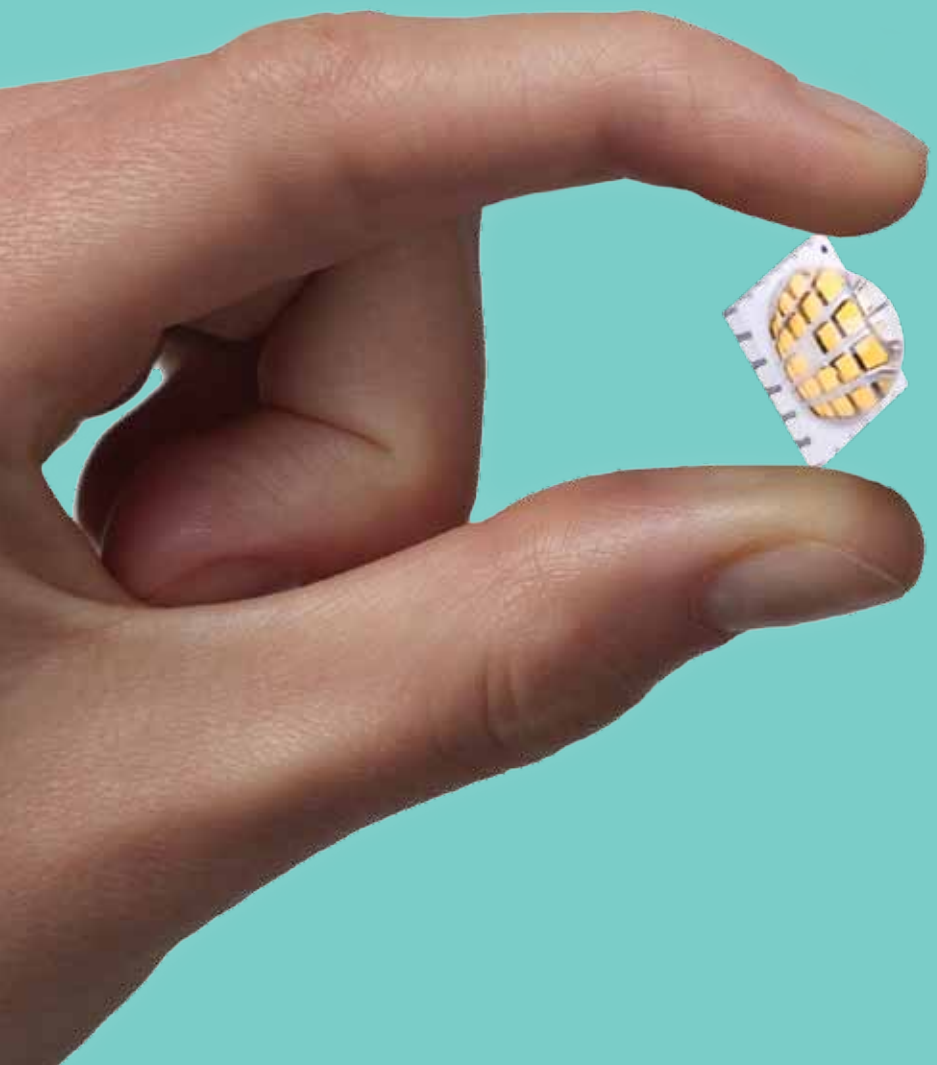
Bright Light.
Tiny Package.

LuxiGen Platform



ENTERTAINMENT LIGHTING

ARCHITECTURAL LIGHTING

HIGH-END INTERIOR SPACES

UV CURING

HORTICULTURE & SPECIALTY

LED ENGIN

Bright Light. Tiny Package.

The building blocks of light

The LuxiGen™ Platform provides designers and engineers the building blocks to create seamless lighting experiences with high power density design – from tunable entertainment lighting and innovative architectural spaces to high-end downlighting, specialty curing and industrial lighting sources.

Innovation starts with the LuxiGen™ Platform, an emitter and lens or integrated module system. The small size, yet remarkably powerful output, allows for a previous unobtainable freedom of design wherever high-flux density, directional light is demanded.

