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LED Lighting

LED Specification Guide

**PHILIPS
LIGHTOLIER**

sense **and** simplicity

LED Lighting

LED Specification Guide

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The global leader in LED Lighting



Nick Merrick © Hedrich Blessing 2009

For over a century, Lightolier's commitment to "Lighting that Makes a Difference" has shaped our industry. Through changing technologies, our dedication to providing practical, high quality lighting solutions has never wavered. As a new chapter on LED Lighting unfolds take confidence in knowing that you are partnering with the clear technology leader.

Our design philosophies have been refined through years of application experience. While paying careful attention to the needs of LED lighting, we once again placed lighting application at the forefront of our product development process. The resulting architecturally integrated LED solutions create a class leading portfolio which addresses the demands of modern lighting systems with legendary Lightolier quality.

Without exception, our LED products are designed from the ground up, in a true system level approach. With high powered LEDs, there are many factors that can have an adverse impact on the overall system performance. For example, an increase in operating temperature by only 10 degrees can reduce life by 50%. As a result, the interaction between elements like LED circuits, power conversion, thermal management and optics become increasingly important. By designing these systems concurrently Lightolier creates the highest performing systems possible. This method guarantees effective thermal management; the most crucial aspect to sustained performance and longevity.

Our application specific, total system designs utilize the latest technology platforms available. The vertical integration of Philips within the LED lighting industry affords Lightolier unmatched advantages in R&D efficiencies and technological collaboration. Our LED product portfolio offers multiple strategies to meet the most challenging application demands. This global R&D network, combined with Lightolier's continued investment in LED, means you can be confident you are specifying and installing the very best in lighting technology.

Evaluating LED

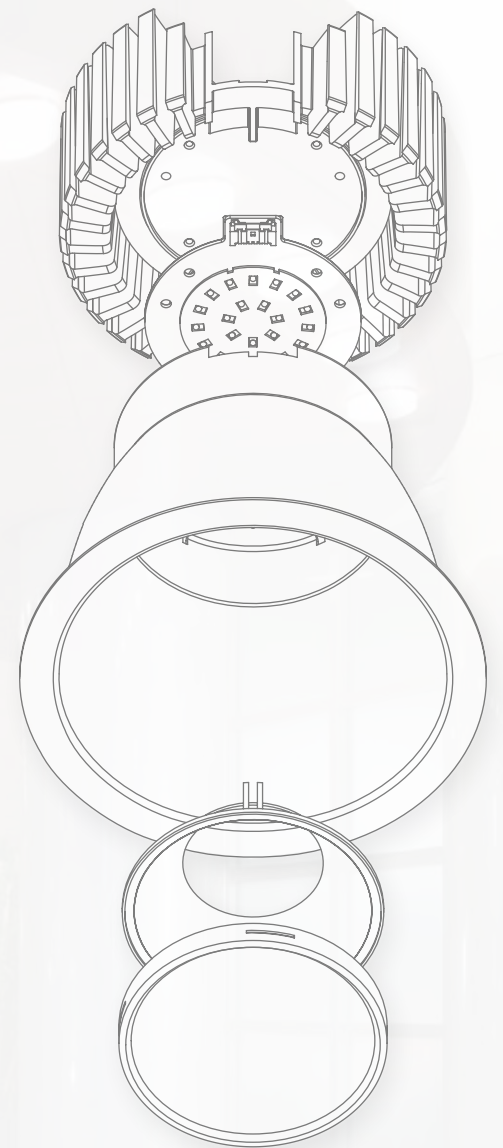
In today's market, there are many different LED products available – all promising increased efficiency, life, and performance. The following section is designed to highlight a few key elements to look for, or be wary of, when evaluating a LED product.

Can you trust the data? While there is no question LEDs can perform at levels never previously seen by the lighting industry, there are a few key items to look for when reviewing published data.

- All photometric testing should have been completed in accordance with IES LM-79 standards and all life ratings based on IES LM-80 data. These IES standards were created specifically for high powered LED lighting with the aim of providing an 'apples to apples' comparison of published LED performance data.
- The testing should be representative of an installed application, not a single LED component. External factors play a large role in LED performance and it is crucial to account for all of those factors when testing the product. System level designs already account for many of these external factors, ensuring the installed application will meet the published performance data.
- Specification documentation should provide all information which could potentially affect product performance. Operating temperature (Tj) for the luminaire at 25°C ambient can provide a reliable benchmark, but the maximum ambient temperature is important when evaluating a system's limits. Driver efficiencies will affect system performance and should always be included in efficiency calculations.
- Although all LEDs shift color over time, some do more than others. CCT shifts should always be published.

What is the quality of the light? While it is important to evaluate a product on paper, evaluating actual performance can be just as important when choosing a product.

- LEDs are very compact point sources, and can produce an incredible amount of glare. Always look for a product with proper shielding and secondary optics. Products which maximize efficiency while reducing glare will provide the best of both worlds.
- CRI can provide a benchmark when evaluating the quality of the light. However, to truly evaluate a product it is important to experience the color rendering first hand.



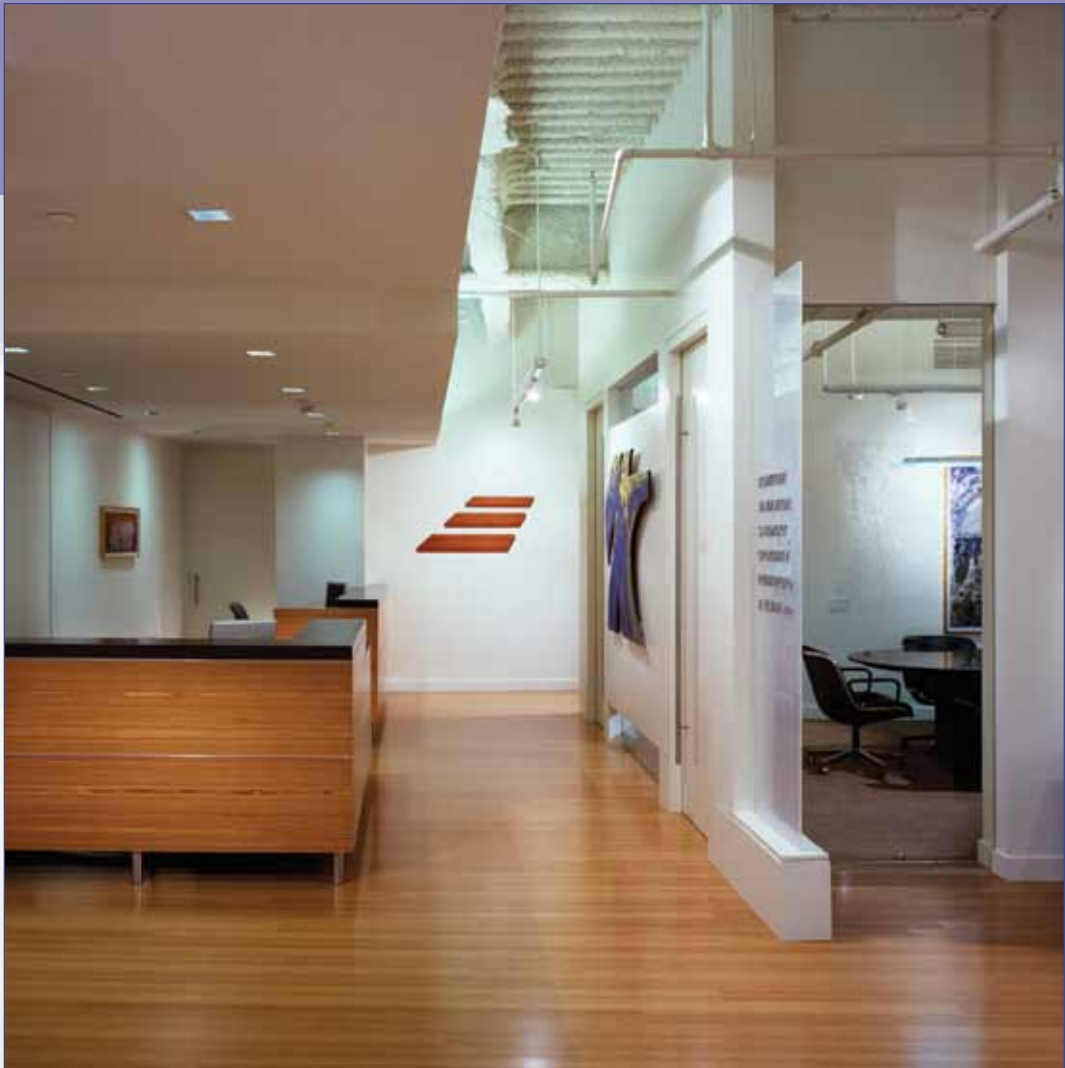
When evaluating LED products and applications Lightolier recommends retaining a qualified lighting professional. You can contact the International Association of Lighting Designers (www.iald.org) to begin a search.

Commercial Interiors

Most of the commercial building stock is comprised of existing structures, which are lit by existing, and often outdated, luminaires. LED lighting presents us with unique opportunities to upgrade these existing systems with high efficiency lighting solutions that improve user experience as well as building value.

As one of the largest sources of energy consumption, a building's lighting system represents a significant portion of overall operating expenses. Lightolier's new LED retrofit modules take advantage of existing lighting layouts and wiring to reduce consumption by up to 75%. Furthermore, tool free installation and integrated control capabilities reduce the out of pocket expenditures typically associated with large scale lighting upgrades.

An investment in a building's lighting systems not only reduces fixed energy costs, but can drastically cut maintenance costs associated with the lighting system. Lightolier's



LED products are rated for at least 50,000 hours of use at 70% lumen maintenance (L70). This unmatched longevity eliminates the need for ongoing relamping service as well as the costly disposal process required for lamps containing mercury. Lastly, the visual environment can be drastically improved through the lighting upgrade process. Lightolier's broad LED offering gives you the ability

to create distinct lighting layers, of varying light levels, to create interest and improve user comfort. For both new and existing spaces, LED lighting can improve productivity while reducing consumption: a win-win for building owners and tenants alike.

LED lighting presents us with unique opportunities to upgrade existing systems with high efficiency lighting solutions.

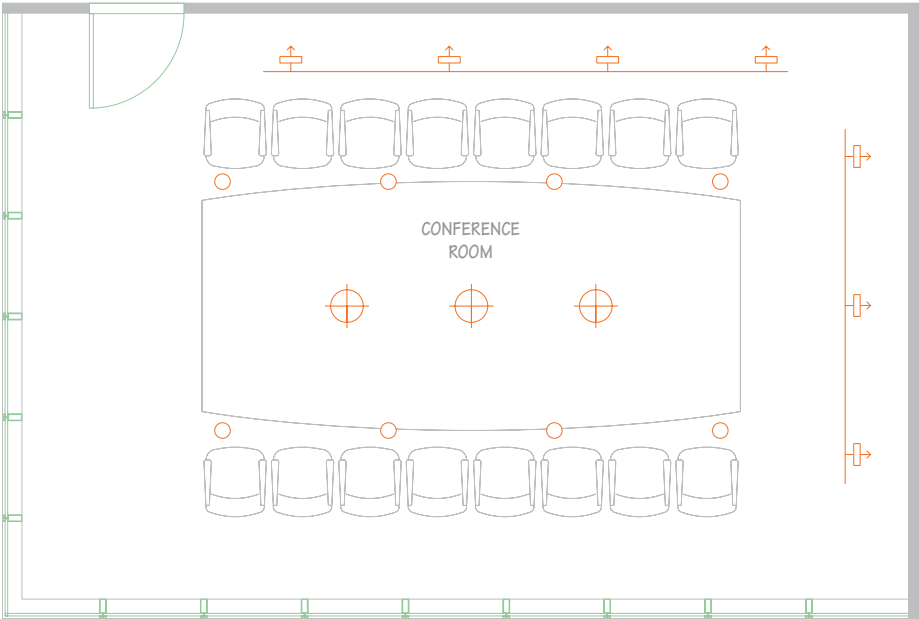
Example: Conference Room

Within this existing conference room a 100% LED lighting upgrade was used to address the unique needs of the space. Incorporating downlights, track and a practical, decorative element into the space resulted in a high efficiency, high performance solution.

By replacing existing 75W incandescent downlights with 23W LED retrofit modules, energy consumption was drastically reduced, while ambient light levels remained even. Integrated control capabilities create the opportunity to design more cost saving elements into the space, such as daylight

harvesting and occupancy sensing. The ability to create pre-set lighting scenes like, presentation mode or meeting mode, create even more efficiencies while improving the functionality of the space.

Decorative elements often consume large portions of the power allotment, while contributing very little functional light to the space. By installing LED Vetro Pendants above the conference table, the high light levels required for the task lighting layer are met while achieving a reduction in energy consumption.



Existing

Symbol	Luminaire	Qty	Watts	Total Watts
○	1102P1 / 1113CD Incandescent – PAR38	8	75	600
⬇	22WW4AL Incandescent – T4	7	75	525
⊕	FP02 CFL – Triple Tube	3	32	96
Total Power (W)				1221
Area (Ft²)				497
W/Ft²				2.46

LED Retrofit

Symbol	Luminaire	Qty	Watts	Total Watts
○	1102P1 / L56LED09S35D1 / 1113CD	8	23	184
⬇	LLF35AL	6	20	120
⊕	PM02L35SA1	3	20	60
Total Power (W)				364
Area (Ft²)				497
W/Ft²				.73

Lytecaster LED Retrofit

- Tool Free Installation
- 19W consumed
- Utilizes existing installations

Product Details – Page 22



Vetro Pendant Large

- Ideal task lighting solution
- Decorative element
- Modular design creates design flexibility

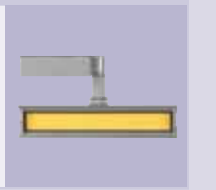
Product Details – Page 38



Alcyon LED Flood

- Low profile 1000+ lumen package
- 20W LED Engine
- Multiple finishes and CCT
- Adjustable aiming

Product Details – Page 30



Retail Lighting

Within the retail environment, lighting plays a critical role on several different levels. The appearance of the showcased product is ultimately determined by the quality of light illuminating it, making retail lighting design a crucial aspect of the selling process.

Additionally, the high levels of light required to showcase products often translate to high levels of consumption from the lighting system. Technological advancements have resulted in high efficiency, LED solutions that meet the demanding requirements of this application.

While display and lighting needs are often dynamic, there is a need for consistency in a lighting design once it has been chosen. Traditional lighting schemes are vulnerable to unintended adjustments resulting from the re-lamping process. This is compounded by retail's extended operating hours which necessitate frequent relamping. Unless strict attention is paid to lamp selection during relamping (wattage, distribution, color temperature, etc) a design can shift over time. Traditional



lighting sources have not presented us with a practical solution to this dilemma.

Lightolier understood the value of a consistent appearance of the retailed product when designing the new LED track offering. Features like locking and multi-axis aiming assure the integrity of a lighting design long after the initial installation.

By virtually eliminating the need to re-lamp, LED products are not susceptible to the accidental changes that commonly plagued halogen sources.

A consistency in light quality characteristics such as CRI and Color Temperature are equally important to the appearance of the retailed product. Carefully designed thermal systems and stringent LED purchasing practices ensure consistency not only from luminaire to luminaire but also over time. With LED, retailed products will always be illuminated the way they were intended.

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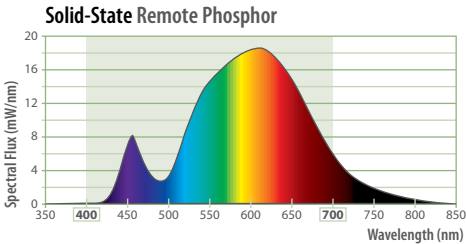
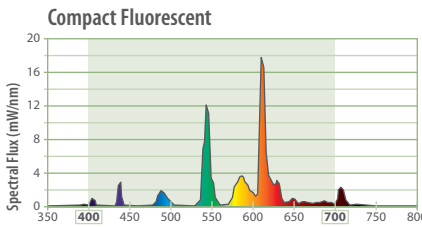
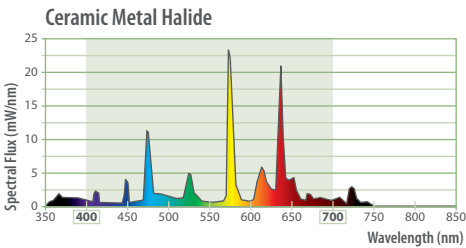
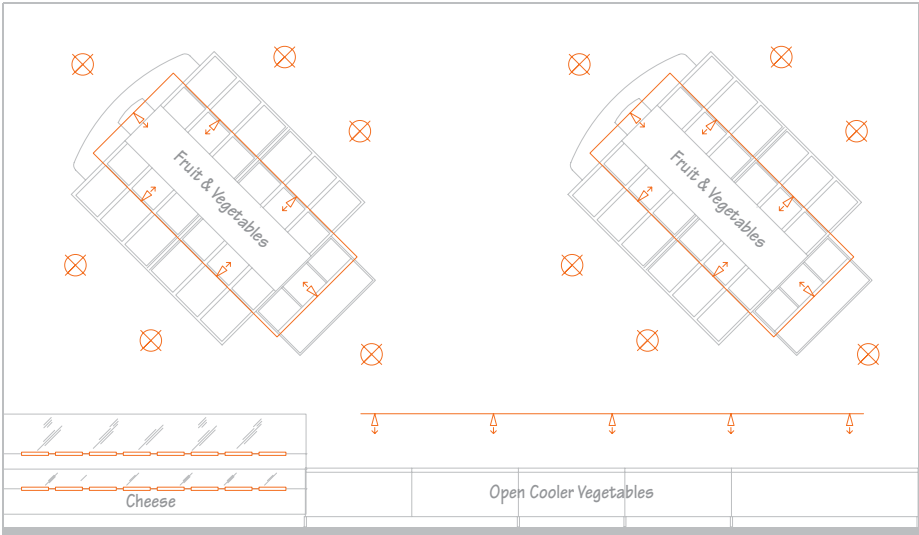
Example: Grocery Store

By using different combinations of luminaires, a retail lighting design can emphasize certain sections of a store. This technique can set apart important products from the rest of the retail offering. In the below example, the owner wanted to draw attention to the produce and cheese departments within the larger grocery store. A combination of accent and decorative lighting was used to showcase the product and draw traffic towards the displays.

A decorative LED pendant was chosen to provide the ambient light level. Suspending this unique decorative element in the space creates a visual cue that draws customers towards the department. Paying close attention to

the vibrant colors and the need for a high CRI solution, track lighting was suspended above the displays to accent the individual items. A spot distribution was chosen for the LED track head, creating a 3:1 contrast ratio on the highlighted produce. In addition to consuming less wattage, the LED solution created far less heat than comparable sources; significantly increasing the shelf life of the fresh produce.

To accent the open cooler where the cheese is displayed, a low profile, linear LED fixture was integrated into the shelving. This unobtrusive fixture provides the higher light levels required to accent the product, with a low physical impact.



The LED's ability to render the full spectrum of colors is critical in retail lighting. When comparing the spectral distribution of an LED source to that of other efficient sources, like CFL and HID – the advantage is clear.

Alcyon LED Accent

- Locking multi-axis aiming
- Spot distribution
- 50,000 hour life
- 80+ CRI

Product Details – Page 32



Pendalyte

- 20W, 1000 lumen light engine
- Volumetric, low glare
- Decorative, modular design

Product Details – Page 42



Micro

- Low profile design
- Quick connect installation
- Asymmetrical distribution
- Multiple finishes for minimal visual impact

Product Details – Page 49



Hospitality Lighting

Hospitality Lighting presents several different challenges for the lighting system. The diverse needs typically found within hotels require versatility within the lighting system.

Our LED offering can meet many of the needs of a hospitality application with a surprisingly small number of products. The design commonality throughout the entire hotel creates efficiencies in maintenance and consistency in appearance.

