLTAC4M-500K	120/208/240/277	CWA	M58 or H37		47737	M250/MULTI-KIT	46

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M40048TAC4M & M40048TAC4M-500K	480/120TAP	CWA	M59 or H33	47394	M400/480/120T-KIT	47
M400ML5AC4M & M400ML5AC4M-500K	120/208/240/277/480	CWA	M59 or H33	47338	M400/SUPER5-KIT	47
M400MLTAC4M & M400MLTAC4M-500K	120/208/240/277	CWA	M59 or H33	47739	M400/MULTI-KIT	47
M50MLTLC3M & M50MLTLC3M-500K	120/208/240/277	HX-HPF	M110	47007	M50/MULTI-KIT	49
M70MLTLC3M & M70MLTLC3M-500K	120/208/240/277	HX-HPF	M98	47013	M70/MULTI-KIT	49
P1000MLTAC5M & P1000MLTAC5M-500K	120/208/240/277	CWA	M141	47416	M1000/MULTI-PS-KIT	55
P175MLTAC3M & P175MLTAC3M-500K	120/208/240/277	CWA	M137 or M152	47686	M175/MULTI-PS-KIT	51
P20048TAC3M & P20048TAC3M-500K	480/120TAP	CWA	M136	47259	M200/480/120T-PS-KIT	51
P200MLTAC3M & P200MLTAC3M-500K	120/208/240/277	CWA	M136	47690	M200/MULTI-PS-KIT	51
P25048TAC4M & P25048TAC4M-500K	480/120TAP	CWA	M138 or M153	47283	M250/480/120T-PS-KIT	52
P250ML5AC4M	120/208/ 240/277/480	CWA	M138 or M153	47282	M250/SUPER5-PS-KIT	52
P250MLTAC4M & P250MLTAC4M-500K	120/208/240/277	CWA	M138 or M153	47112	M250/MULTI-PS-KIT	52
P320277AFXM	120/277	CWA	M132 or M154	47753	M320-PS/120/277/F-CAN	68
P32048TAC4M & P32048TAC4M-500K	480/120TAP	CWA	M132 or M154	47303	M320/480/120T-PS-KIT	53
P320MLTAC4M & P320MLTAC4M-500K	120/208/240/277	CWA	M132 or M154	47676	M320/MULTI-PS-KIT	53
P35048TAC4M & P35048TAC4M-500K	480/120TAP	CWA	M131	47337	M350/480/120T-PS-KIT	53
P350MLTAC4M & P350MLTAC4M-500K	120/208/240/277	CWA	M131	47695	M350/MULTI-PS-KIT	53
P40048TAC4M & P40048TAC4M-500K	480/120TAP	CWA	M155 or M135	47403	M400/480/120T-PS-KIT	54
P400ML5AC4M	120/208/240/277/480	CWA	M155 or M135	47400	M400/SUPER5-PS-KIT	54
P400MLTAC4M & P400MLTAC4M-500K	120/208/240/277	CWA	M155 or M135	47132	M400/MULTI-PS-KIT	54
P450MLTAC4M & P450MLTAC4M-500K	120/208/240/277	CWA	M144	47405	M450/MULTI-PS-KIT	54
P750MLTAC5M & P750MLTAC5M-500K	120/208/240/277	CWA	M149	47717	M750/MULTI-PS-KIT	55
S1000ML5AC5M & S1000ML5AC5M-500K	120/208/240/277/480	CWA	S52	47659	LU1000/SUPER5-KIT	62
S1000MLTAC5M & S1000MLTAC5M-500K	120/208/240/277	CWA	S52	47389	LU1000/MULTI-KIT	62
S100MLTLC3M & S100MLTLC3M-500K	120/208/240/277	HX-HPF	S54	47316	LU100/MULTI-KIT	58
S15048TLC3M & S15048TLC3M-500K	480/120TAP	HX-HPF	S55	47621	LU150/480/120T-KIT	59
S150MLTLC3M & S150MLTLC3M-500K	120/208/240/277	HX-HPF	S55	47335	LU150/MULTI-KIT	59
S200MLTAC4M & S200MLTAC4M-500K	120/208/240/277	CWA	S66	47628	LU200/MULTI-KIT	59
S25048TAC4M & S25048TAC4M-500K	480/120TAP	CWA	S50	47637	LU250/480/120T-KIT	60
S250ML5AC4M & S250ML5AC4M-500K	120/208/240/277/480	CWA	S50	47634	LU250/SUPER5-KIT	60
S250MLTAC4M & S250MLTAC4M-500K	120/208/240/277	CWA	S50	47357	LU250/MULTI-KIT	60
S40048TAC4M & S40048TAC4M-500K	480/120TAP	CWA	S51	47657	LU400/480/120T-KIT	61
S400ML5AC4M & S400ML5AC4M-500K	120/208/240/277/480	CWA	S51	47647	LU400/SUPER5-KIT	61
S400MLTAC4M & S400MLTAC4M-500K	120/208/240/277	CWA	S51	47364	LU400/MULTI-KIT	61
S70MLTLC3M & S70MLTLC3M-500K	120/208/240/277	HX-HPF	S62	47301	LU70/MULTI-KIT	58
—	277	CWA	H38 or H44	47472	H100/277-KIT	63
—	120/240	CWA	H38 or H44	47471	H100/DUAL-KIT	63
—	480	CWA	H36	47525	H1000/480-KIT	65
—	480	CWA	H39	47490	H175/480-KIT	64
—	480	CWA	H37	47500	H250/480-KIT	64
—	120	CWA	H33	47517	H2X400/120-KIT	65
—	277	CWA	H33	47518	H2X400/277-KIT	65
—	480	CWA	H33	47510	H400/480-KIT	65

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Universal Lighting Technologies to OSRAM SYLVANIA Magnetic HID Cross Reference