ENTERTAINMENT LIGHTING

When high-intensity, tunable light for stage and studio is required, LuxiGen delivers. With a package that delivers more light to the source, ultimate flexibility in light beam quality and control, and light specifically tuned for skin tones and textiles color rendering, LuxiGen provides the ultimate viewing experience for fans.

ARCHITECTURAL LIGHTING

LuxiGen powered fixtures provide unlimited design flexibility for both interior and exterior architectural spaces with high quality in-source mixing. From vivid wall washing color to high-end effect lighting, the LuxiGen Platform provides the essential building blocks for amazing architectural experiences.

HIGH-END INTERIOR SPACES

Retail and experiential interior environments demand high quality light and illumination. LuxiGen-powered single emitter solutions for down lighting, accent and decorative lighting offer superior color-rendering, color stability and control. Additionally, combination with our uniquely tailored TIR lens creates superior lux-on-target with a high lux, high-quality, well-controlled beam of light.

UV CURING

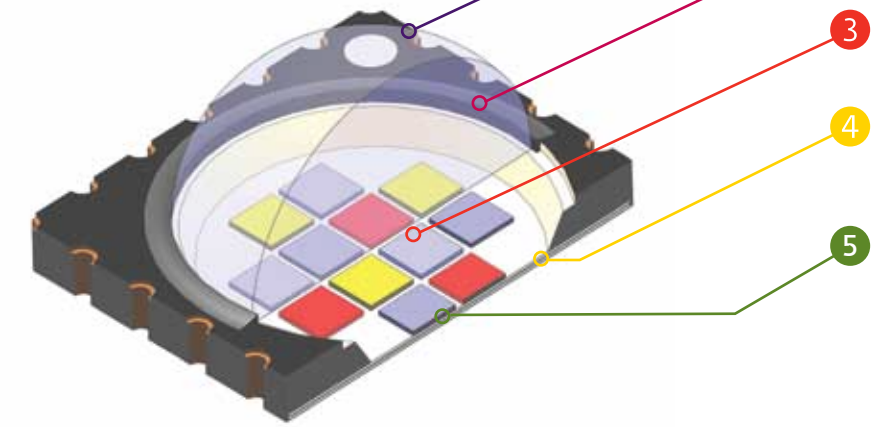
High speed UV curing requires the ultimate in high flux density, extreme reliability and tunable wavelength options. LuxiGen's superior high power density performance provides significant savings in curing and processing times. LuxiGen emitters provide a robust and reliable, energy-efficient solution to handle the demanding environments of printing and curing applications.

HORTICULTURE & SPECIALTY

The highly flexible LuxiGen Platform is ideally suited to address the needs of specialized lighting industries such as horticulture, medical and food illumination. With extreme moisture resistance, heat resilience, and a full range of wavelengths – including the ability to mix within a single package, LuxiGen emitters are well suited for industrial environments.

LuxiGen Packaging Technology

LuxiGen is able to deliver bright, high-density, controlled, and well-mixed light because of its unique packaging innovations. Not only does LuxiGen deliver extreme lumen and power density, but it also provides it in an extremely small and reliable package.



1. Rugged glass lens resistant to contamination and degradation
2. High strength interlocking lens attach for mechanical robustness
3. Individually addressable die for in-source color tuning
4. Multi-layer, stress-free ceramic substrate engineered to maximize power density and reliability
5. Unique die attachment process to minimize thermal resistance

LuxiGen Family of Products

LuxiGen products benefit from a low thermal resistance, narrow binning options, multiple mounting options and an option for additional ESD protection. Further, the LuxiGen Platform includes a number of secondary optics designed specifically for LuxiGen emitters. These lenses offer superior color-mixing across the full color spectrum and allow for extremely well-controlled, high quality and uniform light.