The Calculite LED Downlight is a specification grade product, available in multiple lumen packages, color temperatures, and finishes. Additional features like standard dimming and a 50,000 hour minimum rated life (L70) present unique advantages to different spaces. A full building design can incorporate downlights from this single LED product line while still maintaining the flexibility hospitality applications demand.

Lighting System Demands	
Guest Rooms	High CRI, layered lighting, integration of supplemental lighting of different sources
Circulation Areas	24 hour use, emergency/egress capability, directional lighting, efficiency
Lobby Bar	Control capabilities, visual appeal, layered lighting



Creating a welcoming and intimate atmosphere in the hotel bar or restaurant is an important way to differentiate it from the rest of the hotel. The lighting design must present guests with an inviting alternative to their rooms. This often requires the application of dimmable fixtures and lighting controls to create preset lighting scenes.

Adding decorative elements to the design is critical to making the space welcoming and attractive. A combination of LED downlights, track and decorative pendants can meet all these requirements and poses a highly efficient and practical solution to the hotel bar or restaurant.

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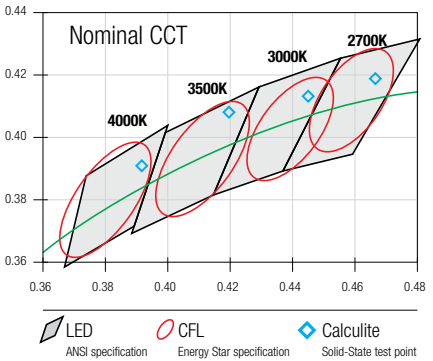
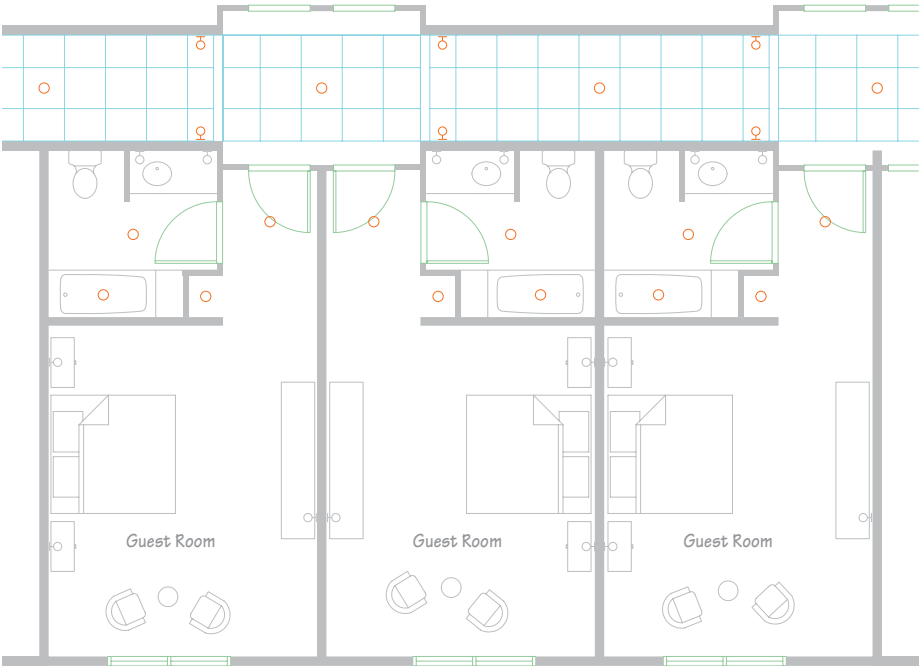
Example: Guest Rooms

While the hotel lobby and bar usually receive a majority of the design emphasis; the circulation spaces and guest rooms account for a majority of the installed fixtures. Selecting high performance luminaires for these spaces is the key to reducing maintenance costs and realizing energy savings.

In the following example, Calculite LED downlighting was utilized in the hallways where 24 hour use is required. A 20W light engine was specified that reduced wattage

while still providing the light levels needed for safe passage. A low wattage decorative sconce was used to supplement the downlight and to provide a way finding element in the hallways.

In the guest rooms, a 10W Calculite LED Downlight was chosen for general illumination in the bathrooms and room entrances. The flexibility provided by multiple CCT options was crucial, since it will be supplemented by CFL task lighting next to the bed and around the mirrors.



The ability to integrate LED luminaires with the supplemental lighting required for hospitality applications is critical to a consistent feel in the space. This chart demonstrates the CCT of our LED engines in relation to CFL.

Calculite Round Aperture

- 20W and 10W options
- 500, 1000, 1500 and 2000 lumen packages
- Multiple CCT options
- 50° Cutoff

Product Details – Page 14



Vetro Wall Sconce

- Hand blow triplex glass
- Soft decorative glow
- ADA Compliant
- 6W LED Engine

Product Details – Page 39



Specification Downlighting

Setting new standards in design, efficiency and flexibility for architectural downlighting.

Designed as an alternative to compact fluorescent, Calculite LED utilizes the aperture sizes, shielding and flexibility of traditional sources. This allows specification of LED technology where it's appropriate while ensuring consistent, specification-grade design language can be maintained throughout the architectural space.



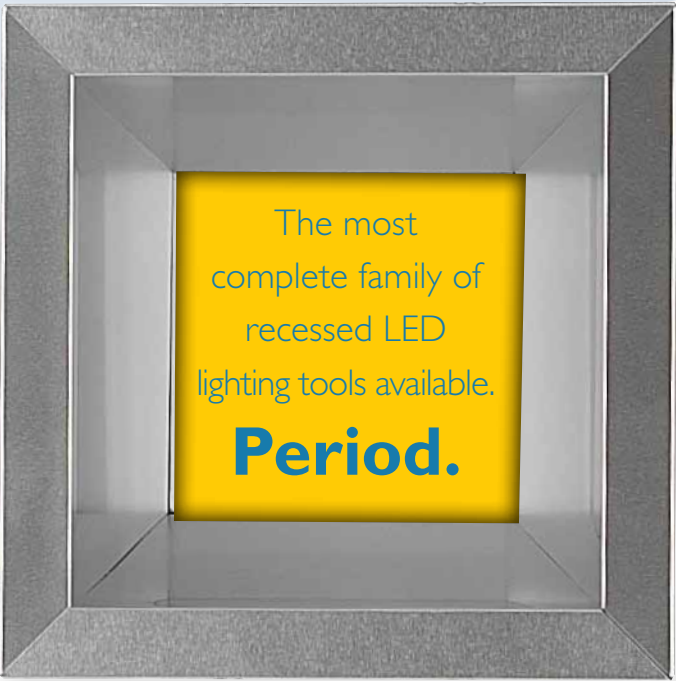
4 lumen packages

3 aperture sizes

4 color temperatures

2 downlight beam distributions

4 wall washer styles



Use the right technology for the job. Choose the family that gives you the options. It's what you've come to expect from Calculite.



	Lumen Packages	Downlight		Wall Washer		
		Medium	Wide	Lensed	Open-Single	Open-Double
4"	500					
	1000		✓	✓	✓	✓
6"	1500	✓	✓	✓	✓	✓
	2000					
7"	1500	✓	✓	✓	✓	✓
	2000					

Round Apertures

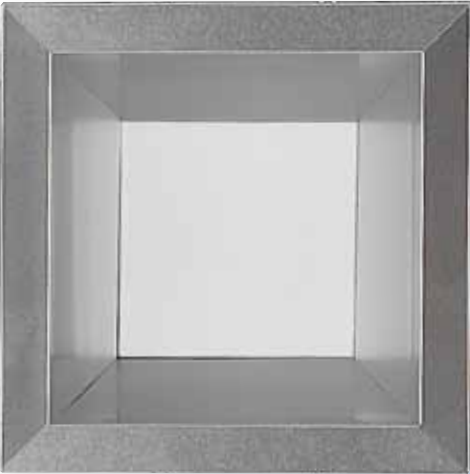
Calculite LED round aperture products include medium and wide beam downlights along with an industry-best selection of wall washers.

Square Apertures

Calculite LED squares feature a downlight and lensed wall washer with an architecturally-appropriate square light source.

4"x4"
6"x6"

Lumen Packages	Downlight		Lensed Wall Washer	
	4"x4"	6"x6"	4"x4"	6"x6"
500				
1000	✓		✓	
1500				
2000	✓		✓	



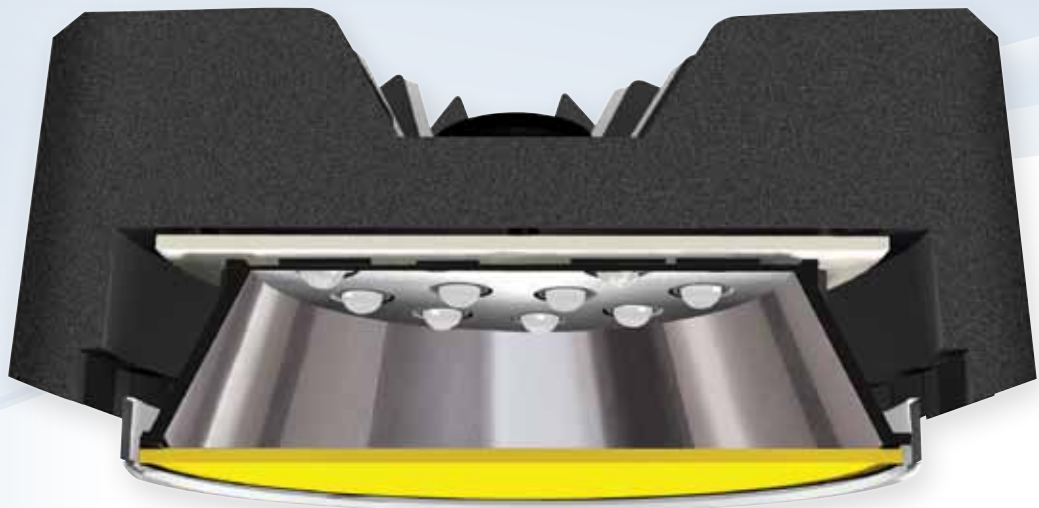
	Lumen Packages	Downlight	
		4"	7"
4"	500		
	1000	✓	
7"	1500		
	2000	✓	

Cylinders

Calculite LED cylinders feature ceiling, stem and pendant-mount flexibility in white and satin aluminum finishes.

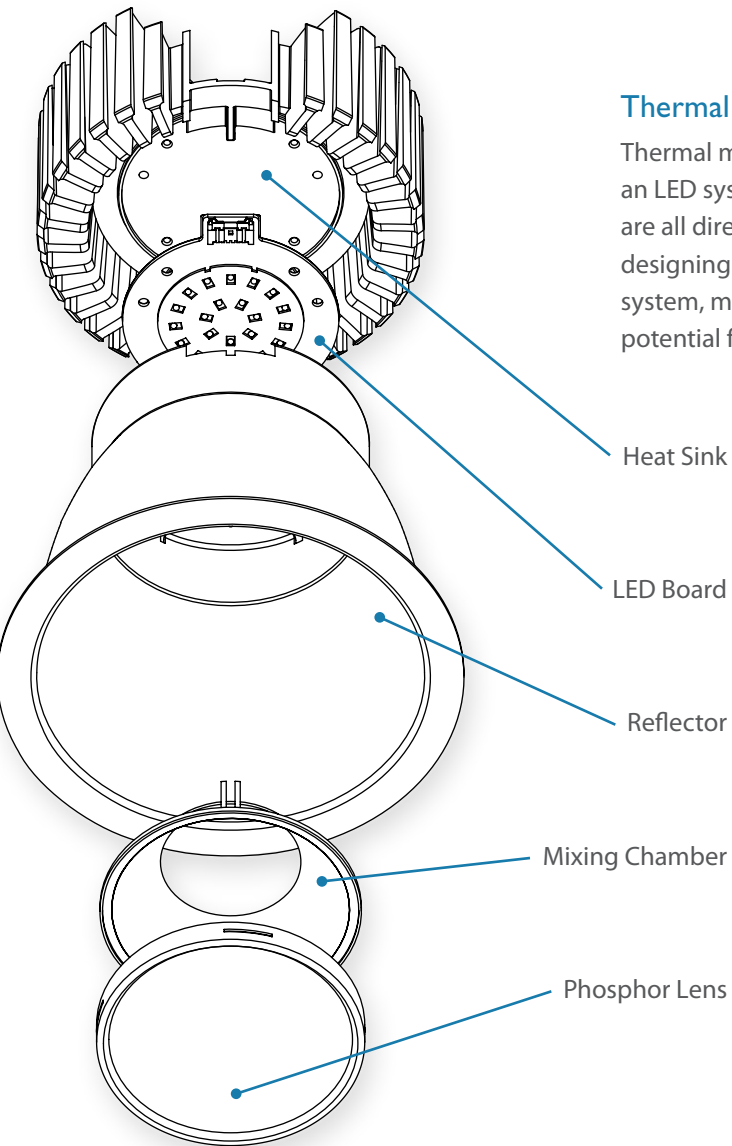
Remote Phosphor

This technology redefines how light from blue LEDs is converted to white. Lightolier’s design delivers up to 2000 lumens while achieving system efficacies in excess of 50 lumens delivered per watt consumed.



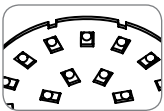
Thermal Management - Design

Thermal management is critical to every aspect of an LED system. Light output, life and color stability are all directly related to operating temperature. By designing the light engine as a fully enclosed, integrated system, maximum heat dissipation is ensured and the potential for field contamination has been eliminated.



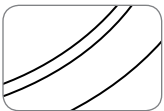
Heat Sink

Lightolier-patented design. Carbon pad applied to eliminate insulating air gaps.



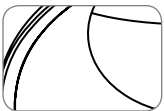
LED Board

Royal blue LEDs. Lack of phosphor application minimizes performance variation.



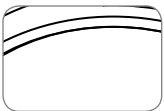
Reflector

Lightolier-patented design. Utilizes reflector to circulate room-side air across LED board.



Mixing Chamber

Lightolier-patented design. Optimized shape and maximum-reflectivity material increases efficiency.



Phosphor Lens

Remote-mounted phosphor runs cooler, maximizing efficiency while minimizing degradation.

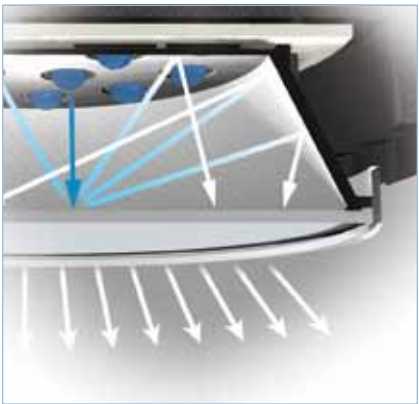
Thermal Management - Assembly

In a clean room designed and built specifically for this product, Calculite’s LED light engines are assembled in Lightolier’s Fall River, MA manufacturing facility. This ensures no contamination inhibits performance of the thermal management design.



Product Performance

Maximum Efficiency



Up to 60% of light that contacts phosphor, whether it’s remote-mounted or applied directly to the chip, is back-reflected.

With Philips’ remote-mounted phosphor system this back-reflected light can be utilized. Lightolier developed and patented an optimized, highly reflective mixing chamber which redirects this light, resulting in a 20% increase in system efficiency.

Color Consistency



Variation in color across products has historically been a challenge for lighting products utilizing LED technology. This is in large part due to the process variability in applying phosphor directly to the LED diode.

Remote phosphor technology provides superior color consistency across products, as the phosphor is manufactured in large sheets, cut to shape, and laminated to diffusion film. This process results in color consistency $\pm 100k$ across products.

As-Specified Performance



Calculite’s remote phosphor technology ensures that the LED performance that’s been specified will be available at construction rollout.

The phosphor itself is developed and manufactured exclusive from the LED chip and can therefore be modified as required to deliver the fixture performance expected when the lighting specification is written. This allows the product to change with technology gains, yet provide the same below-ceiling performance as specified.

Key Features

- 4", 6" and 7" apertures
- 50° cutoff to source & source image
- Medium & wide beam (0.9 & 1.2) distributions*

* Medium beam available in 6" & 7" apertures only



Key Features

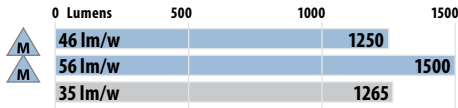
- 4" x 4" and 6" x 6" apertures
- 50° cutoff to source & source image
- Aperture-matching square source



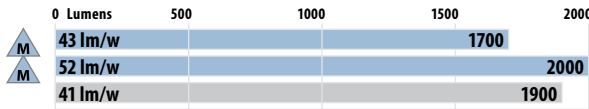
Round

Medium Beam (approx. 0.9 s.c.)

Aperture	Description	Part No.
6"	27W LED (27W)	C6L1520DL
7"	27W LED (27W)	C7L1520DL
6"	32W CFL (36W)	8021



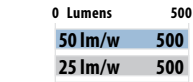
Aperture	Description	Part No.
6"	39W LED (39W)	C6L1520DL
7"	39W LED (39W)	C7L1520DL
7"	42W CFL (46W)	8022



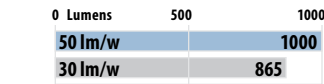
Round

Wide Beam (approx. 1.2 s.c.)

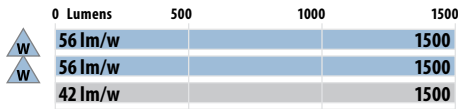
Aperture	Description	Part No.
4"	10W LED (10W)	C4L05DL
4"	18W CFL (20W)	8011



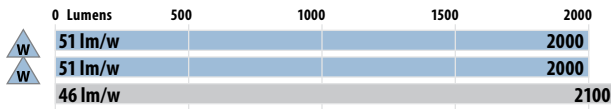
Aperture	Description	Part No.
4"	20W LED (20W)	C4L10DL
6"	26W CFL (29W)	8031



Aperture	Description	Part No.
6"	27W LED (27W)	C6L1520DL
7"	27W LED (27W)	C7L1520DL
6"	32W CFL (36W)	8031



Aperture	Description	Part No.
6"	39W LED (39W)	C6L1520DL
7"	39W LED (39W)	C7L1520DL
7"	42W CFL (46W)	8037



* Data provided above is 3000K CCT.

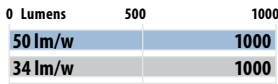
Square

(approx 1.1 s.c.)

Aperture	Description	Part No.
4" x 4"	10W LED (10W)	C4X4L05DL



Aperture	Description	Part No.
4" x 4"	20W LED (20W)	C4X4L10DL
4" x 4"	26W CFL (29W)	4X4



Aperture	Description	Part No.
6" x 6"	27W LED (27W)	C6X6L1520DL
4" x 4"	32W CFL (36W)	4X4

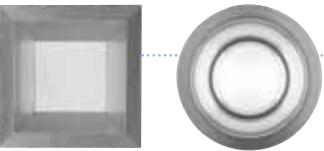


Available in 2Q 2010

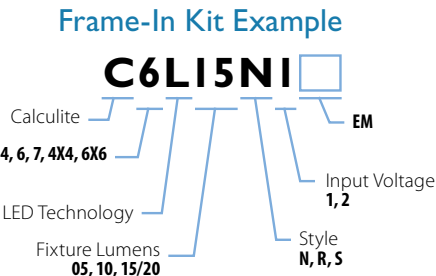
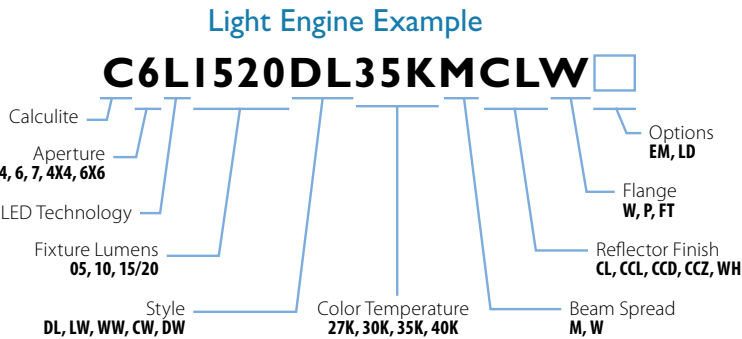
Aperture	Description	Part No.
6" x 6"	39W LED (39W)	C6X6L1520DL



Available in 2Q 2010

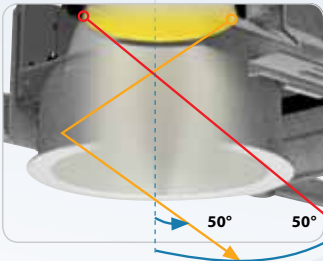


Part Numbering Logic



Key Features

Comfort Optics



Designed specifically around the LED source Calculite LED delivers true 50° physical and reflected cutoff for reduced aperture brightness and an unobtrusive ceiling presence.