Universal Lighting Technologies Catalog #	Input Voltage (V_{AC})	Circuit Type	ANSI Code	OSRAM SYLVANIA Item #	OSRAM SYLVANIA Description	Page #
—	120/208/240/277	CWA	H46	46518	H50/MULTI-KIT	63
—	120/208/240/277	CWA	H43	46519	H75/MULTI-KIT	63
—	120/277	HX-HPF	S54	47592	LU100/120/277-KIT	58
—	120	R-NPF	S54	47585	LU100/120R-INT	57
—	480	HX-HPF	S54	47593	LU100/480-KIT	58
—	480	CWA	S52	47391	LU1000/480-KIT	62
—	120/277	HX-HPF	S55	47617	LU150/120/277-KIT	59
—	120	R-NPF	S55	47616	LU150/120R-INT	57
—	480	CWA	S55	47623	LU150/480-CWA-KIT	59
—	480	HX-HPF	S55	47619	LU150/480-KIT	59
—	480	CWA	S66	47631	LU200/480-KIT	59
—	120/277	CWA	S50	47642	LU250/120/277-KIT	60
—	480	CWA	S50	47358	LU250/480-KIT	60
—	480	CWA	S67	47644	LU310/480-KIT	60
—	120/208/240/277	CWA	S67	47643	LU310/MULTI-KIT	60
—	120/240	HX-HPF	S76	47271	LU35/120/240-KIT	58
—	120	R-NPF	S76	47537	LU35/120R-INT	57
—	120/277	CWA	S51	47656	LU400/120/277-KIT	61
—	480	CWA	S51	47376	LU400/480-KIT	61
—	120/277	HX-HPF	S68	47549	LU50/120/277-KIT	58
—	120	R-NPF	S68	47548	LU50/120R-INT	57
—	120/277	HX-HPF	S62	47571	LU70/120/277-KIT	58
—	120	R-NPF	S62	47558	LU70/120R-INT	57
—	480	HX-HPF	S62	47579	LU70/480-KIT	58
—	480	CWA	S111	47658	LU750/480-KIT	62
—	120/208/240/277	CWA	S111	47712	LU750/MULTI-KIT	62
—	120/277	HX-HPF	M90	47219	M100/120/277-KIT	50
—	120/277/347/480	Reg. Lag	—	47089	M1000/120/277/347/480-HQI-RL	56
—	120/277/347/480	CWA	M141	47417	M1000/120/277/347/480-PS-KIT	55
—	480	CWA	M141	46805	M1000/480-PS-KIT	55
—	120/277	HX-HPF	M102	47228	M150/120/277-PS-KIT	50
—	120/208/240/277	CWA	M102 or M142	47640	M150/MULTI-PS-CWA-KIT	50
—	120/277	CWA	M102 or M142	47738	M150-PS/120/277/F-CAN	67
—	120/277	CWA	M57 or H39	47254	M175/120/277-KIT	46
—	480	CWA	M57 or H39	47035	M175/480-KIT	46
—	480	CWA	M137 or M152	46801	M175/480-PS-KIT	51
—	120/277	CWA	M137 or M152	47741	M175-PS/120/277/F-CAN	68
—	480	CWA	M136	46802	M200/480-PS-KIT	51
—	277/347/480	Reg. Lag	—	47090	M2000/277/347/480-HQI-RL	56
—	120/277	CWA	M136	47747	M200-PS/120/277/F-CAN	68
—	120/277	HX-HPF	M80	47273	M250/120/277-KIT	52
—	480	CWA	M58 or H37	47050	M250/480-3X4-KIT	46
—	480	CWA	M58 or H37	47611	M250/480-KIT	46
—	480	CWA	M138 or M153	47106	M250/480-PS-KIT	52
—	120/277	CWA	M138 or M153	47749	M250-PS/120/277/F-CAN	68
—	120/240	CWA	M59 or H33	47075	M2x400/120/240-KIT	47
—	480	CWA	M132 or M154	46803	M320/480-PS-KIT	53
—	120/277	HX-HPF	M130	47680	M35/120/277/F-CAN	67
—	120/277	HX-HPF	M130	47203	M35/120/277-KIT	49
—	120/208/240/277	CWA	M130	47001	M35/MULTI-HQ/CI-KIT	49
—	480	CWA	M131	47697	M350/480-PS-KIT	53
—	480	CWA	M59 or H33	47065	M400/480-KIT	47
—	480	CWA	M155 or M135	47138	M400/480-PS-KIT	54
—	120/277	CWA	M155 or M135	47757	M400-PS/120/277/F-CAN	68
—	480/120TAP	CWA	M144	47408	M450/480/120T-PS-KIT	54
—	480	CWA	M144	46804	M450/480-PS-KIT	54
—	120/277	HX-HPF	M110	47204	M50/120/277-KIT	49
—	120/277	HX-HPF	M139	47693	M70/120/277/F-CAN	67
—	120/277	HX-HPF	M98	47217	M70/120/277-KIT	49
—	120/208/240/277	CWA	M98 or M139 or M85	47645	M70/MULTI-HQ/CI-KIT	49
—	120/277/347/480	CWA	M149	47409	M750/120/277/347/480-PS-KIT	55
—	480	CWA	M149	47718	M750/480-PS-KIT	55

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Venture Lighting to OSRAM SYLVANIA Magnetic HID Cross Reference