	 **LZ1-SERIES**	 **LZ4-SERIES**	 **LZ9-SERIES**	 **LZC-SERIES**	 **LZP-SERIES**
NUMBER OF DIE	1	4	9	12	24 or 25
DIMENSIONS L x W , mm	4.4 x 4.4	7.0 x 7.0	7.0 x 7.0	9.0 x 9.0	12.0 x 12.0
NOMINAL DRIVE CURRENT mA	1000	700	700	700	700
MAXIMUM DRIVE CURRENT mA	1200	1500	800	1200	1200
THERMAL RESISTANCE °C/W	10.5 4.2 for UV/DB	1.1	1.3	0.7	0.6
MAX JUNCTION TEMP °C	150 125*	150 125*	150 125*	150 125*	150 125*

* for red, amber, UV

LuxiGen White Products

LuxiGen Emitters

TYPICAL PERFORMANCE LUMINOUS FLUX [LUMENS]	LZ1-SERIES 1000 mA	LZ4-SERIES 700 mA	 1000 mA	LZ9-SERIES 700mA	LZC-SERIES 700 mA	 1000 mA	LZP-SERIES 700 mA	 1000 mA
STUDIO WHITE 5300K; CRI 85	—	600	780	1300	1750	2250	3400	4400
COOL WHITE 5500K; CRI 70	227	680	850	1700	2100	2700	3900	5000
NEUTRAL WHITE 4000K; CRI 80	200	610	760	1500	1850	2300	3500	4500
WARM WHITE 3000K; CRI 80	180	550	700	1350	1650	2100	3050	4000
GALLERY WHITE 3000K; CRI 97	—	450	580	950	1300	1670	2500	3200

LuxiGen Integrated Solutions

LuxiTune™ Series

Tunable White Light Engines for halogen-style dimming available as tunable emitter, driver and TIR lens

ViviLux™ Series

High Efficiency CRI 90 Emitter and Lens Solutions available as single emitter and TIR lens kit

TYPICAL PERFORMANCE		LZC LUXITUNE™ 100% Intensity @T_c = 65°C	LZC VIVILUX™ 700 mA @T_j = 100°C	LZP VIVILUX™ 700 mA @T_j = 100°C
LUMINOUS FLUX [LUMENS]	Emitter + Lens	1100	1700	3050
COLOR TEMPERATURE		3000K @100% intensity 3000K - 1800K dim range	2700K and 3000K	2700K and 3000K
COLOR RENDERING	CRI / R9	90 / 70 @3000K	90 / 80	90 / 80
COLOR CONSISTENCY [SDCM]	Single Bin	3.0	2.5	2.5
EFFICACY [LUMENS / WATT]	Emitter + TIR lens	63	68	68
CENTER BEAM CANDLEPOWER [CD]	Narrow Flood Beam	2700	4500	11,000
	Flood Beam	2100	2700	6000
	Wide Flood Beam	1200	2000	—

LuxiGen Single Color Products

LuxiGen UV Products

TYPICAL PERFORMANCE	LZ1-SERIES		LZ4-SERIES		LZC-SERIES		LZP-SERIES	
RADIANT FLUX [mW]	700 mA	1000 mA	700 mA	1000 mA	700 mA	1000 mA	700 mA	1000 mA
VIOLET 385 nm - 410 nm peak	690	900	2600	3400	8100	10,300	15,500	19,500
UV 365 nm - 375 nm peak	320	-	1200	-	3600	-	CONTACT LED ENGIN	

LuxiGen Specialty Color Products

TYPICAL PERFORMANCE	LZ1-SERIES		LZ4-SERIES	
RADIANT FLUX [mW]	700 mA	1000 mA	700 mA	1000 mA
DEEP RED 660 nm peak	640	830	2200	2800
FAR RED 740 nm peak	310	405	1210	1580
INFRARED 850 nm peak	470	600	1800	2300
INFRARED 940 nm peak	385	500	1470	1900
DENTAL BLUE 460 nm peak	660	900	2600	3500

LuxiGen Visible Color Products

TYPICAL PERFORMANCE	LZ1-SERIES	LZ4-SERIES	
LUMINOUS FLUX [LUMENS]	1000 mA	700 mA	1000 mA
RED 623 nm dominant	120	350	440
GREEN 523 nm dominant	180	550	700
BLUE 460 nm dominant	40	130	160
AMBER 590 nm dominant	105	325	420