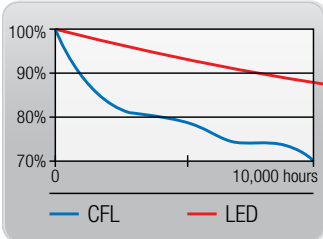
Dimming/Emergency Capability



Electronic low voltage (5%), 0-10V (10%) and Lutron dimming options available depending on luminaire selected. See LED-DIM specification sheet for details.

Both Integral (EM suffix) and low-wattage inverter (see LED-DIM specification sheet) options available for emergency backup.

Lumen Maintenance



Depreciating more consistently over time as compared to CFL, Calculite's LED downlight will provide at least 50,000 hours rated life at 70% lumen maintenance.

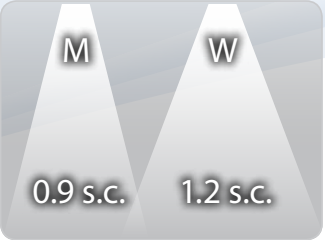
Flangeless Option



After the frame-in kit is installed, the flangeless ring is inserted into the ceiling opening and the flange is plastered over, feathered, sanded and finished.

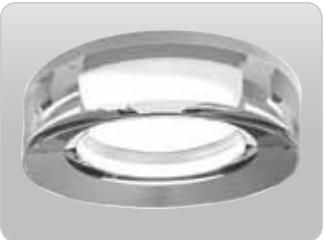
A flangeless "FT" trim is required. Accessory ring CA_FMRLED recommended for gypsum applications.

Beam Distributions



Designed as a direct replacement for CFL, Calculite LED offers medium and wide beam spread options where possible. Medium is an alternative to vertically-oriented CFL (0.9 s.c.), wide is an alternative to horizontal orientations (1.2 s.c.).

Decorative Accessories



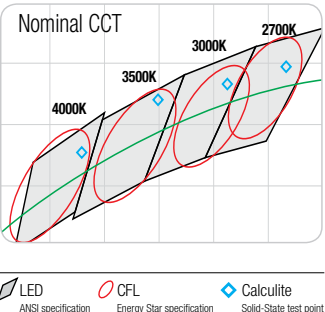
Calculite round aperture downlights are compatible with Vetro architectural decorative accessories. A flangeless "FT" trim is required.

Industry Best Warranty



Lightolier is emphasizing confidence in our product and a commitment to our specifiers with an industry-best 5 year warranty covering all components. Conventional equipment typically offers separate warranties for the lamp and the ballast.

Chromaticity Diagram



Slightly warmer in tone than compact fluorescent, Calculite LED provides a color richness and spectrum beyond that of traditional energy-efficient sources.

Remote phosphor technology, tight LED specifications, and proper thermal management allow Calculite to commit to CCT variation $\pm 100K$ both across products and over time.

Round Finish Options



Clear (CL) is the most specular and therefore most efficient finish available. Clear reflectors deliver maximum photometric performance but can produce a mirror image of the interior of the space.



Comfort Clear (CCL) is a slightly diffuse clear finish, which eliminates iridescence and reduces the mirror image inherent with specular finishes.



Comfort Clear Diffuse (CCD) is a semi-specular finish that softens the light at the source of the reflector. The finish creates a subtle, even luminance from the reflector cone.



Champagne Bronze (CCZ) is a semi-specular finish that softens the light at the source of the reflector while providing a warmer reflector appearance. Light output is slightly warmer as well.

Flange Options



White (WH) is a matte finish that produces the brightest aperture when illuminated but provides the smoothest transition to most ceilings when off. White is available only with a white flange.



White Painted Flange (W) is a 5/8" wide integral flange painted matte white.

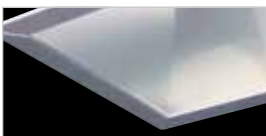


Polished Flange (P) is a 5/8" wide integral flange polished and finished to match the appearance of the interior of the reflector.

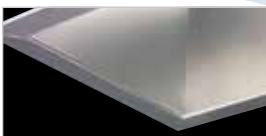


Flangeless (FT) provides a minimal flange for flush mount installations.
*CA4FMRLED recommended

Square Finish Options



Clear (CL) is the most specular and therefore most efficient finish available. Clear reflectors deliver maximum photometric performance but can produce a mirror image of the interior of the space.



Comfort Clear (CCL) is a slightly diffuse clear finish, which eliminates iridescence and reduces the mirror image inherent with specular finishes.



Comfort Clear Diffuse (CCD) is a semi-specular finish that softens the light at the source of the reflector. The finish creates a subtle, even luminance from the reflector cone.



Champagne Bronze (CCZ) is a semi-specular finish that softens the light at the source of the reflector while providing a warmer reflector appearance. Light output is slightly warmer as well.

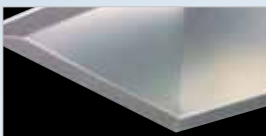
Flange Options



White (WH) is a matte finish that produces the brightest aperture when illuminated but provides the smoothest transition to most ceilings when off. White is available only with a white flange.



White Painted Flange (W) is a 5/8" wide integral flange painted matte white.



Polished Flange (P) is a 5/8" wide integral flange polished and finished to match the appearance of the interior of the reflector.



Flangeless (FT) provides a minimal flange for flush mount installations. Available in 6" aperture only.
*CA6X6FMRLED recommended

4" Aperture New Construction

Unitized optical assemblies guarantee precise alignment between lamp and optics for consistent, reliable performance

Ceiling collar provides locking vertical adjustment to accommodate ceilings from 0" to 2" thick

Integral telescoping mounting bars extend from 20" to 30" long and lock securely into position

Built-in locking tabs provide positive attachment to standard T-bar systems

J-box mounted driver contributes to optimal thermal performance of sensitive components.

The square frame rotates 180° for the easy alignment of multiple fixtures

6" Aperture New Construction

Unitized optical assemblies guarantee precise alignment between lamp and optics for consistent, reliable performance

Light engine adjusts vertically in frame for ceilings up to 2" thick

Offset mounting brackets balance frame to ensure reliable frame and light engine installation

J-box mounted driver contributes to optimal thermal performance of sensitive components

Retrofit Frame-In Kit

LED retrofit frames allow conversion of existing Calculite 4 1/2" and 6" aperture installations to a sustainable, energy efficient solution. Power supply attaches either to existing socket via screw base and snap-in socket cup or by mounting directly to junction box. Light engine installs via standard connector.

Retrofit Frame-In Kit J-Box version

Key Features

- Converts existing 4 1/2" & 6" Calculite incandescent, compact fluorescent and HID (downlight & open wall washer trims only)
- Two possible connection systems
 1. J-Box version: convert by re-wiring at J-Box
 2. Screw-in version: easy conversion from a standard 120V incandescent medium base Calculite socket cup without additional wiring
- Tool-less installation
- Available in 120V or 277V

Remodeler Frame-In Kit

Key Features

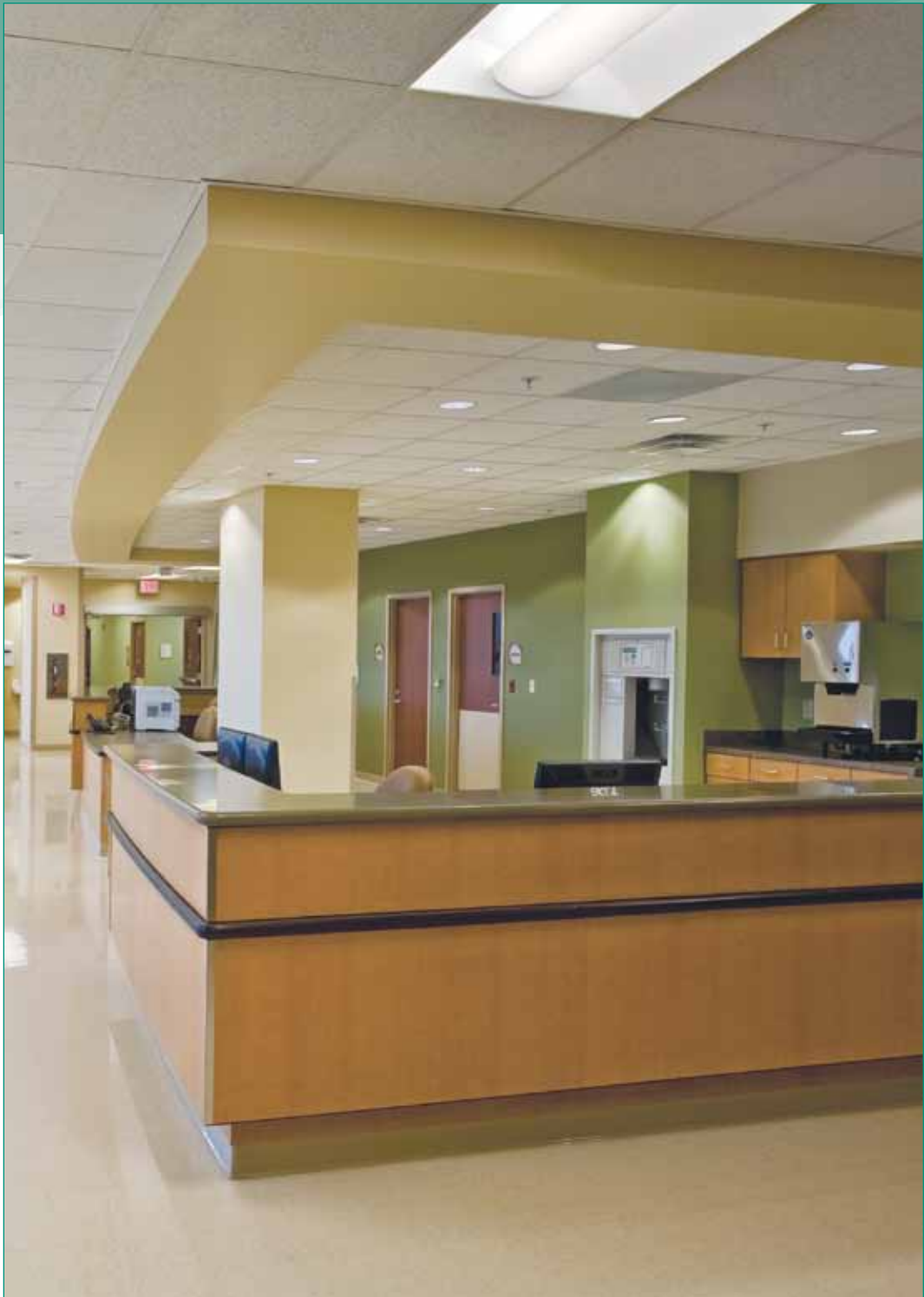
- For existing Non-IC applications up to 2" ceiling thickness
- Hinged J-box design permits easy insertion through ceiling
- Tool-less installation; 3 tooth (ratchet) clips secure ring to ceiling
- Integral driver casing and junction box ensure cool operation
- Available in 120V or 277V

General Purpose Downlighting

Sustainable Excellence.

Technology should enhance your lighting, not detract from it. Lytecaster's line of LED products provides value added features, proven performance and the quality you've come to expect from Lytecaster for over 40 years.

Designed for commercial applications, our LED line of products are created to meet the demanding needs of these applications. As part of a total lighting system, our LED technology is designed and tested for performance, aesthetics and reliability.



**PHILIPS
LIGHTOLIER**

**5 year
warranty**

**PHILIPS
ADVANCE** **PHILIPS
LUMILEDS**



Proven Performance

Lytecaster LED is committed to quality lighting. Our tightly controlled custom binning process and controlled mixing chamber ensure a quality white light and excellent color consistency. In fact, our color consistency is held to a tolerance twice as controlled as the current Energy Star standards.

Proven Leadership

Embrace new technology in your lighting designs... Lytecaster LED incorporates a One Philips approach using Philips Lumiled LEDs, Philips Advance drivers and Philips Lightolier luminaires. With a 5 year warranty and over 250 years of combined lighting experience, Lytecaster LED is the product you can trust for quality and performance.

Performance without Sacrifice

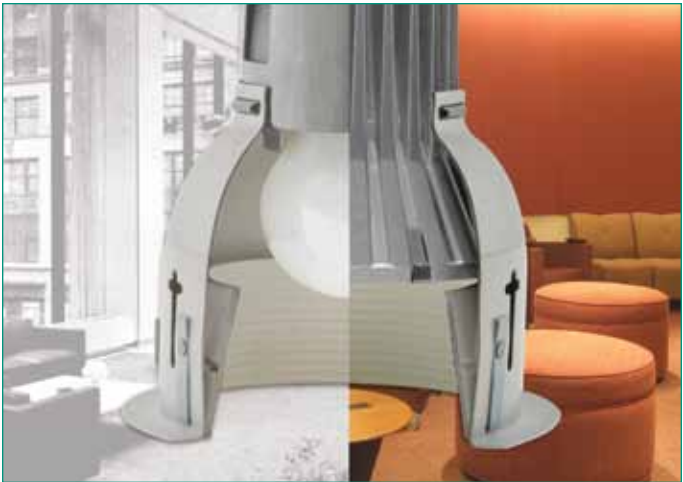
Lytecaster LED provides the light output of a 75w PAR lamp using less than 20 watts of energy. This can save thousands of dollars per fixture over the life of the LED and reduce your carbon footprint by almost 20 tons. This incorporated with attractive energy rebates can result in a return on investment of less than 24 months while helping the environment.

Design Flexibility



Energy efficiency is a single component of the lighting equation. Lytecaster provides superior performance and aesthetics through our unique design that also allows you to use our existing trims. Over 50 of our most popular trim styles and finishes are available to provide you a quality look and the ability to easily match installed products.

Design Functionality



Designed to have the look and feel of incandescent lamps, Lytecaster LED looks similar to existing PAR lamps and with our regressed mixing chamber, actually provides a superior cutoff for exceptional glare control and visual comfort.

Key Features

- Tool free installation
- Improved cut-off and optic performance
- Uses up to 75% less energy than incandescent
- Works with both 5" & 6" Lytecaster frames (1002P1 / 1102P1)
- Replace existing incandescent sources with comparable lighting and aesthetics



Retrofit



Catalog No.	Ceiling	Color Temp	Input Voltage	Wattage	Lumens	Trims
L56LED09S271	Non-IC Retrofit	2700k	120V	19W	900 lm	Pages 26-27
L56LED09S27D1	Non-IC Retrofit (dimming)			23W		
L56LED09S351	Non-IC Retrofit	3500k		19W		
L56LED09S35D1	Non-IC Retrofit (dimming)			23W		

LED Advantage



Easily installs as a retrofit or as an energy efficient new construction luminaire



Dimming



Dimming models use existing incandescent dimmer and wiring; saving money and labor.



Compatibility



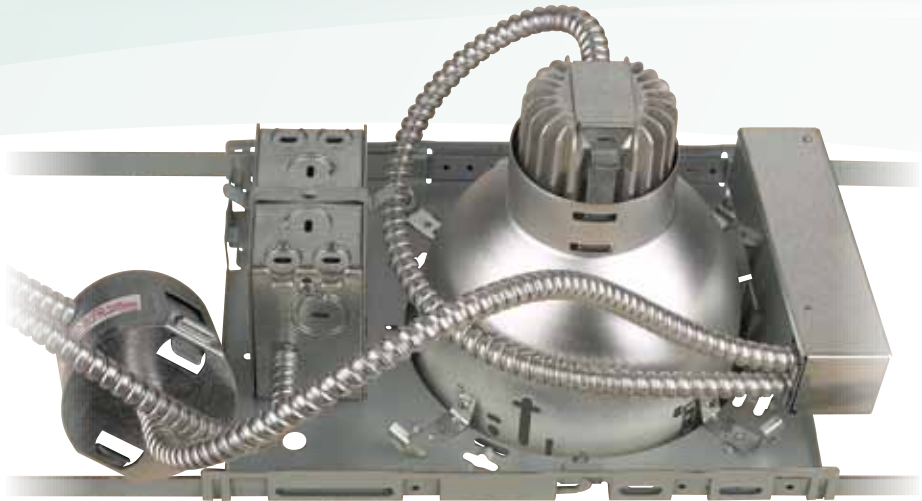
Use existing Lytecaster trims for added flexibility and ceiling consistency.



900 lumen LED system provides comparable light to a 75W incandescent lamp using 75% less energy.

Tool Free Installation

Lytecaster's tool free retrofit design is so simple, it's almost as easy as replacing a lamp while using 75% less energy than a comparable incandescent lamp.



Step 1

Remove the incandescent lamp and pull the existing trim down from the ceiling. Place the trim to the side.



Step 2

Attach the male screw shell to the lamp socket and secure to the socket cup



Step 3

Install the LED driver onto the frame by sliding the driver clip under the frame



Step 4

Install the heat sink into the trim and clip the wiring to the top of the heat sink. Lytecaster LED is compatible with dozens of existing trims



Step 5

Push the trim back into the ceiling



Key Features

- Easily install into existing ceilings
- Equal to a 75W incandescent
- Uses up to 75% less energy than incandescent
- Improved cut-off and optic performance
- Comparable design to our 5" 1003R / 6" 1103R remodeler



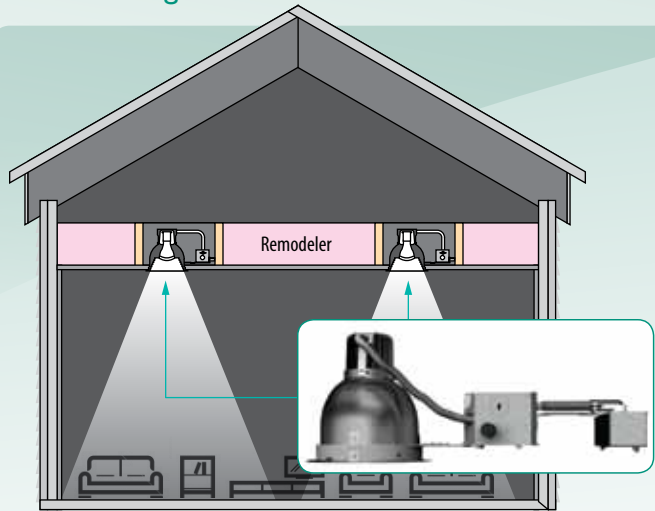
Remodeler



* Lumen performance varies by color temperature, driver and trim option. Please reference specification sheets for performance details.