Venture Lighting Catalog #	Input Voltage (V_{AC})	Circuit Type	ANSI Code	OSRAM SYLVANIA Item #	OSRAM SYLVANIA Description	Page #
V90AM6514K	120/208/240/277/480	CWA	M47 or H36	47427	M1000/SUPER5-KIT	48
V90D1233K	120/208/240/277	HX-HPF	S62	47301	LU70/MULTI-KIT	58
V90D1333K	120/208/240/277	HX-HPF	S54	47316	LU100/MULTI-KIT	58
V90D1435K	120/208/240/277	HX-HPF	S55	47335	LU150/MULTI-KIT	59
V90D1610K	120/208/240/277	CWA	S66	47628	LU200/MULTI-KIT	59
V90D1711K	120/208/240/277	CWA	S50	47357	LU250/MULTI-KIT	60
V90D1810K	120/208/240/277	CWA	S67	47643	LU310/MULTI-KIT	60
V90D1911K & V90D1912K	120/208/240/277	CWA	S51	47364	LU400/MULTI-KIT	61
V90D2311K	120/208/240/277	CWA	S52	47389	LU1000/MULTI-KIT	62
V90D5731K	120/208/240/277	HX-HPF	M110	47007	M50/MULTI-KIT	49
V90D5810K	120/208/240/277	CWA	M98 or M139 or M85	47645	M70/MULTI-HQ/CI-KIT	49
V90D5832K	120/208/240/277	HX-HPF	M98	47013	M70/MULTI-KIT	49
V90D5932K	120/208/240/277	HX-HPF	M90	47019	M100/MULTI-KIT	50
V90D6111K	120/208/240/277	CWA	M57 or H39	47735	M175/MULTI-KIT	46
V90D6211K	120/208/240/277	CWA	M58 or H37	47049	M250/MULTI 3X4-KIT	46
V90D6212K	120/208/240/277	CWA	M58 or H37	47737	M250/MULTI-KIT	46
V90D6413K	120/208/240/277	CWA	M59 or H33	47739	M400/MULTI-KIT	47
V90D6514K	120/208/240/277	CWA	M47 or H36	47744	M1000/MULTI-KIT	48
V90D6612K	120/208/240/277	CWA	M48	46808	M1500/MULTI-KIT	48
V90D7110K	120/208/240/277	CWA	M102 or M142	47640	M150/MULTI-PS-CWA-KIT	50
V90D7130K	120/208/240/277	HX-HPF	M102	47682	M150/MULTI-PS-KIT	50
V90D7210K	120/208/240/277	CWA	M137 or M152	47686	M175/MULTI-PS-KIT	51
V90D7310K	120/208/240/277	CWA	M136	47690	M200/MULTI-PS-KIT	51
V90D7411K	120/208/240/277	CWA	M132 or M154	47676	M320/MULTI-PS-KIT	53
V90D7512K	120/208/240/277	CWA	M131	47695	M350/MULTI-PS-KIT	53
V90D7612K	120/208/240/277	CWA	M155 or M135	47132	M400/MULTI-PS-KIT	54
V90D7810K	120/208/240/277	CWA	M141	47416	M1000/MULTI-PS-KIT	55
V90D7910K	120/208/240/277	CWA	M149	47717	M750/MULTI-PS-KIT	55
V90D8410K	120/208/240/277	CWA	M138 or M153	47112	M250/MULTI-PS-KIT	52
V90D8512K	120/208/240/277	CWA	M144	47405	M450/MULTI-PS-KIT	54
V90H1132K	120/277	HX-HPF	S68	47549	LU50/120/277-KIT	58
V90H5731K	120/277	HX-HPF	M110	47204	M50/120/277-KIT	49
V90H5832K	120/277	HX-HPF	M98	47217	M70/120/277-KIT	49
V90H5932K	120/277	HX-HPF	M90	47219	M100/120/277-KIT	50
V90J7810K	120/277/347/480	CWA	M141	47417	M1000/120/277/347/480-PS-KIT	55
V90J7910K	120/277/347/480	CWA	M149	47409	M750/120/277/347/480-PS-KIT	55
V90Y6211K	480	CWA	M58 or H37	47050	M250/480-3X4-KIT	46
V90Y6212TK	480/120TAP	CWA	M58 or H37	47268	M250/480/120T-KIT	46
V90Y6413TK	480/120TAP	CWA	M59 or H33	47394	M400/480/120T-KIT	47
V90Y6514TK	480/120TAP	CWA	M47 or H36	47432	M1000/480/120T-KIT	48
V90Y6612TK	480/120TAP	CWA	M48	47434	M1500/480/120T-KIT	48
V90Y7310TK	480/120TAP	CWA	M136	47259	M200/480/120T-PS-KIT	51
V90Y7411TK	480/120TAP	CWA	M132 or M154	47303	M320/480/120T-PS-KIT	53
V90Y7512TK	480/120TAP	CWA	M131	47337	M350/480/120T-PS-KIT	53
V90Y7612TK	480/120TAP	CWA	M155 or M135	47403	M400/480/120T-PS-KIT	54
V90Y8511TK	480/120TAP	CWA	M144	47408	M450/480/120T-PS-KIT	54
—	277	CWA	H38 or H44	47472	H100/277-KIT	63
—	120/240	CWA	H38 or H44	47471	H100/DUAL-KIT	63
—	120/208/240/277	CWA	H38 or H44	46522	H100/MULTI-KIT	63
—	480	CWA	H36	47525	H1000/480-KIT	65
—	120/208/240/277	CWA	H36	47524	H1000/MULTI-KIT	65
—	480	CWA	H39	47490	H175/480-KIT	64
—	120/208/240/277	CWA	H39	47489	H175/MULTI-KIT	64
—	480/120TAP	CWA	H37	46531	H250/480/120T-KIT	64
—	480	CWA	H37	47500	H250/480-KIT	64
—	120/208/240/277	CWA	H37	47499	H250/MULTI-KIT	64
—	120	CWA	H33	47517	H2X400/120-KIT	65
—	277	CWA	H33	47518	H2X400/277-KIT	65
—	480/120TAP	CWA	H33	46533	H400/480/120T-KIT	65
—	480	CWA	H33	47510	H400/480-KIT	65
—	120/208/240/277	CWA	H33	47509	H400/MULTI-KIT	65
—	120/208/240/277	CWA	H46	46518	H50/MULTI-KIT	63
—	120/208/240/277	CWA	H43	46519	H75/MULTI-KIT	63
—	120/277	HX-HPF	S54	47764	LU100/120/277/F-CAN	69
—	120/277	HX-HPF	S54	47592	LU100/120/277-KIT	58
—	120	R-NPF	S54	47304	LU100/120R	57
—	120	R-NPF	S54	47585	LU100/120R-INT	57
—	480	HX-HPF	S54	47593	LU100/480-KIT	58
—	480	CWA	S52	47391	LU1000/480-KIT	62
—	120/208/240/277/480	CWA	S52	47659	LU1000/SUPER5-KIT	62
—	120/277	HX-HPF	S55	47765	LU150/120/277/F-CAN	69
—	120/277	HX-HPF	S55	47617	LU150/120/277-KIT	59
—	120	R-NPF	S55	47319	LU150/120R	57
—	120	R-NPF	S55	47616	LU150/120R-INT	57
—	480/120TAP	HX-HPF	S55	47621	LU150/480/120T-KIT	59