LuxiGen Multi-Color Products

LZ4 Series

TYPICAL PERFORMANCE	RED, GREEN, BLUE & WHITE RGBW		RED, GREEN & BLUE RGB		RED, GREEN, BLUE & AMBER RGBA	
LUMINOUS FLUX [LUMENS]	700 mA	1000 mA	700 mA	1000 mA	700 mA	1000 mA
RED 623 nm dominant	85	110	85	110	85	110
GREEN 523 nm dominant	140	180	280	360	140	180
BLUE 460 nm dominant	30	40	30	40	30	40
AMBER 590 nm dominant	–	–	–	–	75	95
WHITE 6500K	170	222	–	–	–	–

LZ4 Flat Lens Series

TYPICAL PERFORMANCE	RED, GREEN, BLUE & WHITE RGBW		
LUMINOUS FLUX [LUMENS]	700 mA	1000 mA	1.5A
RED 623 nm dominant	65	84	130
GREEN 523 nm dominant	125	160	200
BLUE 460 nm dominant	30	39	53
WHITE 6500K	180	235	300

LZC Series

TYPICAL PERFORMANCE	RED, GREEN, BLUE & WHITE RGBW		RED, GREEN & BLUE RGB		RED, GREEN, BLUE & AMBER RGBA	
LUMINOUS FLUX [LUMENS]	700 mA	1000 mA	700 mA	1000 mA	700 mA	1000 mA
RED 623 nm dominant	210	270	280	360	210	270
GREEN 523 nm dominant	340	440	455	590	340	440
BLUE 460 nm dominant	80	100	100	130	80	100
AMBER 590 nm dominant	–	–	–	–	240	305
WHITE 6500K	480	620	–	–	–	–

LuxiGen Mounting Options

STANDARD MCPCB PRODUCT OPTIONS

	DESCRIPTION	DIAMETER mm	MCPCB THERMAL RESISTANCE °C/W	CHANNEL CONFIGURATION
	LZ1 Miniature	11.5	2	1-channel
	LZ1 Star	19.9	1.5	1-channel
	LZ4 Star	19.9	1.1	1-channel / 4-channel
	LZ9 Star	19.9	0.2	1-ch (1x9)/(3x3) string options
	LZC Star	28.3	0.6 / 0.1	1 to 3-channel/ 4-channel
	LZC Connector	49.5	0.6	1-ch (1x12)/(2x6) string options
	LZP Star	28.3	0.1	4-channel / 5-channel
	LZP Connector	49.5	0.1	2-ch (2x12+1)/(4x6+1) string options

LuxiGen Lens Options

	LZ4-SERIES 4-die TIR lens options	**LZ9-SERIES** 9-die TIR lens options	**LZC-SERIES** 12-die TIR lens options	**LZP-SERIES** 25-die TIR lens options
NARROW SPOT	—	—	9°	10°
SPOT	14°	17°	15° / 13°	13°
NARROW FLOOD	22°	26°	20°	20°
FLOOD	40°	39°	32°	32°
WIDE FLOOD	—	—	50°	—

*For more lens options, please visit **www.ledengin.com/products/lenses**.

LED ENGIN

LED Engin, based in California's Silicon Valley, specialises in ultra-bright, ultra compact solid state lighting solutions allowing lighting designers & engineers the freedom to create uncompromised yet energy efficient lighting experiences.

Our LuxiGen™ Platform — an emitter and lens combination or integrated module solution, delivers superior flexibility in light output, ranging from 3w to 90w, a wide spectrum of available colors, including whites, multi-color and UV, and the ability to deliver upwards of 5000 high quality lumens to a target. The small size, yet remarkably powerful output, allows for a previously unobtainable freedom of design wherever high-flux density, directional light is required.

05/13

651 River Oaks Parkway | San Jose, CA 95134 USA | phone +1 408 922 7200 | fax +1 408 922 0158 | www.ledengin.com