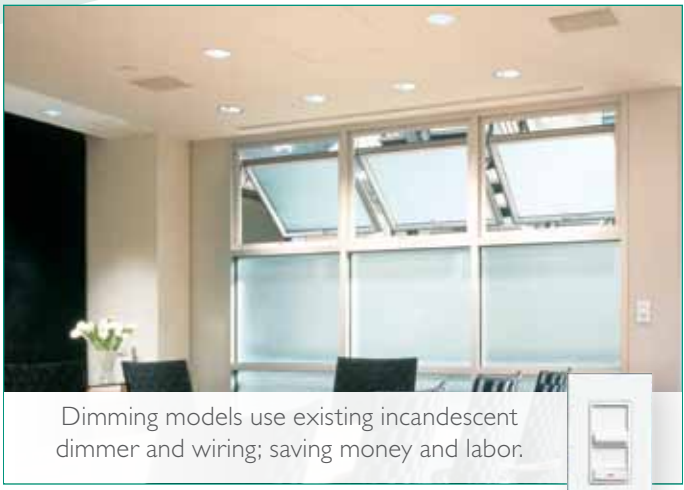
Catalog No.	Ceiling	Color Temp	Input Voltage	Wattage	Lumens	Trims
1000LED09R271	5" Non-IC Remodeler	2700k	120V	19W	900 lm*	Page 26
1000LED09R27D1	5" Non-IC Remodeler (dimming)			23W		
1000LED09R351	5" Non-IC Remodeler	19W				
1000LED09R35D1	5" Non-IC Remodeler (dimming)	23W				
1100LED09R271	6¾" Non-IC Remodeler	2700k		19W	900 lm*	Pages 27
1100LED09R27D1	6¾" Non-IC Remodeler (dimming)			23W		
1100LED09R351	6¾" Non-IC Remodeler	3500k		19W		
1100LED09R35D1	6¾" Non-IC Remodeler (dimming)			23W		

LED Advantage



- ✓ Easily installs into existing ceilings from below.
- ✓ Add energy efficient lighting to any room.
- ✓ Replace existing fixtures with comparable lighting using a fraction of the energy.

Dimming



Dimming models use existing incandescent dimmer and wiring; saving money and labor.

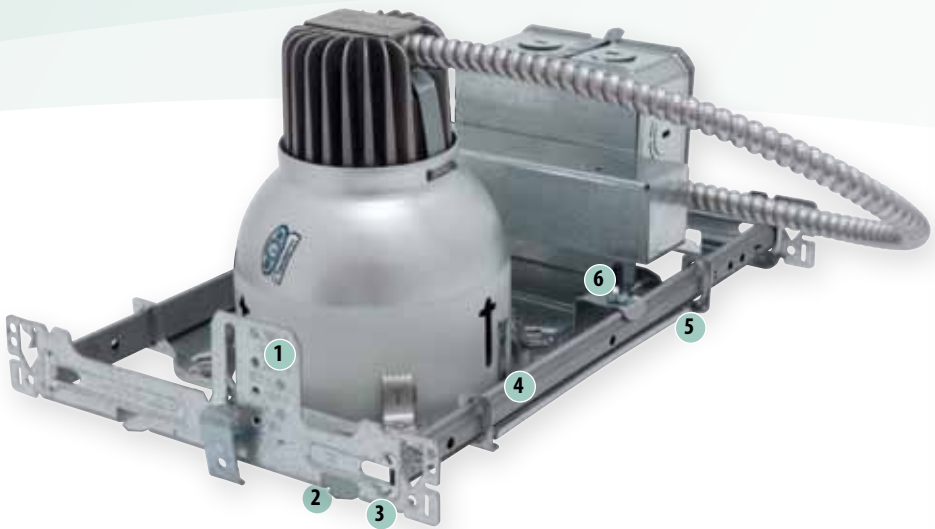
Easy Installation

Adhesive cutting template makes it easy to mark installation points while the unique mounting ring (shown) securely holds to the ceiling while securing the trim for a flawless installation.



Key Features

- Tool free installation in commercial ceilings
- Cuts installation time by up to 50%
- Ideal for light commercial, hospitality and multi-family
- Improved cut-off and optic performance
- Uses up to 75% less energy than incandescent



Uniframe

Catalog No.	Ceiling	Color Temp	Input Voltage	Wattage	Lumens	Trims
1001LED09N271	5" Non-IC New Construction	2700k	120V	19W	900 lm*	Page 26
1001LED09N272	5" Non-IC New Construction (dimming)	2700k	277V	23W		
1001LED09N351	5" Non-IC New Construction	3500k	120V	19W		Page 27
1001LED09N352	5" Non-IC New Construction (dimming)	3500k	277V	23W		
1101LED09N271	6 3/4" Non-IC New Construction	2700k	120V	19W		
1101LED09N272	6 3/4" Non-IC New Construction (dimming)	2700k	277V	23W		
1101LED09N351	6 3/4" Non-IC New Construction	3500k	120V	19W		
1101LED09N352	6 3/4" Non-IC New Construction (dimming)	3500k	277V	23W		
1101LED09N35D1	6 3/4" Non-IC New Construction (dimming)	3500k	120V	23W		



* Lumen performance varies by color temperature, driver and trim option. Please reference specification sheets for performance details.



Uniframe LED provides all the great tool-free installation features of the original Uniframe product while providing 900 lumens of light using 75% less energy than comparable incandescent lamps

Grid Lock Inside

1

Grid Lock Outside

1

Joist Finder

2

Nailing Tabs

3

T-Bar

4

Adjustable

5

Horizontal Adjustment

6

Tool free installation in Grid Ceiling. Automatically adjusts to any T-Bar height, width, and ceiling thickness with our new Grid-Lock.

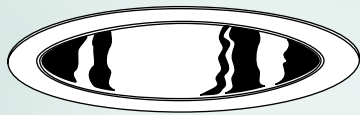
Easily adaptable to wood construction with integrated nailing tabs and vertical alignment tabs for standard joists and strapping.

Design secures tile down on T-Bar eliminating the tile floating upward during trim installation.

Easily adjusts from 16" O.C. wood joists to 24" O.C. T-Bar.

Locking mechanism eliminates frame movement.

5" Series Compatible Trims



The trims listed below are compatible with the LED Retrofit and the 5" LED Remodeler and Uniframe

Aperture Cone

Cat. No.	Finish
1008*	Brushed Gold
1010*	Brushed Clear
1012*	Specular Gold
1013*	Specular Clear
1013CD*	Clear Diffuse
1013BK*	Specular Black
1013WH	Matte White



Step Baffle

Cat. No.	Finish
1005*	Matte Black
1005BNM	Natural Metal baffle Natural Metal flange
1005WH	Matte White



Basic Baffle

Cat. No.	Finish
1076	Black Baffle
1076WH	White Baffle



Basic White Reflector

Cat. No.	Finish
1071	Gloss White



Step Eyelid Wall Washer

Cat. No.	Finish
1035	White Eyelid with Matte Black Baffle
1035WH	White Eyelid with Matte White Baffle



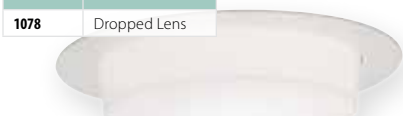
Basic Eyelid Wall Washer

Cat. No.	Finish
1085	Gloss White



Drop Lens

Cat. No.	Finish
1078	Dropped Lens



Flush Lens

Cat. No.	Finish
1090	Flush Lens



Cratere Dome

Cat. No.	Finish
1024	Cratere Dome



Please reference frame-in kit spec sheet for Energy Star trim compatibility.
* Add "NM" to sku for Natural Metal Flange

6 3/4" Series Compatible Trims



The trims listed below are compatible with the LED Retrofit and the 6 3/4" LED Remodeler and Uniframe

Aperture Cone

Cat. No.	Finish
1108*	Brushed Gold
1110*	Brushed Clear
1112*	Specular Gold
1113*	Specular Clear
1113CD*	Clear Diffuse
1113BK*	Specular Black
1113WH	Matte White



Specular Reflector

Cat. No.	Finish
1145	Specular Gold
1146	Specular Clear
1146CD	Clear Diffuse



Basic White Reflector

Cat. No.	Finish
1171	Gloss White



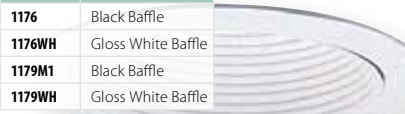
Step Baffle

Cat. No.	Finish
1105*	Matte Black
1105BNM	Natural Metal baffle Natural Metal flange
1105WH	Matte White



Basic Baffle

Cat. No.	Finish
1176	Black Baffle
1176WH	Gloss White Baffle
1179M1	Black Baffle
1179WH	Gloss White Baffle



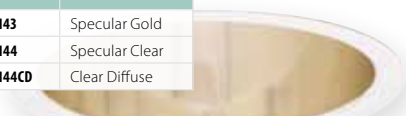
Cross Blade

Cat. No.	Finish
1132	Cross Blade



Shallow Specular Reflector

Cat. No.	Finish
1143	Specular Gold
1144	Specular Clear
1144CD	Clear Diffuse



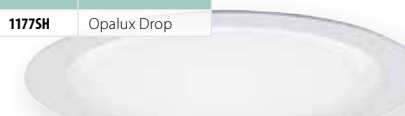
Basic Eyelid Wall Washer

Cat. No.	Finish
1185	Gloss White



Drop Lens

Cat. No.	Finish
1177SH	Opalux Drop



Flush Lens

Cat. No.	Finish
1190	Flush Lens



Recessed Lens

Cat. No.	Finish
1128	Opal Lens



Fresnel Lens

Cat. No.	Finish
1126	Fresnel Lens



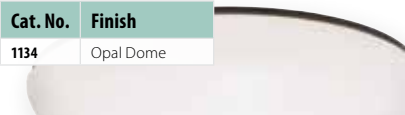
Opal Glass

Cat. No.	Finish
1121	Opal Disk



Opal Dome

Cat. No.	Finish
1134	Opal Dome



Cratere Dome

Cat. No.	Finish
1124	Cratere Dome



Please reference frame-in kit spec sheet for Energy Star trim compatibility.
* Add "NM" to sku for Natural Metal Flange

Track Lighting

Setting the standard in innovation, flexibility and performance.

Employing the latest in LED technology, combined with the proven success of Alcyon, our LED luminaires set the standard for innovation, flexibility and performance, without sacrificing design.

Building upon our expertise in LED the Alcyon LED family represents the state-of-the-art in energy efficient lighting for retail, commercial and architectural applications. Alcyon LED delivers long lasting performance for accent and flood lighting in a stunning wireless design



Remote Phosphor

The Alcyon LED Flood utilizes, Lightolier's proprietary Remote Phosphor Technology. Redefining how light from blue LED's is converted to white. Remote phosphor technology achieves system performance of 50 lumens per watt with consistent, uniform color across products.

Remote mounting the phosphor to the diffusion lens allows back-reflected light to be redirected out of the luminaire by a highly-reflective mixing chamber. The result is a 20% increase in system efficiency.

Quality White Lighting

Tightly packed white LED technology used in Alcyon LED Accents deliver the quality of light that is essential for applications where directional lighting is needed. Ideal for display, accent and task lighting.

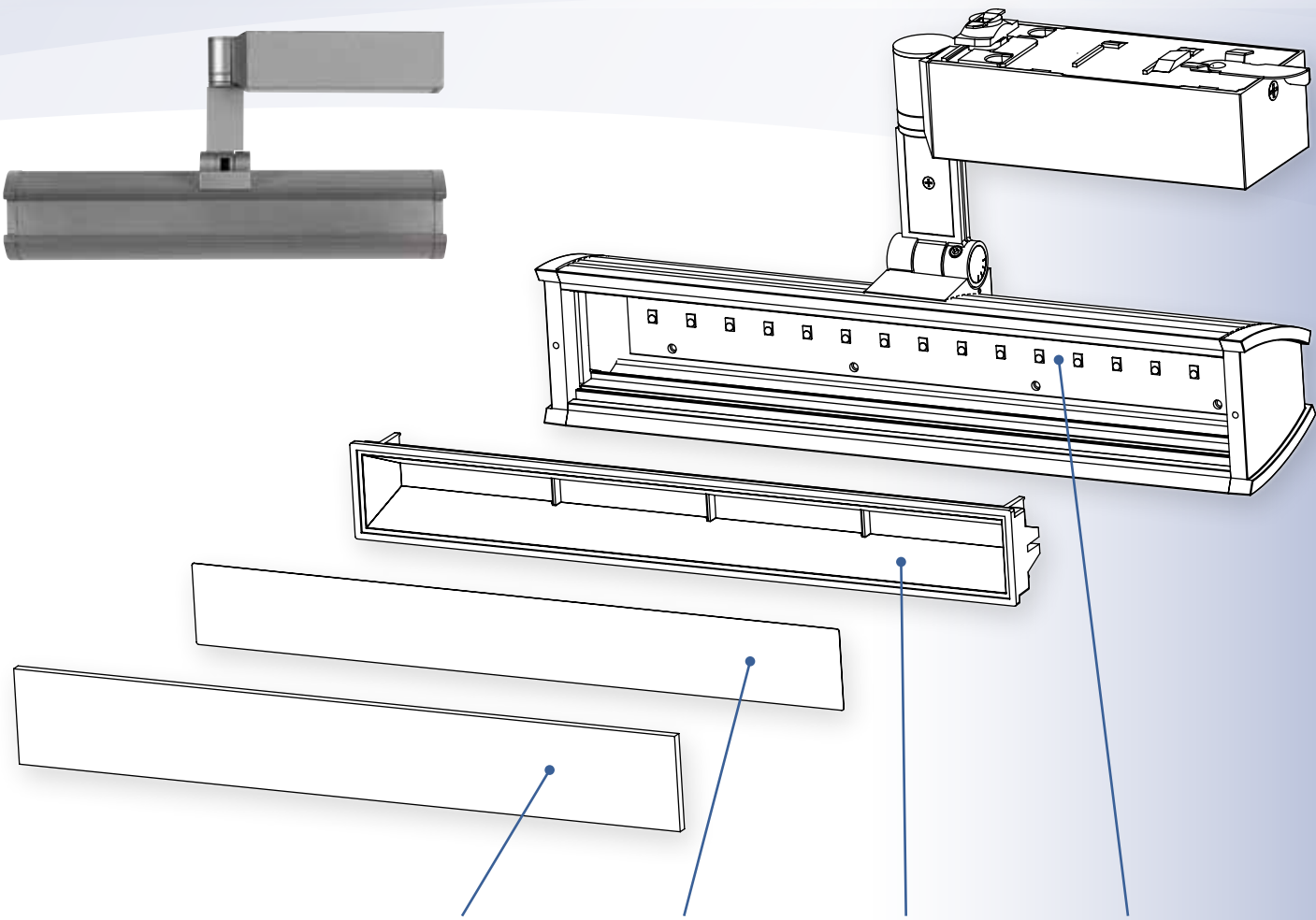
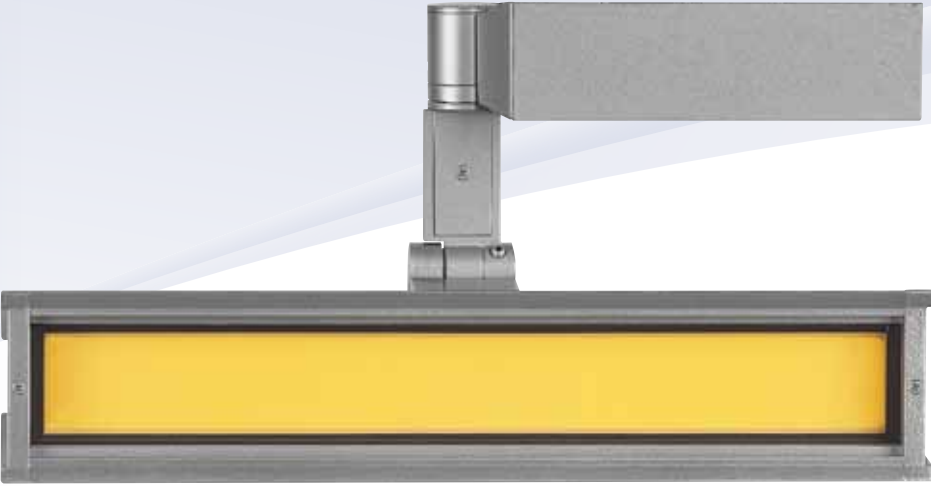
Alcyon LED accents provide higher efficiency than incandescent or halogen light sources leading to energy savings with no ultraviolet or infrared radiation. Accent luminaires provide concentrated light which dramatically draws interest to objects.

Key Features

- 20W, 1200* Nominal Lumens
- LED Board: Metal Core Printed Circuit board for efficient thermal management with 16 royal blue LEDs.
- Optical Assembly: Patented remote phosphor technology provides increased efficiency and color stability. Phosphor lens assembly positioned in front of LED array converts blue light to white and produces a wide even pattern of diffused light without bright spots created by individual LEDs. Uniform phosphor coating provides consistent, stable color with a shift of no more than +/- 100K over life. High reflectance material in optical chamber harnesses led light and redirects through phosphor with minimal losses.
- Integral Locking: Vertical and horizontal locking preserves original lighting design intent.
- Aiming Indicator: Allows a series of luminaires to be precisely set to the same aiming angle.

* +/- 5%

LLF SERIES



LLF SERIES

- Cover Lens**
Colorless Borosilicate glass protects optical chamber and LED surfaces from dust and other contaminants.
- Phosphor Lens**
Patented remote phosphor technology provides increased efficiency and color stability.
- Optical Chamber**
Harnesses LED light and redirects through phosphor with minimal losses.
- LED Board**
16 royal blue LEDs. Remote phosphor application minimizes performance variation.



LLFVZBK



LLFLVBK



LLFBD8K

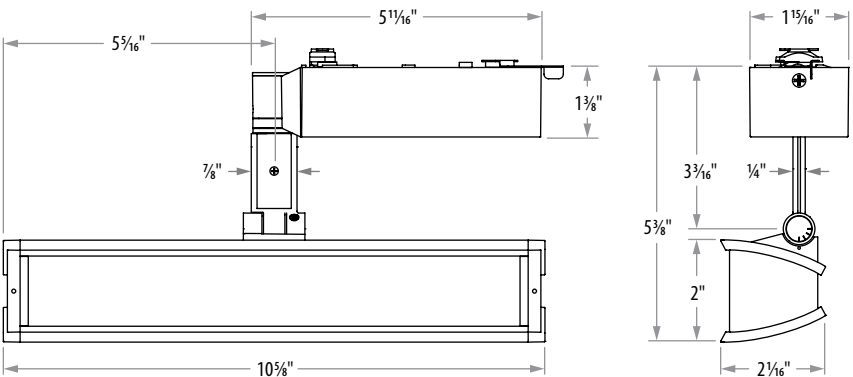
Alcyon LED Flood Accessories

Cat. No.	Finish	Description
LLFVZ	AL Aluminum	Track LED Flood Visor
	BK Black	
	WH White	
LLFLV	BK Black	Track LED Flood Vertical Blade Louver
	AL Aluminum	
LLFBD	BK Black	Track LED Flood Barn Door
	WH White	

Dimming: Use electronic ELV (electronic low voltage) type dimmer. Consult factory for dimming compatibility.

Alcyon LED Flood

Cat. No.	Finish	Color Temp
LLF27	AL Aluminum	2700K
	BK Black	
	WH White	
LLF30	AL Aluminum	3000K
	BK Black	
	WH White	
LLF35	AL Aluminum	3500K
	BK Black	
	WH White	
LLF40	AL Aluminum	4000K
	BK Black	
	WH White	



Key Features

- 17W, 700* Nominal Lumens
- Integrated Housing Heat Sink:
Die-cast aluminum maintains LED junction temperature for minimum 50,000 hr lifetime at 70% lumen maintenance.
- Optical Assembly: Interchangeable reflectors may be changed at any time to accommodate the lighting requirements of the space.
- Integral Locking: Vertical and horizontal locking preserves original lighting design intent.
- Aiming Indicator: Allows a series of luminaires to be precisely set to the same aiming angle.

* +/- 10% for 3000K



Alcyon LED Small Cylinder

Designed around the finest white LED's and thermally engineered for superior optical performance, the Alcyon LED Small Cylinder delivers light equal to most MR16 lamp sources. Available in a range of beam spreads for lighting flexibility and is dimmable.

Key Features

- 25W, 960* Nominal Lumens
- Integrated Housing Heat Sink:
Die-cast aluminum maintains LED junction temperature for minimum 50,000 hr lifetime at 70% lumen maintenance.
- Optical Assembly: Interchangeable reflectors may be changed at any time to accommodate the lighting requirements of the space.
- Integral Locking: Vertical and horizontal locking preserves original lighting design intent.
- Aiming Indicator: Allows a series of luminaires to be precisely set to the same aiming angle.