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—	480	CWA	S55	47623	LU150/480-CWA-KIT	59
—	480	HX-HPF	S55	47619	LU150/480-KIT	59
—	480	CWA	S66	47631	LU200/480-KIT	59
—	120/277	CWA	S50	47777	LU250/120/277/F-CAN	69
—	120/277	CWA	S50	47642	LU250/120/277-KIT	60
—	480/120TAP	CWA	S50	47637	LU250/480/120T-KIT	60
—	480	CWA	S50	47358	LU250/480-KIT	60
—	120/208/240/277/480	CWA	S50	47634	LU250/SUPER5-KIT	60
—	480	CWA	S67	47644	LU310/480-KIT	60
—	120/240	HX-HPF	S76	47271	LU35/120/240-KIT	58
—	120/277	HX-HPF	S76	47761	LU35/120/277/F-CAN	69
—	120	R-NPF	S76	47269	LU35/120R	57
—	120	R-NPF	S76	47537	LU35/120R-INT	57
—	120/277	CWA	S51	47656	LU400/120/277-KIT	61
—	480/120TAP	CWA	S51	47657	LU400/480/120T-KIT	61
—	480	CWA	S51	47376	LU400/480-KIT	61
—	120/208/240/277/480	CWA	S51	47647	LU400/SUPER5-KIT	61
—	120/277	HX-HPF	S68	47762	LU50/120/277/F-CAN	69
—	120	R-NPF	S68	47274	LU50/120R	57
—	120	R-NPF	S68	47548	LU50/120R-INT	57
—	120/277	HX-HPF	S62	47763	LU70/120/277/F-CAN	69
—	120/277	HX-HPF	S62	47571	LU70/120/277-KIT	58
—	120	R-NPF	S62	47284	LU70/120R	57
—	120	R-NPF	S62	47558	LU70/120R-INT	57
—	480	HX-HPF	S62	47579	LU70/480-KIT	58
—	480	CWA	S111	47658	LU750/480-KIT	62
—	120/208/240/277	CWA	S111	47712	LU750/MULTI-KIT	62
—	120/277	HX-HPF	M90	47734	M100/120/277/F-CAN	67
—	120/277/347/480	Reg. Lag	—	47089	M1000/120/277/347/480-HQI-RL	56
—	480	CWA	M47 or H36	47655	M1000/480-KIT	48
—	480	CWA	M141	46805	M1000/480-PS-KIT	55
—	120/208/240/277	CWA	M47 or H36	47207	M1000/MULTI-I/D	70
—	120/277	HX-HPF	M102	47228	M150/120/277-PS-KIT	50
—	120/208/240/277	HX-HPF	M81	47229	M150/MULTI-KIT	50
—	480	CWA	M48	47095	M1500/480-KIT	48
—	120/277	CWA	M102 or M142	47738	M150-PS/120/277/F-CAN	67
—	120/277	CWA	M57 or H39	47743	M175/120/277/F-CAN	66
—	120/277	CWA	M57 or H39	47254	M175/120/277-KIT	46
—	480/120TAP	CWA	M57 or H39	47253	M175/480/120T-KIT	46
—	480	CWA	M57 or H39	47035	M175/480-KIT	46
—	480	CWA	M137 or M152	46801	M175/480-PS-KIT	51
—	120/208/240/277	CWA	H39	47153	M175/MULTI-I/D	70
—	120/208/240/277/480	CWA	M57 or H39	47243	M175/SUPER5-KIT	46
—	120/277	CWA	M137 or M152	47741	M175-PS/120/277/F-CAN	68
—	480	CWA	M136	46802	M200/480-PS-KIT	51
—	277/347/480	Reg. Lag	—	47090	M2000/277/347/480-HQI-RL	56
—	120/277	CWA	M136	47747	M200-PS/120/277/F-CAN	68
—	120/277	CWA	M58 or H37	47751	M250/120/277/F-CAN	66
—	120/277	HX-HPF	M80	47273	M250/120/277-KIT	52
—	480/120TAP	CWA	M138 or M153	47283	M250/480/120T-PS-KIT	52
—	480	CWA	M58 or H37	47611	M250/480-KIT	46
—	480	CWA	M138 or M153	47106	M250/480-PS-KIT	52
—	120/208/240/277	CWA	M58 or H37	47158	M250/MULTI-I/D	70
—	120/208/240/277/480	CWA	M58 or H37	47265	M250/SUPER5-KIT	46
—	120/208/240/277/480	CWA	M138 or M153	47282	M250/SUPER5-PS-KIT	52
—	120/277	CWA	M138 or M153	47749	M250-PS/120/277/F-CAN	68
—	120/240	CWA	M59 or H33	47075	M2x400/120/240-KIT	47
—	480	CWA	M132 or M154	46803	M320/480-PS-KIT	53
—	120/277	CWA	M132 or M154	47753	M320-PS/120/277/F-CAN	68
—	120/277	HX-HPF	M130	47680	M35/120/277/F-CAN	67
—	120/277	HX-HPF	M130	47203	M35/120/277-KIT	49
—	120/208/240/277	CWA	M130	47001	M35/MULTI-HQ/CI-KIT	49
—	480	CWA	M131	47697	M350/480-PS-KIT	53
—	120/277	CWA	M59 or H33	47759	M400/120/277/F-CAN	66
—	480	CWA	M59 or H33	47065	M400/480-KIT	47
—	480	CWA	M155 or M135	47138	M400/480-PS-KIT	54
—	120/208/240/277	CWA	M59 or H33	47172	M400/MULTI-I/D	70
—	120/208/240/277/480	CWA	M59 or H33	47338	M400/SUPER5-KIT	47
—	120/208/240/277/480	CWA	M155 or M135	47400	M400/SUPER5-PS-KIT	54
—	120/277	CWA	M155 or M135	47757	M400-PS/120/277/F-CAN	68
—	480	CWA	M144	46804	M450/480-PS-KIT	54
—	120/277	HX-HPF	M110	47195	M50/120/277/F-CAN	67
—	120/277	HX-HPF	M139	47693	M70/120/277/F-CAN	67
—	120/277	HX-HPF	M98 or M143	47694	M70/120/277/F-CAN	67
—	480	CWA	M149	47718	M750/480-PS-KIT	55

This cross reference is intended as an aid for identifying comparable products for the lamp types listed as a convenience to the user. OSRAM SYLVANIA does not warrant or guarantee the accuracy or correctness of the content. Case sizes, wiring diagrams and performance specifications may vary, please refer to manufacturers specifications. Please refer to the OSRAM SYLVANIA catalog for verification of product specifications appropriate for the applications.

Ordering Catalog

Specifications subject to change without notice.

Howard Industries to OSRAM SYLVANIA Magnetic HID Cross Reference

Howard Industries Catalog #	Input Voltage (V_{AC})	Circuit Type	ANSI Code	OSRAM SYLVANIA Item #	OSRAM SYLVANIA Description	Page #
M0100011C212	480	CWA	M47 or H36	47655	M1000/480-KIT	48
M0100071C212	120/208/240/277	CWA	M47 or H36	47744	M1000/MULTI-KIT	48
M010071C511	120/208/240/277	HX-HPF	M90	47019	M100/MULTI-KIT	50
M0150011C212	480	CWA	M48	47095	M1500/480-KIT	48
M0150071C212	120/208/240/277	CWA	M48	46808	M1500/MULTI-KIT	48
M017571C211	120/208/240/277	CWA	M57 or H39	47735	M175/MULTI-KIT	46
M017581C212	120/208/240/277/480	CWA	M57 or H39	47243	M175/SUPER5-KIT	46
M020011C611	480	CWA	M136	46802	M200/480-PS-KIT	51
M020029C611	480/120TAP	CWA	M136	47259	M200/480/120T-PS-KIT	51
M020071C611	120/208/240/277	CWA	M136	47690	M200/MULTI-PS-KIT	51
M025011C211	480	CWA	M58 or H37	47611	M250/480-KIT	46
M025011C212	480	CWA	M58 or H37	47050	M250/480-3X4-KIT	46
M025029C211	480/120TAP	CWA	M58 or H37	47268	M250/480/120T-KIT	46
M025071C211	120/208/240/277	CWA	M58 or H37	47737	M250/MULTI-KIT	46
M025071C212	120/208/240/277	CWA	M58 or H37	47049	M250/MULTI 3X4-KIT	46
M025071C611	120/208/240/277	CWA	M138 or M153	47112	M250/MULTI-PS-KIT	52
M025081C211	120/208/240/277/480	CWA	M58 or H37	47265	M250/SUPER5-KIT	46
M032071C611	120/208/240/277	CWA	M132 or M154	47676	M320/MULTI-PS-KIT	53
M035071C611	120/208/240/277	CWA	M131	47695	M350/MULTI-PS-KIT	53
M040011C211	480	CWA	M59 or H33	47065	M400/480-KIT	47
M040011C611	480	CWA	M155 or M135	47138	M400/480-PS-KIT	54
M040029C211	480/120TAP	CWA	M59 or H33	47394	M400/480/120T-KIT	47
M040029C611	480/120TAP	CWA	M155 or M135	47403	M400/480/120T-PS-KIT	54
M040071C211	120/208/240/277	CWA	M59 or H33	47739	M400/MULTI-KIT	47
M040071C611	120/208/240/277	CWA	M155 or M135	47132	M400/MULTI-PS-KIT	54
M040081C211	120/208/240/277/480	CWA	M59 or H33	47338	M400/SUPER5-KIT	47
S005023C511	120/277	HX-HPF	S68	47549	LU50/120/277-KIT	58
S007071C511	120/208/240/277	HX-HPF	S62	47301	LU70/MULTI-KIT	58
S010071C511	120/208/240/277	HX-HPF	S54	47316	LU100/MULTI-KIT	58
S015071C511	120/208/240/277	HX-HPF	S55	47335	LU150/MULTI-KIT	59
S025071C211	120/208/240/277	CWA	S50	47357	LU250/MULTI-KIT	60
S025081C211	120/208/240/277/480	CWA	S50	47634	LU250/SUPER5-KIT	60
S040011C211	480	CWA	S51	47376	LU400/480-KIT	61
S040071C211	120/208/240/277	CWA	S51	47364	LU400/MULTI-KIT	61
S100011C211	480	CWA	S52	47391	LU1000/480-KIT	62
S100071C211	120/208/240/277	CWA	S52	47389	LU1000/MULTI-KIT	62
—	277	CWA	H38 or H44	47472	H100/277-KIT	63
—	120/240	CWA	H38 or H44	47471	H100/DUAL-KIT	63
—	120/208/240/277	CWA	H38 or H44	46522	H100/MULTI-KIT	63
—	480	CWA	H36	47525	H1000/480-KIT	65
—	120/208/240/277	CWA	H36	47524	H1000/MULTI-KIT	65
—	480	CWA	H39	47490	H175/480-KIT	64
—	120/208/240/277	CWA	H39	47489	H175/MULTI-KIT	64
—	480/120TAP	CWA	H37	46531	H250/480/120T-KIT	64
—	480	CWA	H37	47500	H250/480-KIT	64
—	120/208/240/277	CWA	H37	47499	H250/MULTI-KIT	64
—	120	CWA	H33	47517	H2X400/120-KIT	65
—	277	CWA	H33	47518	H2X400/277-KIT	65
—	480/120TAP	CWA	H33	46533	H400/480/120T-KIT	65
—	480	CWA	H33	47510	H400/480-KIT	65
—	120/208/240/277	CWA	H33	47509	H400/MULTI-KIT	65
—	120/208/240/277	CWA	H46	46518	H50/MULTI-KIT	63
—	120/208/240/277	CWA	H43	46519	H75/MULTI-KIT	63
—	120/277	HX-HPF	S54	47764	LU100/120/277/F-CAN	69
—	120/277	HX-HPF	S54	47592	LU100/120/277-KIT	58
—	120	R-NPF	S54	47304	LU100/120R	57
—	120	R-NPF	S54	47585	LU100/120R-INT	57
—	480	HX-HPF	S54	47593	LU100/480-KIT	58
—	120/208/240/277/480	CWA	S52	47659	LU1000/SUPER5-KIT	62
—	120/277	HX-HPF	S55	47765	LU150/120/277/F-CAN	69
—	120/277	HX-HPF	S55	47617	LU150/120/277-KIT	59
—	120	R-NPF	S55	47319	LU150/120R	57
—	120	R-NPF	S55	47616	LU150/120R-INT	57
—	480/120TAP	HX-HPF	S55	47621	LU150/480/120T-KIT	59
—	480	CWA	S55	47623	LU150/480-CWA-KIT	59
—	480	HX-HPF	S55	47619	LU150/480-KIT	59
—	480	CWA	S66	47631	LU200/480-KIT	59
—	120/208/240/277	CWA	S66	47628	LU200/MULTI-KIT	59
—	120/277	CWA	S50	47777	LU250/120/277/F-CAN	69
—	120/277	CWA	S50	47642	LU250/120/277-KIT	60
—	480/120TAP	CWA	S50	47637	LU250/480/120T-KIT	60
—	480	CWA	S50	47358	LU250/480-KIT	60