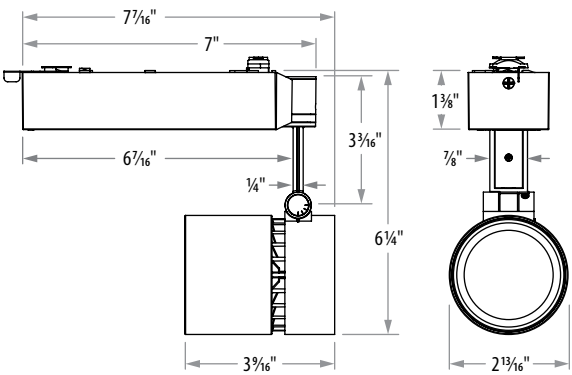
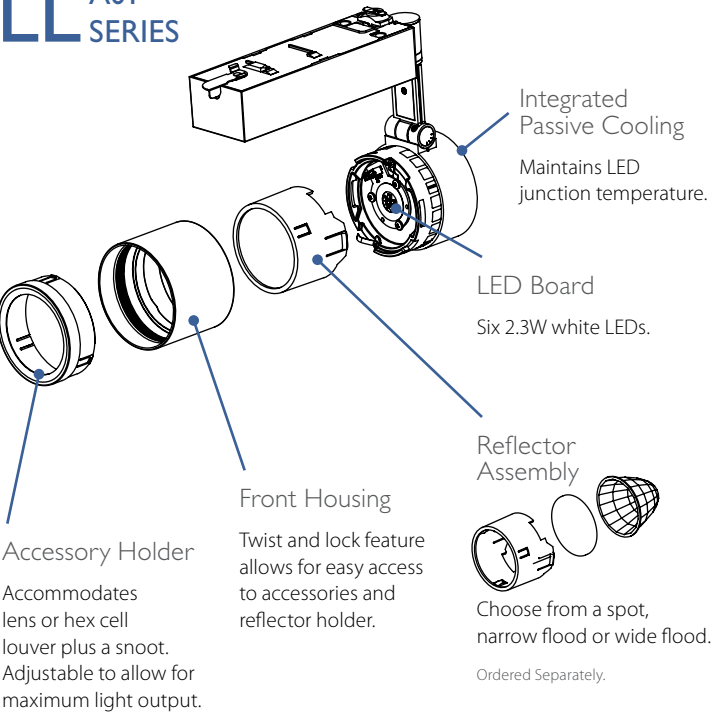
* +/- 10% for 3000K



Alcyon LED Medium Cylinder

Architecturally styled the Alcyon LED Medium Cylinder offers excellent beam control and aesthetics while providing high performance accent lighting for retail and commercial applications. Delivering lumens equivalent to many 20W T4 metal halide systems.

LL A01 SERIES



Fixture

Cat. No.	Description	
LLA01ND30	Non-Dimmable	3000K
LLA0130	Dimmable	
LLA01ND27	Non-Dimmable	2700K
LLA0127	Dimmable	

Add suffix for choice of finish; (BK) Black, (AL) Aluminum, and (WH) White.

Snoot

Cat. No.	Finish
LLA01SN	BK Black
	WH White

Accessory Holder

Cat. No.	Finish
LLA01AH	BK Black
	WH White

Reflector

Cat. No.	Description
RS	Spot Reflector
LLA01	RNF Narrow Flood Reflector
RF	Flood Reflector

Ordered Separately. Field Changeable.

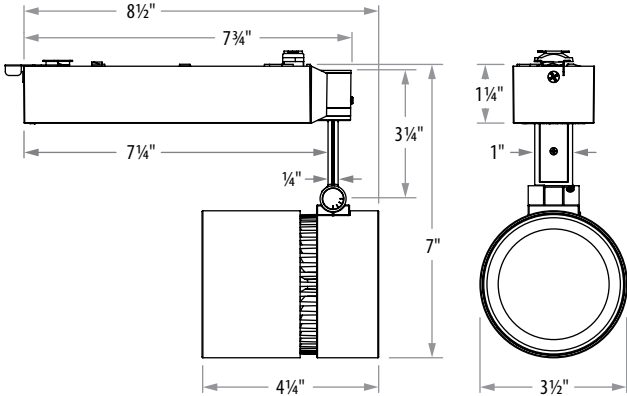
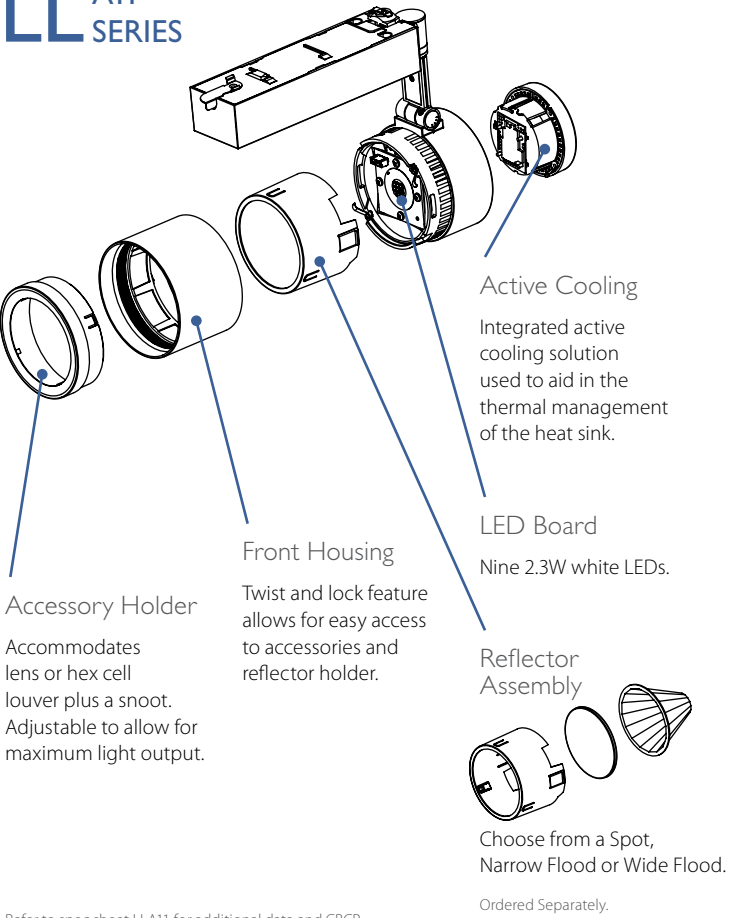
Louver

Cat. No.	Description
AL25HC	2.5" Diameter Hex Cell Louver

Diffusion/Special Filter

Cat. No.	Description
AF25 Series	2.5" Diameter

LL A11 SERIES



Fixture

Cat. No.	Description	
LLA11ND30	Non-Dimmable	3000K
LLA1130	Dimmable	
LLA11ND27	Non-Dimmable	2700K
LLA1127	Dimmable	

Add suffix for choice of finish; (BK) Black, (AL) Aluminum, and (WH) White.

Snoot

Cat. No.	Finish
LLA11SN	BK Black
	WH White

Accessory Holder

Cat. No.	Finish
LLA11AH	BK Black
	WH White

Reflector

Cat. No.	Description
RS	Spot Reflector
LLA11	RNF Narrow Flood Reflector
RF	Flood Reflector

Ordered Separately. Field Changeable.

Louver

Cat. No.	Description
LLAHCAT1	Track LED Louver

Diffusion/Special Filter

Cat. No.	Description
LLA11AF	PF Perimeter Frost
	SY Symmetrical Spread
	FR Frosted Etched Glass
	SF Solite Soft Focus

Refer to spec sheet LLA01 for additional data and CBCP.

Refer to spec sheet LLA11 for additional data and CBCP.

For complete specification information visit www.Lightolier.com/SolidState

Architectural Decorative Lighting

Lightolier's Architectural Decorative utilizes state-of-the-art LED technology.

Architectural Decorative luminaires are designed to complement the architecture of a space, with elegant lines and forms that add elements of light for visual interest, or when used repetitively as a rhythm of light. These products can create the ambiance of any interior space, however with today's energy concerns, efficiency is required to be built into each design.

With efficiency comes LED technology, which creates the soft glow and gentle sparkle expected from any architectural product, without a large amount of energy consumption. Great care has gone into designing each product to deliver consistent color at various CCTs and to integrate decorative elements into any ambient lighting system.

Beauty is not the only element designed into each luminaire. Thermal management is critical to every aspect of an LED system, and light output, life and color stability are all directly related to controlling a luminaire's operating temperature. By designing each decorative luminaire as an integrated system, utilizing LEDs, maintaining thermal control and aesthetic design, we can assure maximum heat dissipation for the life of the product, and achieve architectural ambiance and space enhancement.



Architect: Torchia Associates, Inc
Photograph: Padgett and Company

Lighting Architectural Decorative

Vetro Pendant 2 3/8" (Straight)



PS⁰¹
SERIES

Power Heads

Catalog No.	Source	Watts	CCT	Volts
PS01L275AU	LED	6W	27k	120V to 277V
PS01L305AU			30k	
PS01L355AU			35k	
PS01L405AU			40k	

Primary Diffuser

Cat. No.	Ht	Description	Compatibility
SG01L	10"	Inner Cylindrical Opal Glass	Required for all Glass options
SA01L		Inner Cylindrical Opal Acrylic	Required for all Acrylic options

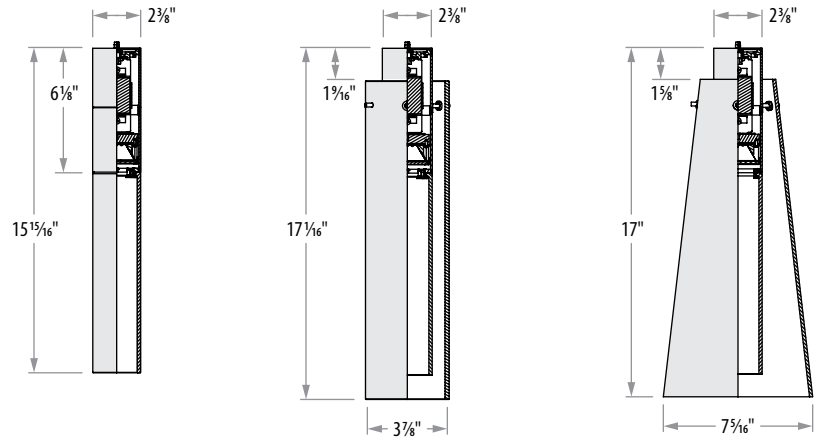
Secondary Glass

Cat. No.	Ht	Description	Compatibility
GLS01	15 1/2"	Outer Cylindrical Clear Glass	Optional for all
GLS02		Outer Conical Clear Glass	
GLS01A		Outer Cylindrical Clear Acrylic	

Suspension Kits

Cat. No.	Finish	Description
SK01	Satin Aluminum	Clear Metallic Straight Cord/Cable, 120" Length, (10') w/Canopy
SK02		Clear Metallic Straight Cord/Cable, 300" Length, (25') w/Canopy
ST01		36" Length 3/8" Stem w/Canopy
ST02		60" Length 3/8" Stem w/Canopy
CTC		Close to Ceiling Kit
TM01		Track Mounting Kit

Vetro PS Series Dimensions

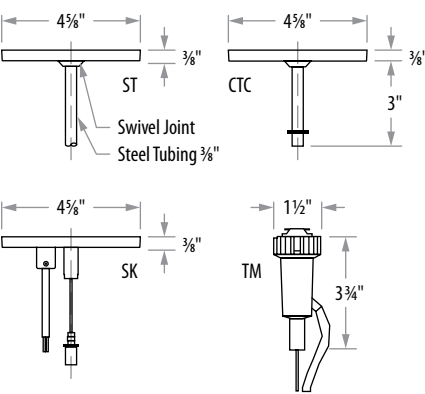


PS Power Head with SG01L Glass

PS Power Head with SG01L/GLS01 Glass

PS Power Head with SG01L/GLS02 Glass

Suspension Kit Dimensions



Note: Power Head, Primary Glass and Suspension Kit must be ordered to make complete Luminaire. Secondary Glass is optional.

Power Heads

Catalog No.	Source	Watts	CCT	Volts
PS01L27SAU	LED	6W	27k	120V to 277V
PS01L30SAU			30k	
PS01L35SAU			35k	
PS01L40SAU			40k	

Primary Glass

Cat. No.	Ht	Description	Compatibility
SG03L	9"	Inner Conical Opal Glass	Required for all

Secondary Glass

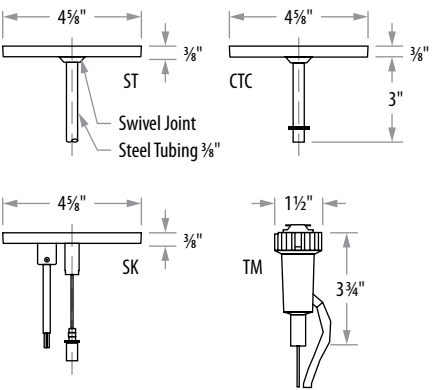
Cat. No.	Ht	Description	Compatibility
GLS02	15 1/2"	Outer Conical Clear Glass	Optional for all
GLS03		Outer Conical Clear/Sand Blasted Glass	

Suspension Kits

Cat. No.	Finish	Description
SK01	Satin Aluminum	Clear Metallic Straight Cord/Cable, 120" Length, (10') w/Canopy
SK02		Clear Metallic Straight Cord/Cable, 300" Length, (25') w/Canopy
ST01		36" Length 3/8" Stem w/Canopy
ST02		60" Length 3/8" Stem w/Canopy
CTC		Close to Ceiling Kit
TM01		Track Mounting Kit

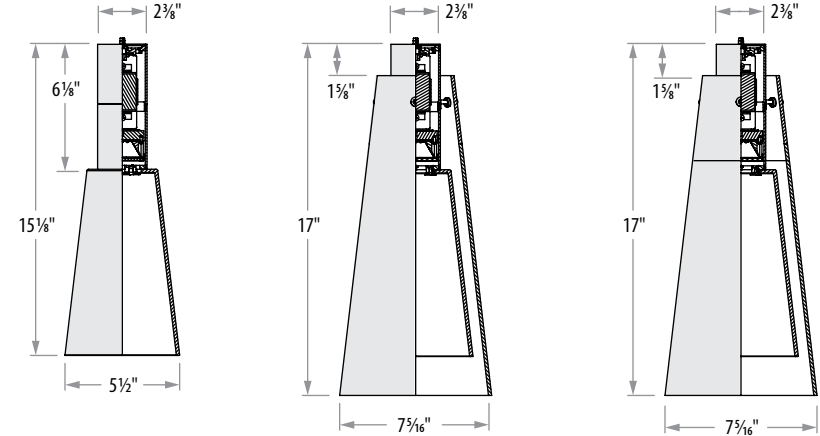
PS⁰¹ SERIES

Suspension Kit Dimensions



Note: Power Head, Primary Glass and Suspension Kit must be ordered to make complete Luminaire. Secondary Glass is optional.

Vetro PS Series Dimensions



PS Power Head with SG03L Glass

PS Power Head with SG03L/GLS02 Glass

PS Power Head with SG03L/GLS03 Glass



Lighting Designer: David Apfel

Vetro Pendant 4 ¾"

Power Heads

Cat. No.	Source	CCT	Volts
PM01L27SA1	10W LED	120V	120V to 277V
PM01L27SA2		27k	
PM01L30SA1		120V	
PM01L30SA2		30k	
PM01L35SA1		120V	
PM01L35SA2		35k	
PM01L40SA1	40k	120V	120V to 277V
PM01L40SA2		277V	

Cat. No.	Source	CCT	Volts
PM02L27SA1	20W LED	120V	120V to 277V
PM02L27SA2		27k	
PM02L30SA1		120V	
PM02L30SA2		30k	
PM02L35SA1		120V	
PM02L35SA2		35k	
PM02L40SA1	40k	120V	120V to 277V
PM02L40SA2		277V	

Primary Diffuser

Cat. No.	Width	Description	Compatibility
PG01	4 ¾"	Inner Opal Glass	Required for all Glass options
PA01		Inner Opal Acrylic	Required for all Acrylic options

Secondary Glass/Acrylics

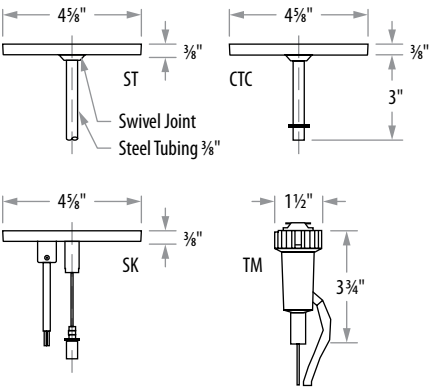
Cat. No.	Width	Description	Compatibility
GL01	7"	Outer Clear Glass	Optional for all
GL02	10 ¼"		
GL01A	7"	Outer Clear Acrylic	
GL02A	10 ¼"		

Suspension Kits

Cat. No.	Finish	Description
SK01	Satin Aluminum	Clear Metallic Straight Cord/Cable, 120" Length, (10') w/Canopy
SK02		Clear Metallic Straight Cord/Cable, 300" Length, (25') w/Canopy
ST01		36" Length ¾" Stem w/Canopy
ST02		60" Length ¾" Stem w/Canopy
CTC		Close to Ceiling Kit
TM01		Track Mounting Kit

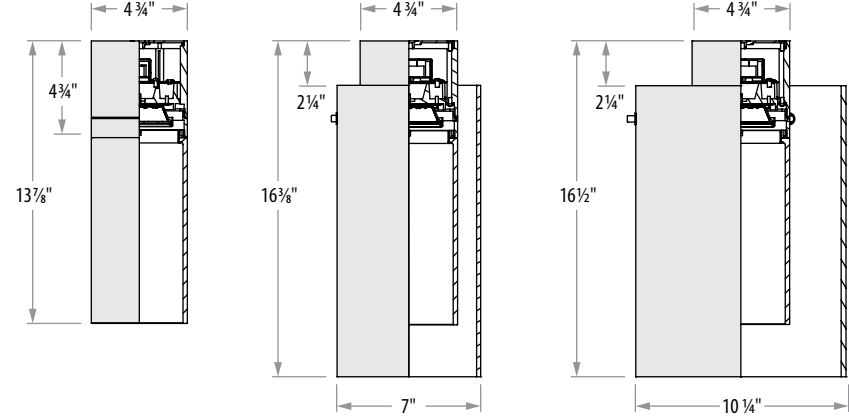
PM^{01&02} SERIES

Suspension Kit Dimensions



Note: Power Head, Primary Glass and Suspension Kit must be ordered to make complete Luminaire. Secondary Glass is optional.

Vetro PM Series Dimensions



PM Power Head with PG01 Glass PM Power Head with PG01/GL01 Glass PM Power Head with PG01/GL02 Glass

Vetro Wall Sconce

Power Heads

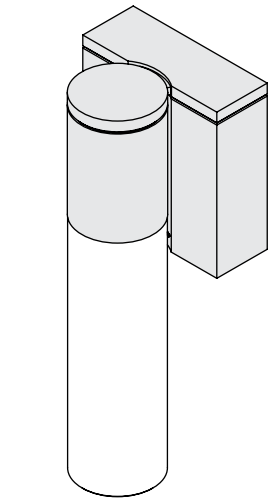
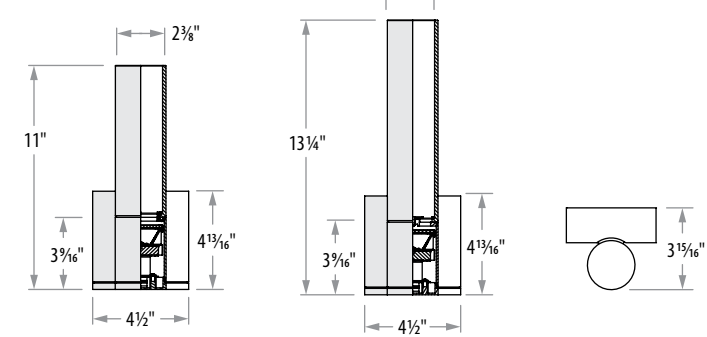
Catalog No.	Source	Watts	CCT	Volts
PW01L27SAU	LED	6W	27k	120V to 277V
PW01L30SAU			30k	
PW01L35SAU			35k	
PW01L40SAU			40k	

Primary Diffuser

Cat. No.	Ht	Description	Compatibility
SG01L	10"	Inner Opal Glass	Required for all Glass options
SG02L	8"		
SA01L	10"	Inner Opal Acrylic	Required for all Acrylic options
SA02L	8"		

PW⁰¹ SERIES

Vetro PW Series Dimensions



Note: Power Head and Primary Glass must be ordered to make complete luminaire.