This cross reference is intended as an aid for identifying comparable products for the lamp types listed as a convenience to the user. OSRAM SYLVANIA does not warrant or guarantee the accuracy or correctness of the content. Case sizes, wiring diagrams and performance specifications may vary, please refer to manufacturers specifications. Please refer to the OSRAM SYLVANIA catalog for verification of product specifications appropriate for the applications.

Ordering Catalog

Specifications subject to change without notice.

OSRAM SYLVANIA National Customer Service and Sales Center
1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

Howard Industries to OSRAM SYLVANIA Magnetic HID Cross Reference

Howard Industries Catalog #	Input Voltage (V_{AC})	Circuit Type	ANSI Code	OSRAM SYLVANIA Item #	OSRAM SYLVANIA Description	Page #
—	480	CWA	S67	47644	LU310/480-KIT	60
—	120/208/240/277	CWA	S67	47643	LU310/MULTI-KIT	60
—	120/240	HX-HPF	S76	47271	LU35/120/240-KIT	58
—	120/277	HX-HPF	S76	47761	LU35/120/277/F-CAN	69
—	120	R-NPF	S76	47269	LU35/120R	57
—	120	R-NPF	S76	47537	LU35/120R-INT	57
—	120/277	CWA	S51	47656	LU400/120/277-KIT	61
—	120/208/240/277/480	CWA	S51	47647	LU400/SUPER5-KIT	61
—	120/277	HX-HPF	S68	47762	LU50/120/277/F-CAN	69
—	120	R-NPF	S68	47274	LU50/120R	57
—	120	R-NPF	S68	47548	LU50/120R-INT	57
—	120/277	HX-HPF	S62	47763	LU70/120/277/F-CAN	69
—	120/277	HX-HPF	S62	47571	LU70/120/277-KIT	58
—	120	R-NPF	S62	47284	LU70/120R	57
—	120	R-NPF	S62	47558	LU70/120R-INT	57
—	480	HX-HPF	S62	47579	LU70/480-KIT	58
—	480	CWA	S111	47658	LU750/480-KIT	62
—	120/208/240/277	CWA	S111	47712	LU750/MULTI-KIT	62
—	120/277	HX-HPF	M90	47734	M100/120/277/F-CAN	67
—	120/277	HX-HPF	M90	47219	M100/120/277-KIT	50
—	120/277/347/480	Reg. Lag	—	47089	M1000/120/277/347/480-HQI-RL	56
—	120/277/347/480	CWA	M141	47417	M1000/120/277/347/480-PS-KIT	55
—	480/120TAP	CWA	M47 or H36	47432	M1000/480/120T-KIT	48
—	480	CWA	M141	46805	M1000/480-PS-KIT	55
—	120/208/240/277	CWA	M47 or H36	47207	M1000/MULTI-I/D	70
—	120/208/240/277	CWA	M141	47416	M1000/MULTI-PS-KIT	55
—	120/208/240/277/480	CWA	M47 or H36	47427	M1000/SUPER5-KIT	48
—	120/277	HX-HPF	M102	47228	M150/120/277-PS-KIT	50
—	120/208/240/277	HX-HPF	M81	47229	M150/MULTI-KIT	50
—	120/208/240/277	CWA	M102 or M142	47640	M150/MULTI-PS-CWA-KIT	50
—	120/208/240/277	HX-HPF	M102	47682	M150/MULTI-PS-KIT	50
—	480/120TAP	CWA	M48	47434	M1500/480/120T-KIT	48
—	120/277	CWA	M102 or M142	47738	M150-PS/120/277/F-CAN	67
—	120/277	CWA	M57 or H39	47743	M175/120/277/F-CAN	66
—	120/277	CWA	M57 or H39	47254	M175/120/277-KIT	46
—	480/120TAP	CWA	M57 or H39	47253	M175/480/120T-KIT	46
—	480	CWA	M57 or H39	47035	M175/480-KIT	46
—	480	CWA	M137 or M152	46801	M175/480-PS-KIT	51
—	120/208/240/277	CWA	H39	47153	M175/MULTI-I/D	70
—	120/208/240/277	CWA	M137 or M152	47686	M175/MULTI-PS-KIT	51
—	120/277	CWA	M137 or M152	47741	M175-PS/120/277/F-CAN	68
—	277/347/480	Reg. Lag	—	47090	M2000/277/347/480-HQI-RL	56
—	120/277	CWA	M136	47747	M200-PS/120/277/F-CAN	68
—	120/277	CWA	M58 or H37	47751	M250/120/277/F-CAN	66
—	120/277	HX-HPF	M80	47273	M250/120/277-KIT	52
—	480/120TAP	CWA	M138 or M153	47283	M250/480/120T-PS-KIT	52
—	480	CWA	M138 or M153	47106	M250/480-PS-KIT	52
—	120/208/240/277	CWA	M58 or H37	47158	M250/MULTI-I/D	70
—	120/208/240/277/480	CWA	M138 or M153	47282	M250/SUPER5-PS-KIT	52