4" Vetro Downlight

4" Vetro Decorative Accessory

- Order Calculite C4L05 or C4L10 Series Frame-In Kits and Flangeless Trims separately.



Nick Merrick © Hedrich Blessing 2009

6" & 7" Vetro Downlight

6" Vetro Decorative Accessory

- Order Calculite C6L Series Frame-In Kits and Flangeless Trims separately.

7" Vetro Decorative Accessory

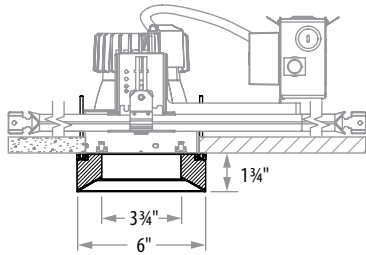
- 7" Vetro Decorative Accessories available (not shown).
- Order Calculite C7L Series Frame-In Kits and Flangeless Trims separately.
- Vetro Accessories are; D7A01, D7A02, D7A03, D7A04, D7A13, D7A14



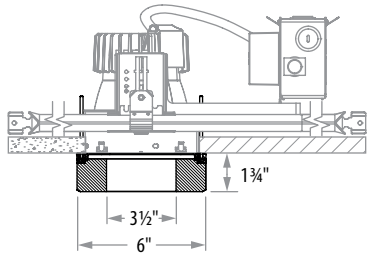
Nick Merrick © Hedrich Blessing 2009



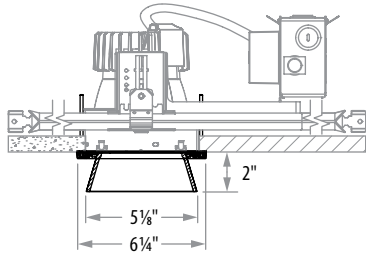
D4A01



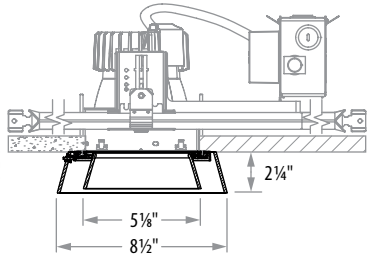
D4A02



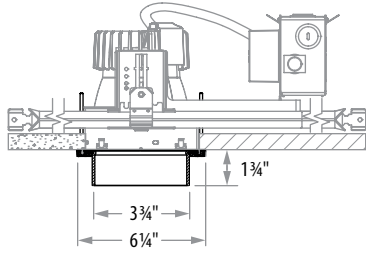
D4A03



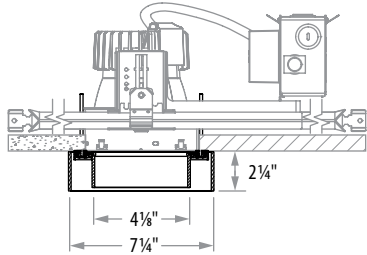
D4A13



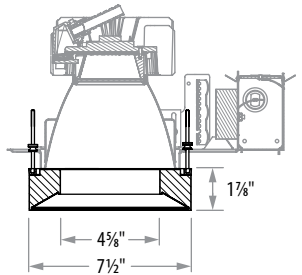
D4A04



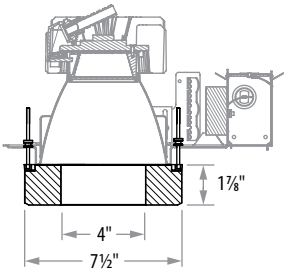
D4A14



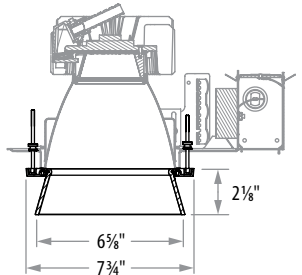
D6A01



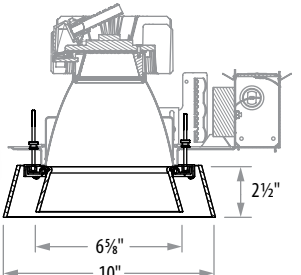
D6A02



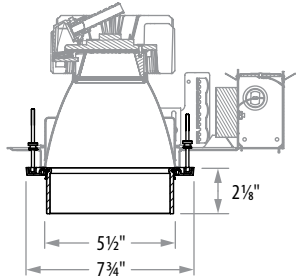
D6A03



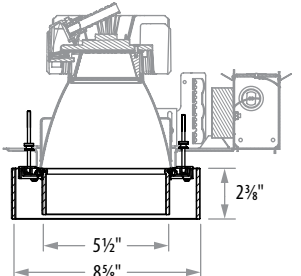
D6A13



D6A04



D6A14



9" Power Heads

Cat. No.	Source	Watts	CCT	Finish	Volts
40471L27U	LED	20W	27K	Grey	120V to 277V
40471L35U			35K		
40471L27UTM			27K	Titanium	
40471L35UTM			35K		

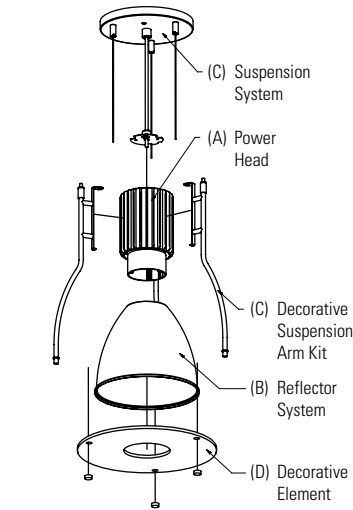
Add Power Head (listed above) to Reflector/Glass Diffuser and Suspension to make a complete luminaire. For deco assemblies shown below, visit www.Lightolier.com/SolidState.

9" Reflectors/Glass Diffusers

Cat. No.	Description
40411	Semi-Specular Anodized Reflector
40413	Satin and Anodized Reflector
409WH	White Glass Diffuser
409BL	Cobalt Blue Glass Diffuser
409AB	Amber Glass Diffuser

Suspension Kits

Cat. No.	Description	Finish
4045KG*	120" Length Cable/Cord & Coil Cord	Grey
4045KB		Black
404536	36" Length 5/8" Stem	Grey
404536B		Black



409WH/409DG/409DKTM
D 12", H 16 3/4"



409AB/409DG/409DKTM*
D 12", H 16 3/4"



409BL/409DG/409DKTM*
D 12", H 16 3/4"



40413/409DG/409DKTM*
D 12", H 16 3/4"

* Denotes decorative elements only, power head must be specified for complete fixture.



Cove

Concealed Color and Concealed White Lighting Systems are perfect for illuminating alcoves, accent areas, and other interior spaces.

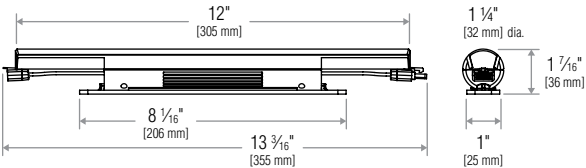
Concealed Color



Cat. No.	Finish	Length	Beam Angle	Volts
CCL12WF12	Charcoal Gray	12"	Wide Flood 120° x 120°	120V
CCL12NF12			Narrow Flood 100° x 40°	
CCL06WF12		6"	Wide Flood 120° x 120°	
CCL06NF12			Narrow Flood 100° x 40°	

Mounting Track	Quantity	Power Cord	Lead
CLMT2548	(25) 4ft mounting tracks	CCLPC360	360"

Power Supplies	Wattage	# of Ports	Volts	Jumper Cables	Lead
CCLP5602P	60W	2 Ports	120V	CCLJC12	12"
CCLP5608P		8 Ports		CCLJC60	60"



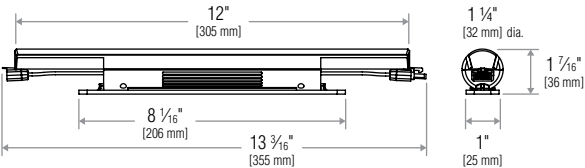
Concealed White



Cat. No.	Finish	Length	Color Temp	Volts
CWL281212	Charcoal Gray	12"	2800K	120V
CWL421212			4200K	
CWL280612		6"	2800K	
CWL420612			4200K	

Mounting Track	Quantity	Power Cord	Lead
CLMT2548	(25) 4ft mounting tracks	CWLPC120	120"

Jumper Cables	Lead
CWLJC12	12"
CWLJC60	60"



Step Lights

Step lights provide a clean and finished aesthetic for your contemporary design while providing functional pathway lighting.



Step Lights

Cat. No.	Style	Finish	Watts	Volts
DSL01W	Linear	Matte White	4W	120V to 240V
DSL01SA		Satin Aluminum		
DSR01W	Round	Matte White		
DSR01SA		Satin Aluminum		
DSS01W	Shielded	Matte White		
DSS01SA		Satin Aluminum		



Marker Lights

The gentle glow of the marker lights provides a subtle visual enhancement ideal for indicating a feature pathway.



Marker Lights

Cat. No.	Style	Finish	Watts	Volts
DML01W	Linear	Matte White	1W	120V to 240V
DML01SA		Satin Aluminum		
DMP01W	Pattern	Matte White		
DMP01SA		Satin Aluminum		
DMR01SA	Round	Satin Aluminum (center)		
DMS01	Square	Sandblasted Acrylic		



Linear

Shielded

Round

Linear

Pattern

Round

Square

Task Lighting

Innovative specification grade fixtures utilizing today's most energy efficient light sources.

LED Task Lighting provides low wattage solutions that enable individuals to place light where it is needed the most. With standards for design wattage ever decreasing, ambient light levels in offices have continued to decrease over the past decade.

Solutions such as the Halley portable Task light provide a generous amount of even illumination to be delivered into the workspace. The variety of LED Undercabinet solutions provide high footcandle levels to desk tops with ultra low profile solutions. The magnetic track and puck system provide a low profile flexible system for challenging design situations.

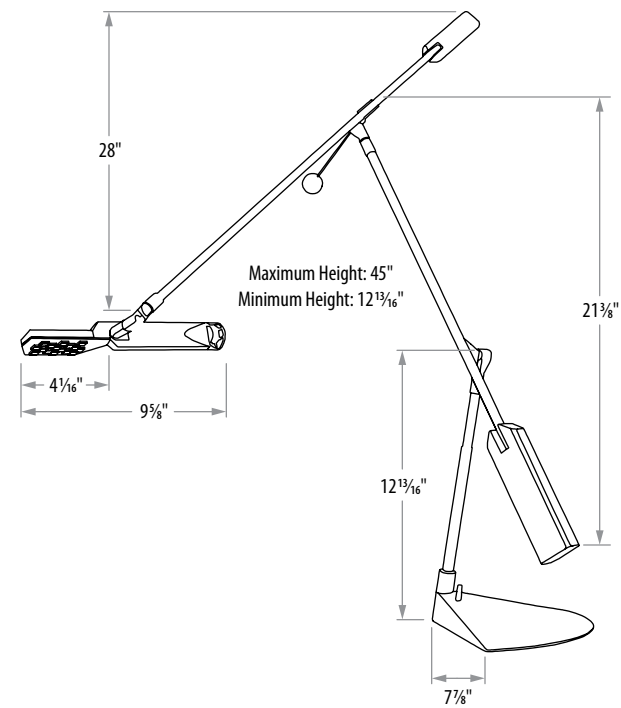
Thermal management is critical to every aspect of an LED system. Light output, life and color stability are all directly related to operating temperature. By designing the light engine as a fully enclosed, integrated system, maximum heat dissipation is ensured and the potential for field contamination has been eliminated. An integrated luminaire provides better thermal conduction throughout the entire luminaire, and therefore provides superior performance related to life, color stability, and light output.



Portable Task and Ambient Lighting Task Halley



Halley
Designer oriented LED portable task light that provides smooth even illumination at 15W maximum input power. Each unit has integral dimming capability and is fully adjustable for maximum user comfort including a rotating head that provides multidimensional shielding capabilities. Halley was designed by world renowned Industrial Designer Richard Sapper.



Cat. No.	Finish	Description	Volts
LL-HDBK	Black	LED Desk Lamp	120V
LL-HDSL	Silver		
LL-HFBK	Black	LED Floor Lamp	
LL-HFSL	Silver		NA
LL-HFBKB	Black	LED Floor Lamp Base	

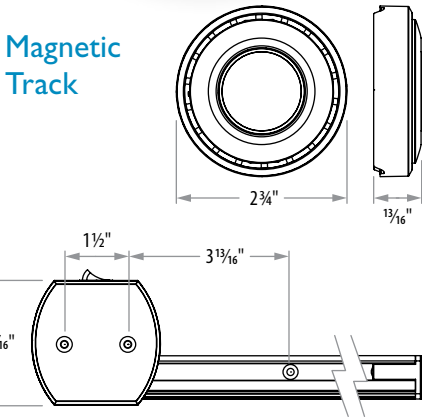
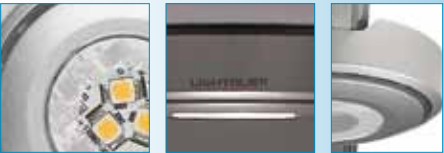
Low Profile

Fully self-contained 18W system with LED board, power supply and drivers in a package only 3/4" deep. Dimmable with standard 0-10V controls.



Magnetic Track

The innovative Magnetic Track System utilizes interchangeable light modules with a smooth, wide distribution. This extremely flexible system allows changing the location, distribution and intensity of the light as the modules can easily be moved, added, or removed.



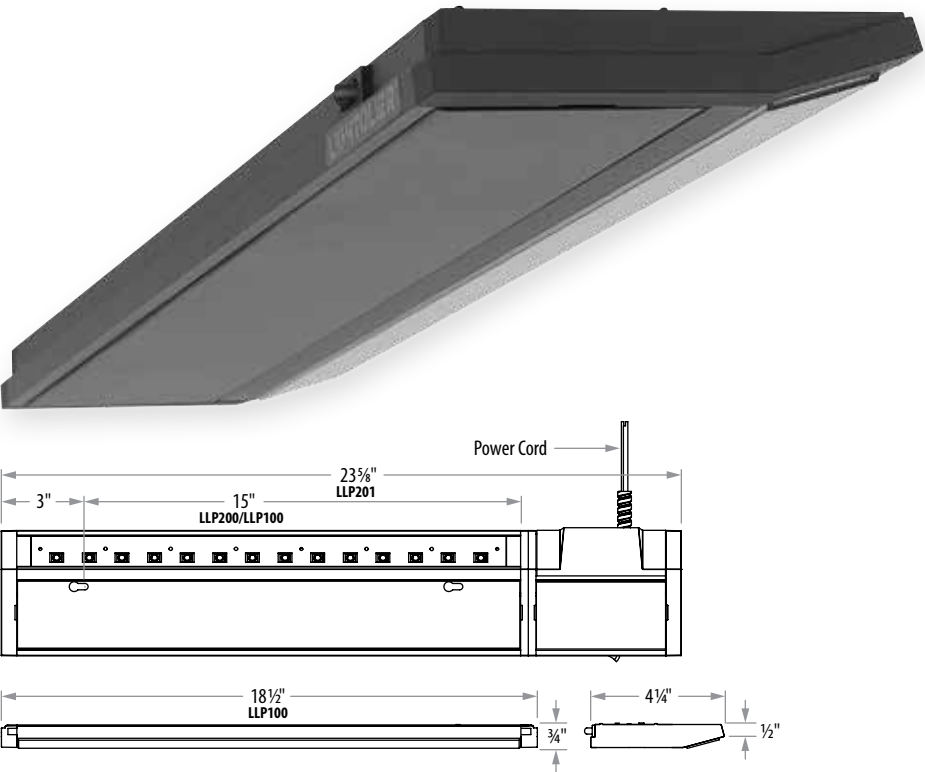
Low Profile

Hardwire

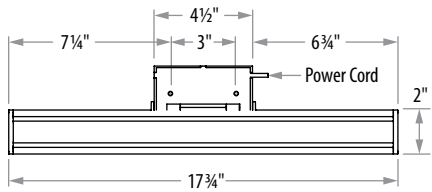
Cat. No.	Finish	Watts	Volts
LLP200WH	White Joiner	18W (23W max.)	120V
LLP200BK	Black Joiner		
LLP201WH	White Power Unit	18W (23W max.)	120V
LLP201BK	Black Power Unit		

Cord and Plug

Cat. No.	Finish	Watts	Volts
LLP100AL	Matte Aluminum	18W (23W max.)	120V
LLP100BK	Matte Black		



Adjustable

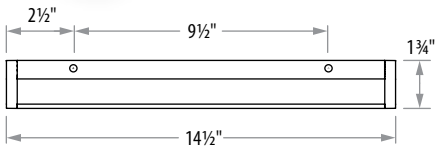


Adjustable

Cat. No.	Finish	Watts	Volts
ADJ100AL*	Matte Aluminum	18W (23W max.)	24V DC
ADJ100BK*	Matte Black		
LED-RPS-50	Matte Black (Remote Power Supply)	50W	120V

* Remote power supply required, see specification sheet for details.

Micro



Micro

Cat. No.	Finish	Watts	Volts
MIC100AL*	Matte Aluminum	10W	24V DC
MIC100BK*	Matte Black		
LED-RPS-50	Matte Black (Remote Power Supply)	50W max.	120V

Magnetic Track

Magnetic Track

Cat. No.	Finish	Description	Watts	Volts
CS100AL*	Matte Alum.	5' Track with switch	NA	24V DC
CS101AL*	Matte Alum.	Magnetic light module	4W	24V DC
LED-RPS-50	Matte Black	Remote Power Supply	50W max.	120V

Recessed Lighting

Providing illumination virtually indistinguishable from traditional technologies while consuming less energy.

The Philips Lightolier LED Recessed luminaire , designed specifically around the LED light source, sets a new standard for lighting efficiency, performance and sustainability.

With our versatile offering of both contemporary and classical shielding appearances, lighting designers and architects have the ability to utilize a LED light source in any environment.

Our LED product families, provide an ideal energy saving fixture for all 2'x2' recessed T-bar grid and drywall applications.



Construction

- Field replaceable LED array accessible from below.
- Integrated thermal management system conducts heat away from LEDs and transfers it to the surrounding environment. Designed to keep LEDs below specified maximum temperatures in typical commercial installations.
- Depth = 5"

Electrical System

- Integral, high efficiency driver and power supply.
- Nominal Power Factor = 0.9
- Input voltage = 120V - 277V, 50/60Hz



LED Facts

LEDs have no breakable glass, their solid-state design renders them impervious to shock, vibration, frequent switching and environmental extremes. With an average lifespan of more than 50,000 hours, these maintenance-free LED luminaires eliminate repeated relamping, and operate in ambient room temperatures of -22°F to +104°F [-30°C to +40°C].



LEDs contain no toxic materials, hazardous mercury, or halogen gases. LEDs emit no ultraviolet (UV) rays or infrared (IR) radiation. LEDs do not require a Material Safety Data Sheet (MSDS) or hazardous waste disposal. LEDs do not produce electro-magnetic interference.