—	120/277	CWA	M138 or M153	47749	M250-PS/120/277/F-CAN	68
—	120/240	CWA	M59 or H33	47075	M2x400/120/240-KIT	47
—	480/120TAP	CWA	M132 or M154	47303	M320/480/120T-PS-KIT	53
—	480	CWA	M132 or M154	46803	M320/480-PS-KIT	53
—	120/277	CWA	M132 or M154	47753	M320-PS/120/277/F-CAN	68
—	120/277	HX-HPF	M130	47680	M35/120/277/F-CAN	67
—	120/277	HX-HPF	M130	47203	M35/120/277-KIT	49
—	120/208/240/277	CWA	M130	47001	M35/MULTI-HQ/CI-KIT	49
—	480/120TAP	CWA	M131	47337	M350/480/120T-PS-KIT	53
—	480	CWA	M131	47697	M350/480-PS-KIT	53
—	120/277	CWA	M59 or H33	47759	M400/120/277/F-CAN	66
—	120/208/240/277	CWA	M59 or H33	47172	M400/MULTI-I/D	70
—	120/208/240/277/480	CWA	M155 or M135	47400	M400/SUPER5-PS-KIT	54
—	120/277	CWA	M155 or M135	47757	M400-PS/120/277/F-CAN	68
—	480/120TAP	CWA	M144	47408	M450/480/120T-PS-KIT	54
—	480	CWA	M144	46804	M450/480-PS-KIT	54
—	120/208/240/277	CWA	M144	47405	M450/MULTI-PS-KIT	54
—	120/277	HX-HPF	M110	47195	M50/120/277/F-CAN	67
—	120/277	HX-HPF	M110	47204	M50/120/277-KIT	49
—	120/208/240/277	HX-HPF	M110	47007	M50/MULTI-KIT	49
—	120/277	HX-HPF	M139	47693	M70/120/277/F-CAN	67
—	120/277	HX-HPF	M98 or M143	47694	M70/120/277/F-CAN	67
—	120/277	HX-HPF	M98	47217	M70/120/277-KIT	49
—	120/208/240/277	CWA	M98 or M139 or M85	47645	M70/MULTI-HQ/CI-KIT	49
—	120/208/240/277	HX-HPF	M98	47013	M70/MULTI-KIT	49
—	120/277/347/480	CWA	M149	47409	M750/120/277/347/480-PS-KIT	55
—	480	CWA	M149	47718	M750/480-PS-KIT	55
—	120/208/240/277	CWA	M149	47717	M750/MULTI-PS-KIT	55

Ordering Catalog

Specifications subject to change without notice.

SYLVANIA HID SYSTEM
LIMITED WARRANTY

Combination Lamp and Ballast System Limited Warranty

OSRAM SYLVANIA Products Inc. ("OSPI") warrants SYLVANIA lamps installed on SYLVANIA magnetic ballasts to be free from defects in material and workmanship and to operate from the date of installation (or 3 months from date of manufacture if installation date is not known or available) for the lamp and ballast warranty periods and subject to the Terms and Conditions specified below. If lamps fail to operate for the warranty period, OSPI will provide a free replacement lamp (no labor allowance). If a SYLVANIA magnetic ballast fails to operate within the warranty period, OSPI will provide a free replacement ballast (no labor allowance).

System	Avg. Rated Lamp Life*	Lamp Warranty Period	Ballast Warranty Period
METALARC®	7,000-12,000 hrs	6 months	24 months
METALARC®	15,000-20,000 hrs	12 months	24 months
LUMALUX®	24,000 hrs	12 months	24 months
LUMALUX®	≥ 30,000 hrs	24 months	24 months

TERMS AND CONDITIONS

SYLVANIA lamps and SYLVANIA ballasts must be installed together as a system and be installed and operated under suitable environmental conditions and in accordance with the latest National Electrical Code, Underwriters Laboratory Bulletins, and ANSI Specifications. This warranty will not apply in the event of conditions demonstrating abnormal use or stress, such as operating temperatures in excess of maximum rated temperatures, under/over voltage conditions, excessive switching cycles or operating hours, dirty or cracked sockets, or improper lamp or ballast installation. Replacement of SYLVANIA lamps with lamps of other manufacturers will void the lamp portion of this warranty. Replacement of the SYLVANIA ballast with any other ballast will void the entire warranty.

FURTHER CONDITIONS

1. Warranty periods based on a minimum 4,000 hours/year to a maximum 6,000 hours/year operation (minimum 10hr/start for lamp).
2. The lighting system must operate the lamp within current ANSI Specifications.
3. OSRAM SYLVANIA reserves the right to examine all failed lamps to verify cause of failure and shall be the sole judge as to whether the lamps are in fact defective.
4. System warranty valid only for installations of 50 or more lamps and ballasts. Contact OSRAM SYLVANIA for further details.
5. Check with OSRAM SYLVANIA when using occupancy sensors or dimming, as some situations may void the warranty.

WARRANTY ACTIVATION / SERVICE CLAIMS

The HID System warranty is automatically activated after OSPI receives a completed HID System warranty registration form within 30 days after installation. An acknowledgment will be sent for each registration along with a reference number for future correspondence. Service claims can be made by contacting 1-800-LIGHTBULB to initiate the process for problem resolution.

LABOR OPTIONS

No labor allowance is made for lamp or ballast replacement.

RETURN OF DEFECTIVE PRODUCT

After contacting OSRAM SYLVANIA and receiving a RETURN MATERIAL AUTHORIZATION NUMBER, the user shall promptly return the product at the user's expense to OSRAM SYLVANIA after receiving instructions as to if, when and where to ship product. Failure to follow this procedure shall void this warranty.

REPLACEMENT OF PRODUCT, LIMITS OF LIABILITY

The foregoing shall constitute the sole and exclusive remedy of the purchaser and the sole and exclusive liability of OSPI. NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS MADE OR IS TO BE IMPLIED. OSPI will not, under any circumstance, whether as a result of breach of contract or warranty, tort, or otherwise, be liable for any incidental, special or consequential damages, including lost profits or revenues or any other costs or damages.

OSPI reserves the right to examine all failed lamps and/or ballasts and reserves the right to be the sole judge as to whether any lamps and/or ballasts are defective and covered under this warranty.

*Subject to and limited by the lamp warranty period limitations set forth above.

OSRAM SYLVANIA National Customer Service and Sales Center
1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

Registration Form

SYLVANIA HID SYSTEM
LIMITED WARRANTY

Photocopy the form below and use it to register any installation featuring SYLVANIA magnetic ballast systems. Also available is our on-line version which you may find by visiting our web site at www.sylvania.com. The warranty coverage begins from the date of installation, but you must register an installation in order to receive warranty service.

Installation Information

Location Name:_____

Address: _____City:_____State:_____Zip: _____

Send Registration To: _____

Address: _____City:_____State:_____Zip: _____

Contact Name:_____Phone: _____Email: _____

Installation Date: _____

Operating Hours: _____starts/day _____hours/day _____days/year

Occupancy Sensors* _____(Yes/No) Dimming* _____(Yes/No)

* check with OSRAM SYLVANIA when using occupancy sensors or dimming, as some situations may void the warranty.

Comments_____

Type & Quantities (Description and NAED Item # as Shown on Product Packaging)

Ballast Description	NAED Item #	Quantity	Lamp Description	NAED Item #	Quantity	Comments
e.g. M750/MULTI-PS-KIT	*47717*	*1000*	*MS750/PS/BU-HOR/BT37*	*64787*	*1000*	

Please Complete and Return To:
OSRAM SYLVANIA
Attn: Warranty Dept.
18725 N. Union Street, Westfield, IN 46074
Tel #: 800/654-0089 Email: warranty.service@sylvania.com

Or Complete and Fax To:
OSRAM SYLVANIA
Fax #: 866/632-9674

Magnetic Ballast Limited Warranty

OSRAM SYLVANIA Products Inc. ("OS") warrants SYLVANIA fluorescent magnetic ballasts and high intensity discharge (HID) magnetic ballasts to be free from defects in material and workmanship and to operate from the date of manufacture for the time periods specified below.

Magnetic Ballast Type	Ballast Warranty Period*
Fluorescent Magnetic	36 months
High Intensity Discharge (HID) Magnetic	24 months
Magnetic Sign	24 months

*Note - Warranty periods are based on typical 4000 hr/12 months operation; longer operating cycles may limit warranty period. Contact OS for details.

TERMS AND CONDITIONS

SYLVANIA magnetic fluorescent and HID ballasts must be installed and operated under suitable environmental conditions and in accordance with the latest National Electrical Code, Underwriters Laboratory Bulletins, ANSI Specifications, CSA standards, and in accordance with OS installation instructions, where applicable. This warranty will not apply if conditions demonstrate abnormal use or stress, such as operating temperatures in excess of maximum rated temperatures, under/over voltage conditions, excessive switching cycles or operating hours, dirty or cracked sockets, or improper lamp or ballast installation.

WARRANTY ACTIVATION / SERVICE CLAIMS

Warranty is activated after installation. Service claims can be made by contacting 1-800-654-0089 (press "2") to initiate the process for problem resolution.

REPLACEMENT OF PRODUCT

OS shall correct any defects by replacing or repairing, at OS's option, any ballast determined to be defective under the terms of this warranty. Note: Labor costs are not reimbursed by OS.

RETURN OF DEFECTIVE BALLAST

After contacting OS and receiving a return AUTHORIZATION NUMBER, the purchaser may be requested to promptly return the ballast at the purchaser's expense to OS after receiving instructions as to if, when and where to ship the ballast. Failure to follow this procedure shall void this warranty.

LIMITS OF LIABILITY

The foregoing shall constitute the sole and exclusive remedy of the purchaser and the sole and exclusive liability of OS. NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS MADE OR IS TO BE IMPLIED. OS will not, under any circumstance, whether as a result of breach of contract or warranty, tort, or otherwise,be liable for any costs or damages, including lost profits or revenues, incidental, special or consequential damages.

OS reserves the right to examine all failed ballasts and reserves the right to be the sole judge as to whether any ballasts are defective and covered under this warranty. This warranty does not cover lamps operated by the ballast.

QUESTIONS? Please call customer service at 1-800-654-0089
contact your local OSRAM SYLVANIA representative.

OSRAM SYLVANIA National Customer Service and Sales Center
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