Opalescent



Delivered Lumens: 3549
Efficacy: 61.5 Lm/W
Footcandles p/sq*: 45.4
Color Temp: 4200k
CRI: 86
Input Watts: 57.7

Catalog Number: OPS2GW8802UNVL59

Opalescent's 2-1/2" regressed frame with contoured lens, made of a high light transmission frost white acrylic, creates a bold but simple appearance that will blend with any architectural environment.

Skyway



Delivered Lumens: 3274
Efficacy: 56.7 Lm/W
Footcandles p/sq*: 42.4
Color Temp: 4200k
CRI: 86
Input Watts: 57.7

Catalog Number: SKS2GPK8802UNVL59

Skyway's aesthetically pleasing triple lens design features a clear conical prismatic center lens, enhanced by softly curved frost white acrylic lenses on each side, mounted in a regressed extruded aluminum frame with spring loaded latches.

Specplus RA



Delivered Lumens: 3497
Efficacy: 60.6 Lm/W
Footcandles p/sq*: 45.8
Color Temp: 4200k
CRI: 86
Input Watts: 57.7

Catalog Number: SPS2GRAKA8802UNVL59

Specplus RA offers a 1/2" regressed extruded aluminum frame with spring loaded latches. The 9/16" wide frame trim gives a 500 square inch aperture. The lens is extruded acrylic, square base male conical prism of .156" overall thickness. Providing excellent obscuration of the light source while controlling volumetric illumination.

Specplus FA



Delivered Lumens: 3497
Efficacy: 60.6 Lm/W
Footcandles p/sq*: 45.8
Color Temp: 4200k
CRI: 86
Input Watts: 57.7

Catalog Number: SPS2GFAKA8802UNVL59

Specplus FA is flat extruded aluminum frame with spring loaded latches. The 9/16" wide frame trim gives a 500 square inch aperture. The lens is extruded acrylic, square base male conical prism of .156" overall thickness. Providing excellent obscuration of the light source while controlling volumetric illumination.

* 42 Recessed LED Luminaires in a 60' X 56' X 9' room with a reflectance of 80/50/20, placed 8' X 10' on center. Footcandle readings are taken 2 1/2' from floor level.

Exit and Emergency Lighting

A complete line of advanced architectural, commercial and industrial emergency lighting products and exit signs to meet all of your life safety needs.

Lightolier Safety Lighting Systems continues to provide the largest selection of exit signs, commercial and industrial emergency lighting products available. We intelligently research, develop and release new, innovative products that utilize the latest technologies in LEDs, environmentally friendly batteries and technically advanced microprocessors and electronics.



Exit and Emergency Lighting **Safety** Architectural Egress & Ambient



Radiante Series

Radiante is a state-of-the-art architectural emergency light that is ideal for upscale interiors. Choose from a wide variety of decorative finishes, and benefit from the high-output white LEDs.

Ordering Information

RD	
Model/Series	Housing Finish
RD = Radiante Architectural Emergency Fixture	A = Aluminum
	W = White
	B = Black
	G = Gunmetal
	BR = Ornamental Bronze
	AC = Aged Copper
	VG = Velvet Green
	N = Nickel
	GA = Granite
Consult factory for other colors.	

Options

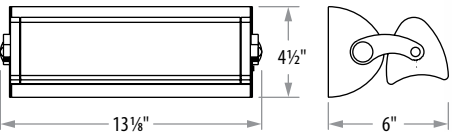
Cat. No.	Description
TP	Tamperproof ¹
DL	Damp Location: 50°F (10°C) to 104°F (40°C)

Accessories

Cat. No.	Description
IRemote	Infrared Remote Control

Notes

1. TP option includes tamperproof screws and kit for installation.



Illumination

Provided by two 5 watt, white LEDs and a specular Miro 4 (Alanod) aluminum reflector. The lamp head assembly may be rotated in five-degree increments over a range of 60 degrees for ideal distribution along the egress path. Radiante will provide one footcandle average illumination over a 44' long path of egress. IES photometric data files are available.

Housing

Constructed of robust die cast and extruded aluminum. A full range of pleasing architecturally inspired finishes are available.

Electronics

120/277 VAC dual voltage input with surge-protected, LED circuitry. Charging system is complete with low voltage disconnect, AC lockout, brownout protection, AC indicator lamp and test switch.

Battery

Maintenance-free, sealed, nickel metal hydride battery has an estimated service life of 10 years, and an operating temperature range of 65°F (19°C) to 85°F (30°C).

Input Power Requirements

120 VAC - 0.09 amps
277 VAC - 0.03 amps

Self-Diagnostics

Standard self-diagnostic electronics perform an automatic one minute test of emergency operation every 30 days and a similar 30 minute test every 180 days. This test verifies fixture activation, battery capacity and lamp operation. User may initiate a one minute or 90 minute test manually using the test switch or available infrared remote.

Code Compliance

UL 924 listed, Optional UL damp location listing.

Warranty

Three year full electronics warranty.
Five year full plus five year pro-rated NiMH battery warranty.

Ordering Information

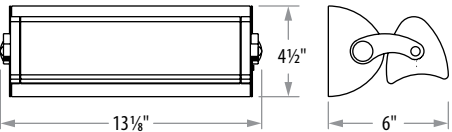
RDNO	
Model/Series	Housing Finish
RDNO = Radiante Normally On	A = Aluminum
	W = White
	B = Black
	G = Gunmetal
	BR = Ornamental Bronze
	AC = Aged Copper
	VG = Velvet Green
	N = Nickel
	GA = Granite

Options

Cat. No.	Description
2CKT1	120VAC Two Circuit
2CKT2	277VAC Two Circuit
TP	Tamperproof ¹
DL	Damp Location

Notes

1. TP option includes tamperproof screws and kit for installation.



Radiante Normally On Series

Radiante Normally On fixture expands on the original Radiante product offering. Less battery and using comfortable 3W LED lamps, Radiante Normally On is ideal for ambient and wall washing applications.

Illumination

Illumination is provided by two 3 watt white LEDs and a specular Miro 4 (Alanod) aluminum reflector. The lamp head assembly may be rotated in five-degree increments over a range of 60 degrees for ideal illumination distribution.

Housing

Housing construction is of both cast and extruded aluminum. The unit is available in multiple colors and finishes. Wall mounts to a single gang or 3-1/2" octagonal junction box.

Installation

Unit shall be easily field connected to a 120 or 277 VAC, 60 hertz, power source. Installation must comply with the NEC as well as other applicable codes.

Electronics

120/277 VAC dual voltage input.

Input Power Requirements

120 VAC - 0.05 amps
277 VAC - 0.02 amps

Code Compliance

UL 924 and 1598; UL damp location listing optional NEC, BOCA and OSHA illumination standard.

Warranty

Three year full electronics warranty.



Surf Wall Series

Surf Wall is a low-level LED lighting luminaire that is suitable for indoor and outdoor wet location applications. Surf Wall can be surface or semi-recessed mounted and has an optional concrete pour backbox which allows for unlimited installations. An optional integrated battery provides emergency operation for applications requiring low-level egress lighting.

Ordering Information

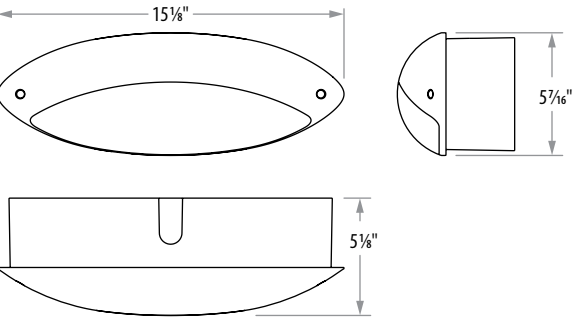
SURF	W			
Model/Series	Mounting	Battery	Housing Finish	Model Designator
SURF = SURF Series White LED Luminaire	W = Wall Mount	A = AC only	A = Aluminum	SD2 = Self Diagnostics
		N = Nickel Metal Hydride Battery	W = White	
			B = Black	
			G = Gunmetal	
			BR = Ornamental Bronze	
			AC = Aged Copper	
			VG = Velvet Green	
			N = Nickel	
			GA = Granite	

Options

Cat. No.	Description
2CKT1	Two circuit 120/120 VAC (AC-only models)
2CKT2	Two circuit 277/277 VAC (AC-only models)
DC	Universal 12-48 VDC input (AC-only models)
EX	Special input transformer (specify voltage & frequency)
T	Self-testing Diagnostics
TA	Audible self-testing diagnostics
HR	Heater option for -40°C
TP	Tamper proof hardware

Accessories

Cat. No.	Description
SDREMOTE	Infrared remote test device



Illumination

Provided by four 3-watt, white 6000K LED's, illumination is further enhanced with a metallized reflector.

Housing

Universal wall mount (surface or recessed) luminaire is constructed of die-cast aluminum with nine available standard decorative finishes. Small, compact design is ideal for normal, ambient and egress lighting applications.

Electronics

120/277 VAC dual voltage input with surge-protected, LED circuitry. Charging system is complete with low voltage disconnect, AC lockout, brownout protection, AC indicator lamp and test switch.

Battery

Maintenance-free, sealed, non-toxic nickel metal hydride battery has an estimated service life of 10 years.

Input Power Requirements

120/277 VAC, 60 HZ, .198/.088 amps max.

Self-Diagnostics

The Self-Diagnostics2 microprocessor has command of all critical circuit functions and operations including charger monitor circuit, battery monitoring circuit, LED/light engine monitoring, transfer circuit monitoring and over/under voltage monitoring.

Operating Temperature Range (self-powered)

32°F (0°C) to 104°F (40°C)
-40°F (-40°C) to 104°C (40°C)
AC Only and Self-powered w/heater option

Warranty

Three year full electronics warranty.
Five year full plus five year pro-rated NiMH battery warranty.

Code Compliance

UL 924 and 1598; Wet location listed.

Ordering Information

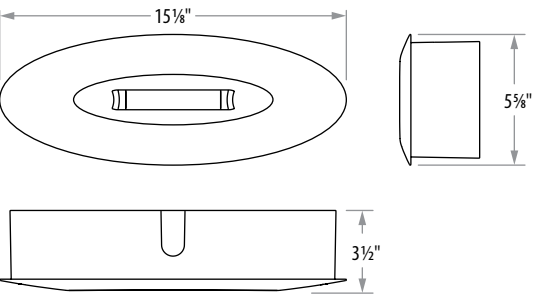
SURF				
Model/Series	Mounting	Battery	Housing Finish	Model Designator
SURF = SURF Series White LED Luminaire	C = Ceiling Mount (Recessed and Surface)	A = AC only N = Nickel Metal Hydride Battery	A = Aluminum	SD2 = Self Diagnostics
			W = White	
			B = Black	
			G = Gunmetal	
			BR = Ornamental Bronze	
			AC = Aged Copper	
			VG = Velvet Green	
			N = Nickel	
			GA = Granite	

Options

Cat. No.	Description
2CKT1	Two circuit 120/120 VAC (AC-only models)
2CKT2	Two circuit 277/277 VAC (AC-only models)
DC	Universal 12-48 VDC input (AC-only models)
EX	Special input transformer (specify voltage & frequency)
T	Self-testing diagnostics
TA	Audible self-testing diagnostics

Accessories

Cat. No.	Description
SDREMOTE	Infrared remote test device



Illumination

Provided by four 3-watt, white 6000K LED's, illumination is further enhanced with a metallized reflector.

Housing

Universal ceiling mount (surface or recessed) luminaire is constructed of die-cast aluminum with nine available standard decorative finishes. Small, compact design is ideal for normal, ambient and egress lighting applications.

Electronics

120/277 VAC dual voltage input with surge-protected, LED circuitry. Charging system is complete with low voltage disconnect, AC lockout, brownout protection, AC indicator lamp and test switch.

Battery

Maintenance-free, sealed, non-toxic nickel metal hydride battery has an estimated service life of 10 years.

Input Power Requirements

120/277 VAC, 60 HZ, .198/.088 amps max.

Self-Diagnostics

The Self-Diagnostics2 microprocessor has command of all critical circuit functions and operations including charger monitor circuit, battery monitoring circuit, LED/light engine monitoring, transfer circuit monitoring and over/under voltage monitoring.

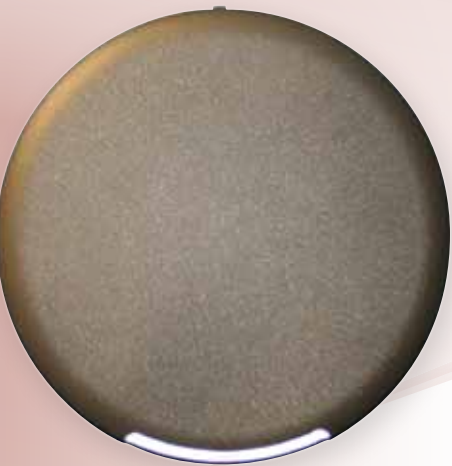


Surf Ceiling Series

Surf series is a sleek and compact ceiling mount luminaire that utilizes state-of-the-art componentry; LED's, NiMH battery and a technologically advanced microprocessor. Versatile ceiling mount, both recessed and surface allows for non-obtrusive installations for the most discernible applications in both normal AC operation and optional battery back-up.

Safety Exit and Emergency Lighting

Wall Sconce



Harmony Series

Harmony series is a LED wall sconce available for normal ambient and/ or egress lighting applications. Simple clean design and robust construction allows for both interior and exterior applications.

Ordering Information

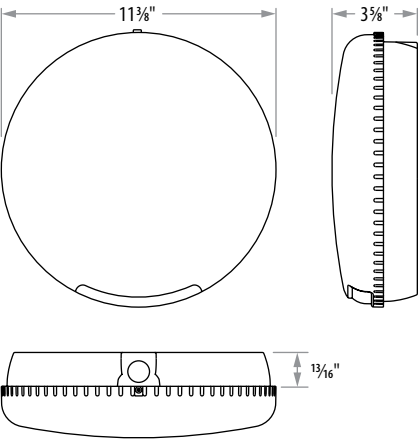
H			
Model/Series	Battery Type	Housing Finish	Model Designator
H = Harmony LED Fixture NiMH battery	A = AC Only N = Self-Powered	A = Aluminum	SD2 = Self Diagnostics
		W = White	
		B = Black	
		G = Gunmetal	
		BR = Ornamental Bronze	
		AC = Aged Copper	
		VG = Velvet Green	
		N = Nickel	
		GA = Granite	

Options

Cat. No.	Description
2CKT1	Two circuit 120/120 VAC (AC-only models)
2CKT2	Two circuit 277/277 VAC (AC-only models)
DC	Universal 12-48 VDC input (AC-only models)
EX	Special Input Transformer (specify voltage & frequency)
HR	Heater option for -40°C to 40° C ambient
T	Self-testing Diagnostics
TA	Audible self-testing diagnostics

Accessories

Cat. No.	Description
SDREMOTE	Infrared remote test device



- Illumination**
Provided by four 3-watt, white 6000K LED's, illumination is further enhanced with a metallized reflector.
- Housing**
Constructed of die-cast aluminum with nine available standard decorative finishes, Harmony series blends well into interior and exterior spaces.
- Electronics**
120/277 VAC dual voltage input with surge-protected, LED circuitry. Charging system is complete with low voltage disconnect, AC lockout, brownout protection, AC indicator lamp and test switch.

- Battery**
Maintenance-free, sealed, non-toxic nickel metal hydride battery has an estimated service life of 10 years.
- Input Power Requirements**
120/277 VAC, 60 HZ, .198/.088 amps max.
- Self-Diagnostics**
The Self-Diagnostics2 microprocessor has command of all critical circuit functions and operations including charger monitor circuit, battery monitoring circuit, LED/light engine monitoring, transfer circuit monitoring and over/under voltage monitoring.

- Operating Temperature Range**
Wet Location: 32°F (0°C) to 104°F (40°C)
Wet Location with Heater: -40°F (-40°C) to 104°F (40°C)
- Warranty**
Three year full electronics warranty.
Five year full plus five year pro-rated NiMH battery warranty.
- Code Compliance**
UL 924 and 1598; UL wet location listed.
Meets ADA specifications for wall mounted lighting fixtures.

Exit and Emergency Lighting Safety

Steplight

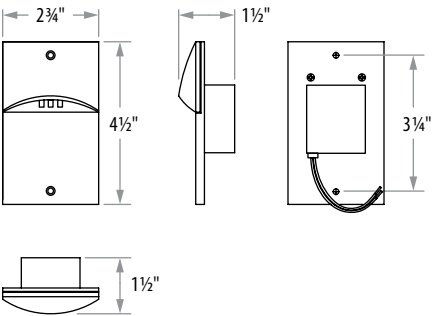


LP Series

The LP Series is designed to support low-level illumination of stairwells, step landings, wheelchair ramps and exit corridors. Optional emergency back-up can be provided by C3 Series or LM mini-inverters.

Ordering Information

LP			
Model/Series	Input Voltage	Lens Color	Housing Finish
LP = Low-Level Lighting Fixture	1 = 12V AC, DC	S = Satin/Frosted Acrylic	IV = Ivory
	2 = 120V AC		WH = White
			BK = Black



- Illumination**
The LP Series LED engine utilizes three high performance white (3500K) LEDs combined with a LED integral driver circuit. Incorporates a user selectable, three level intensity control.
- Housing**
Assembled from premium die cast aluminum components and is painted in a durable powder coat finish. Standard finishes include black, white and ivory with custom finishes optional. Assembled as a one-piece device that includes the LED light engine, integral power supply, three level intensity control and a single gang junction box mounting plate. All LED and electrical components are protected by both a polycarbonate lens and high impact power supply case that will be located within the junction box.
- Electronics**
Designed with all LED components and is rated for 10 years of continuous "normally on" use. Standard product incorporates dip switches on rear of product allowing three levels of intensity.
- Electrical Specifications**
12 VDC input - 0.47 amps
12 VAC input - 0.72 amps
120 VAC input - 0.09 amps

- Operating Temperature Range**
-40°F (-40°C) to 122°C (50°C)
- Code Compliance**
UL 1598 listed. NFPA, BOCA and OSHA illumination standards. Meets ADA specifications for wall mounted lighting fixtures. UL wet location listed.
- Warranty**
Electronics: 5 years full



EX Series

The EX Series Edge-Lit LED exit features state of-the-art technology and innovative styling.

Ordering Information

Model/Series	No. of Faces	Letter Color	Chevron Direction	Mounting Type	Panel Color	Battery Type
EX	1 = Single 2 = Double	R = Red G = Green	3 = No Chevron 4 = Right ³ 5 = Left ³ 6 = Double 7 = Left & Right ²	RC = Recessed Ceiling ⁴ SC = Surface Ceiling W = Wall ³ E = End	C = Clear W = White M = Mirrored	N = NiMH Blank = AC only

Accessories

Cat. No.	Description
IRemote	Infrared Remote Control ⁵
SL-kit	Bar Hanger Kit
EX-BBKIT	Back Box Kit ⁴

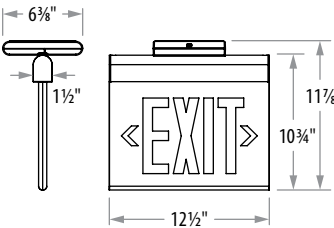
Options

Cat. No.	Description
I	Infrared Remote Sensor ¹
F	Flashing Emergency
Z	Audible Emergency
FA	24 VDC Fire Alarm Interface
WH	White Face Plate or Housing
BK	Black Face Plate or Housing
SL-kit	Bar Hanger Kit for Recessed Ceiling Mount
2CKT1	120 VAC Two Circuit
2CKT2	277 VAC Two Circuit
X	Less Back Box ⁴

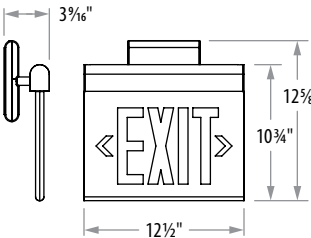
Notes

- For use with remote control which is ordered separately. Item number: IRemote.
- Double face signs only.
- Single face signs only.
- Recessed backbox available for immediate installation. Order part # EX-BBKIT for backbox only. When ordering balance of exit after backbox shipped prior, add "X" to the end of exit part # to signify electronics and panels, no backbox.
- Infrared Remote Sensor (I) option must be ordered with unit to be compatible with IRemote.

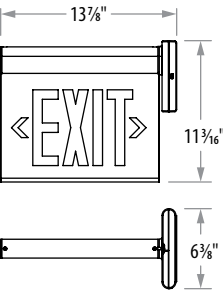
Surface Ceiling (SC)
No Backbox



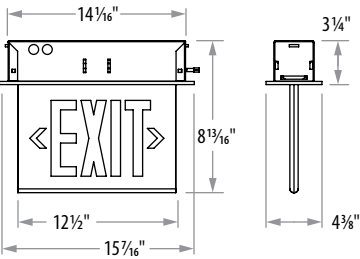
Wall (W)
No Backbox



End (E)
No Backbox



Recessed Ceiling (RC)
Backbox included)



Ordering Information

Model/Series	No. of Faces	Letter Color	Mounting Type	Housing Finish	Battery Type
DX	1 = Single 2 = Double	R = Red G = Green	C = Ceiling/End W = Wall ³	A = Brushed Aluminum W = White B = Black	N = NiMH Blank = AC only

Accessories

Cat. No.	Description
IRemote	Infrared Remote Control ⁵

Options

Cat. No.	Description
I	Infrared Remote Sensor ¹
F	Flashing Emergency
Z	Audible Emergency
FA	24 VDC Fire Alarm Interface
2CKT1	120 VAC Two Circuit
2CKT2	277 VAC Two Circuit

Notes

- For use with remote control which is ordered separately. Item number: IRemote.
- Infrared Remote Sensor (I) option must be ordered with unit to be compatible with IRemote.
- Single face signs only.



DX Series

The DX Series is an upscale Die Cast aluminum LED exit which offers technologically advanced characteristics in a thin profile that is just 0.65" thick.

Illumination

Illumination is accomplished with high output LEDs. Proprietary injection/compression molded acrylic lens provides higher light output and even illumination.

Housing

The EX Series is available in both recessed and surface mounted versions. The recessed mounted sign utilizes a 20 gauge galvanized steel backbox and brushed aluminum (standard) faceplate. The surface mounted version contains the electronics in a low profile brushed aluminum (standard) housing.

Standard Self-Testing/Self-Diagnostics

Unit runs an internal test every 5 seconds for secondary voltage, charge current, battery voltage, and LED illumination. Performs automatic 1 minute discharge test every 30 days and 30 minute discharge test every 180 days.

Electronics

120/277 VAC dual voltage input. Microprocessor controlled charge, transfer and monitoring system. Charging system is complete with low voltage disconnect, AC lockout, and brownout protection. Self powered units include an AC indicator/systems status lamp and manual test switch.

Battery

Maintenance free, sealed nickel metal hydride battery with 10 year life and an operating temperature between 14°F (-10°C) and 113°F (45°C). NiMH battery is a non-toxic, environmentally friendly product which is recyclable.

Input Power Requirements

AC Only	Emergency Operation
Red: 2.28W Green: 2.40W	Red: 3.51W Green: 2.58W

Code Compliance

UL 924 Listed, NFPA 101

Warranty

Electronics: 3 years
Battery: 5 yrs full, 5 yrs pro-rata

Illumination

Illumination is accomplished with high output LEDs. Proprietary internal molded-acrylic panel (thickness: 0.45") for even illumination.

Housing

Die cast aluminum construction with NFPA-type field selectable chevrons. Available in brushed aluminum, white, and black.

Standard Self-Testing/Self-Diagnostics

Unit runs an internal test every 5 seconds for secondary voltage, charge current, battery voltage, and LED illumination. Performs automatic 1 minute discharge test every 30 days and 30 minute discharge test every 180 days.

Electronics

120/277 VAC dual voltage input. Microprocessor controlled charge, transfer and monitoring system. Charging system is complete with low voltage disconnect, AC lockout, and brownout protection. Self powered units include an AC indicator/systems status lamp and manual test switch.

Battery

Maintenance free, sealed nickel metal hydride battery with 10 year life and an operating temperature between 14°F (-10°C) and 113°F (45°C). NiMH battery is a non-toxic, environmentally friendly product which is recyclable.

Input Power Requirements

AC Only	Emergency Operation
Red: 1.29W Green: 2.20W	Red: 3.16W Green: 3.00W

Code Compliance

UL 924 Listed, NFPA 101

Warranty

Electronics: 3 years
Battery: 5 yrs full, 5 yrs pro-rata



TX Series

The TX Series is an upscale thermoplastic LED exit which offers technologically advanced characteristics in a thin profile that is just 0.65" thick.

Ordering Information

TX					
Model/Series	No. of Faces	Letter Color	Mounting Type	Housing Finish	Battery Type
TX	1 = Single	R = Red	C = Ceiling/End	W = White	N = NiMH
	2 = Double	G = Green	W = Wall ³	B = Black	Blank = AC only

Accessories

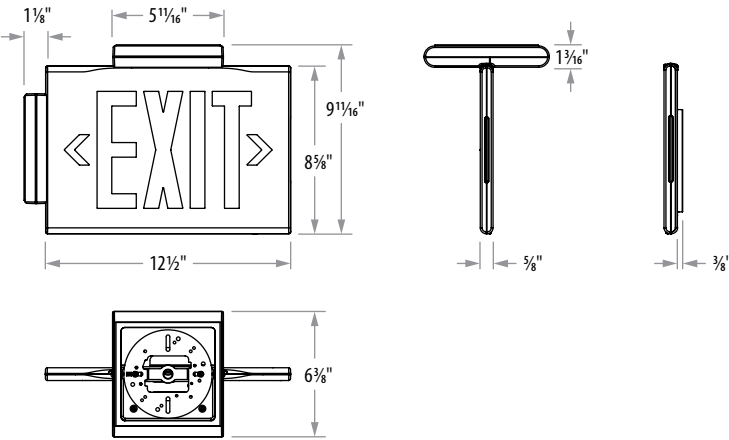
Cat. No.	Description
IRemote	Infrared Remote Control ²

Options

Cat. No.	Description
I	Infrared Remote Sensor ¹
FA	Flashing Emergency
Z	Audible Emergency
X	24 VDC Fire Alarm Interface
2CKT1	120 VAC Two Circuit
2CKT2	277 VAC Two Circuit

Notes

- For use with remote control which is ordered separately. Item number: IRemote.
- Infrared Remote Sensor (I) option must be ordered with unit to be compatible with IRemote.
- Single face signs only.



Illumination

Illumination is accomplished with high output LEDs. Proprietary internal molded-acrylic panel (thickness: 0.45") for even illumination.

Housing

Impact resistant, injection molded U/L 94-5VA flame retardant thermoplastic housing. UV-stabilized to resist discoloration.

Standard Self-Testing/Self-Diagnostics

Unit runs an internal test every 5 seconds for secondary voltage, charge current, battery voltage, and LED illumination. Performs automatic 1 minute discharge test every 30 days and 30 minute discharge test every 180 days.

Electronics

120/277 VAC dual voltage input. Microprocessor controlled charge, transfer and monitoring system. Charging system is complete with low voltage disconnect, AC lockout, and brownout protection. Self powered units include an AC indicator/systems status lamp and manual test switch.

Battery

Maintenance free, sealed nickel metal hydride battery with 10 year life and an operating temperature between 14°F (-10°C) and 113°F (45°C). NiMH battery is a non-toxic, environmentally friendly product which is recyclable.

Input Power Requirements

AC Only	Emergency Operation
Red: 1.29W	Red: 3.16W
Green: 2.20W	Green: 3.00W

Code Compliance

UL 924 Listed, NFPA 101

Warranty

Electronics: 3 years
Battery: 5 yrs full, 5 yrs pro-rata

Ordering Information

LG					
Model/Series	Battery Type	No. of Faces	Letter Color	Housing Finish	Standard Features
LG = Architectural Edge-Lit Exit	A = AC Only	1 = Single	RC = Red on Clear ²	A = Brushed Alum.	SD2 = Self Diagnostics ³
	N = Nickel Cadmium	2 = Double	RW = Red on White	W = White	
			RM = Red w/ Mirrored	B = Black	
			GC = Green on Clear ²		
			GW = Green on White		
			GM = Green w/ Mirrored		

Options

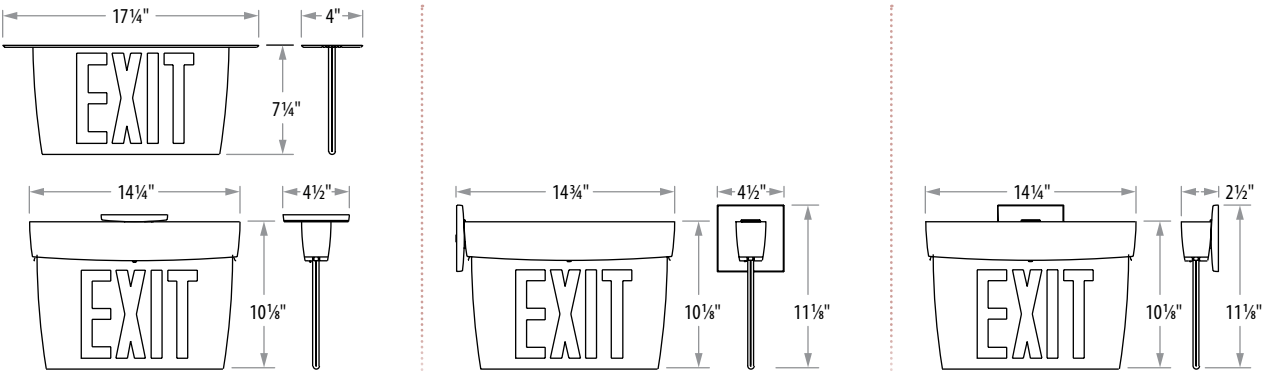
Cat. No.	Description
2CKT1	120 VAC Two Circuit
2CKT2	277 VAC Two Circuit
BF	Buzzer Flasher
BZ	DC Buzzer
DC	12-48 VDC Input
EX	Special Input Transformer
FA	24 VDC Fire Alarm Interface (reg. constant DC voltage) ¹
FL	Emergency Flasher
NY8	8" Letters
SW	Special Wording/Graphics (Consult factory) ¹
T	Self Testing Non-Audible ¹
TA	Self Testing w/Audible Alarm ³
AC	Aged Copper Housing/Trimplate
BR	Ornamental Bronze Housing/Trimplate
G	Gunmetal Housing/Trimplate
GR	Granite Housing/Trimplate
VG	Velvet Green Housing/Trimplate

Accessories

Cat. No.	Description
SDREMOTE	Infrared Test Device
PKIT12A	Pendant Kit, 12" Aluminum Finish
PKIT12BK	Pendant Kit, 12" Black Finish
PKIT12WH	Pendant Kit, 12" White Finish

Notes

- Multiple option configurations may void UL listing. Consult factory for specifics. Suitable for export.
- Not available on double face signs.
- Nickel Cadmium units only.



Illumination

Illumination is accomplished with the use of high brightness LEDs in an optical array offering even illumination.

Housing

All housing components are premium die-cast aluminum construction. A range of finishes are available. Universal mounting allows for recessed ceiling, surface ceiling, surface end or surface wall. A bar hanger kit and trim plate is furnished as a standard feature.

Panel

Panel is manufactured from high impact acrylic and silk-screened using computer generated artwork. Universal self-stick chevrons are standard.

Electronics

120/277 VAC dual voltage input with surge-protected, LED circuitry. Charging system is complete with low voltage disconnect, AC lockout, brownout protection, AC indicator lamp and test switch.

Battery

Maintenance free, sealed nickel cadmium battery has an estimated service life of 10 years, and an operating temperature range of 32°F (0°C) to 104°F (40°C).

Input Power Requirements

AC Only	Emergency Operation
Red: .17A (120VAC) PF=0.96	Red: 4.70W (120 VAC), PF=0.95
3.80A (277VAC) PF = 0.91	4.81W (277 VAC), PF = 0.97

Green: 4.00A (120VAC) PF=0.95	Green: 4.71W (120 VAC), PF=0.95
.008A (277VAC) PF=0.90	4.67W (277 VAC), PF=0.99

Warranty

Electronics: 5 years, Battery: 5 year full, 5 years pro-rata.

Code Compliance

UL 924 listed; NFPA 101; UL damp location



LG Series

The LG Series Edge-Lit Exit provides a slim profile combined with attractive finishing options that blend well with architectural spaces. Easy installation, universal mounting configurations and field selectable chevrons make the LG Edge-Lit both a specifier favorite and an electrical contractor favorite.

Site Lighting

ExceLine offers a wide range of innovative products for Retail, Commercial and Industrial Markets.

Unlike many new LED luminaires entering the market, ExceLine designs each new fixture specifically around cutting edge LED technology, combines that with quality optics to deliver the latest in energy efficiency. These products provide superior performance and essential aesthetic elements to make your project not only efficient but beautiful. ExceLine is leading the changeover to long life, low maintenance LED luminaires that outperform traditional products in every way.

ExceLine has now combined this LED technology with solar in its new solar LED system. Allowing you to install quality lighting at much less cost than traditional hard-wired systems. Solar lighting makes sense today because it is environmentally friendly, and is essential for safety and security. Now it's possible to install lighting in places never thought accessible.



Distinguished by their performance, style and quality, ExceLine luminaires provide a full range of indoor and outdoor lighting solutions for commercial, retail and industrial markets.

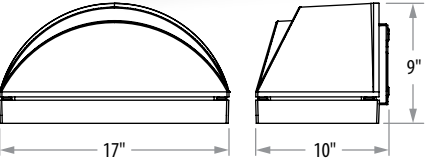
Site Lighting ExceLine
GeoScapes/GeoMatrixx/Site Master

Ordering Information

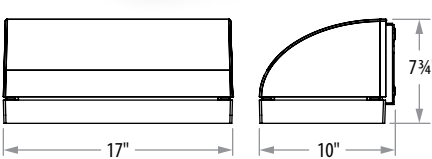
GS		08	U		054	6K		
Model/Series	Shape	Driver	Voltage	Finish	LED #	Color Temp	Optics	Options
GS = GeoScapes	1 = Series 1	08	U = 120/277	B = Wrinkle Black	054	6K Board	H2 = Type II	Consult Factory
	2 = Series 2			W = Wrinkle White			H3 = Type III	
	3 = Series 3			P = Wrinkle Bronze				



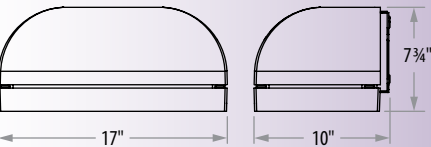
GeoScapes Series



GS Series 3 LED



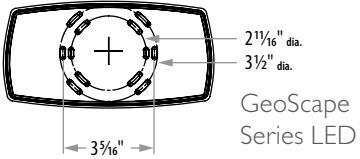
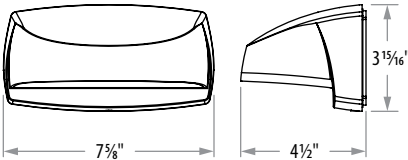
GS Series 2 LED



GS Series 1 LED

Ordering Information

GSM7	
Model/Series	Finish
GSM7 = GeoScapes Mini	T = Titanium Gray
	W = White



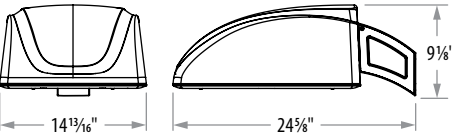
* Quick hanger plate for J-box mounting included.
Note: Not for use in car washes.



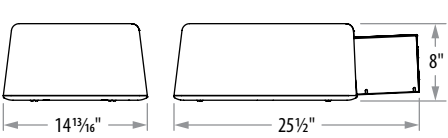
GeoScape Mini Series

Ordering Information

	08	U		054	6K		
Model/Series	Driver	Voltage	Finish	LED #	Color Temp	Optics	Options
GSR = GeoScapes	08	U = 120/277	B = Wrinkle Black	054	6K Board	V2 = Type II	Consult Factory
SMR = Site Master			W = Wrinkle White			V3 = Type III	
			P = Wrinkle Bronze			T5S = Type V Square	
						T5R = Type V Rectangle	



GeoScapes Roadway Series LED



Site Master Series LED



GeoScapes Series



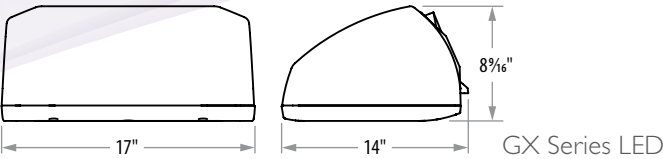
Site Master Series



GeoMatrixx Series

Ordering Information


GX	L		08	U		054	6K		
Model/Series	Shape	Type	Driver	Voltage	Finish	LED #	Color Temp	Optics	Options
GX = GeoMatrixx	L = Large	W = Wall A = Arm	08	U = 120/277	B = Wrinkle Black W = Wrinkle White P = Wrinkle Bronze	054	6K Board	H2 = Type II H3 = Type III	Consult Factory



Note: Not for use in car washes.

Ordering Information

			PV13	LED				
Model/Series	Finish	Distribution	Zone	LED	No. of Fixtures	Wattage	Run Time	Battery Locations
GSR = GeoScapes	B = Wrinkle Black	2 = Type II	PV01-PV20 = Based on geographic location (zip code) Consult Factory	LED	1 = Single	30 = 30 Watts	DTD = Dusk-to-Dawn	L = 8 feet above grade
SMR = Site Master	W = Wrinkle White	3 = Type III			2 = Double*	40 = 40 Watts	5/0/0 = 5hrs after dusk and then off	H = Pole Top
	P = Wrinkle Bronze				60 = 60 Watts	6/0/0 = 6hrs after dusk and then off		
						6/0/2 = 6hrs after dusk and then off; 2hrs on before dawn		
						6/0/8@50% = 6hrs of full power after dusk and 8hrs of half power before dawn		





GeoScapes Series



Site Master Series



ProLyter Series

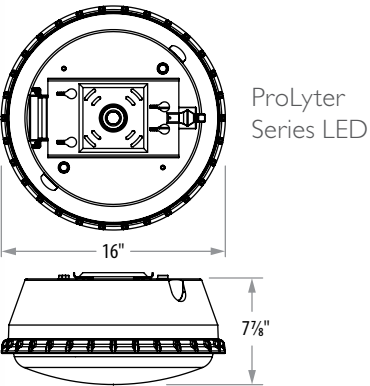


MiniPro Series

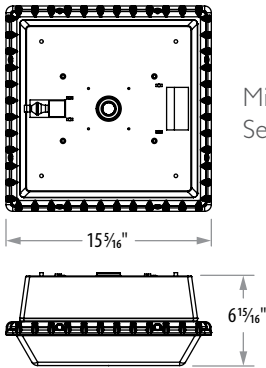
Ordering Information

	08	U		054	6K		
Model/Series	Driver	Voltage	Finish	LED #	Color Temp	Optics	Options
MPQ = MiniPro	08	U = 120/277	B = Wrinkle Black	054	6K Board	H2 = Type II	HS = Hang Straight (PGQ Only)
PGQ = ProLyter			W = Wrinkle White P = Wrinkle Bronze			TSS = Type V Square	Consult Factory for other options

* Quick hanger plate for J-box mounting included.

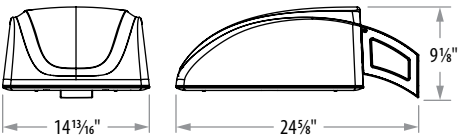


ProLyter Series LED

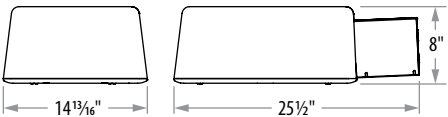


MiniPro Series LED

Note: Not for use in car washes.



GeoScapes Roadway Series LED



Site Master Series LED