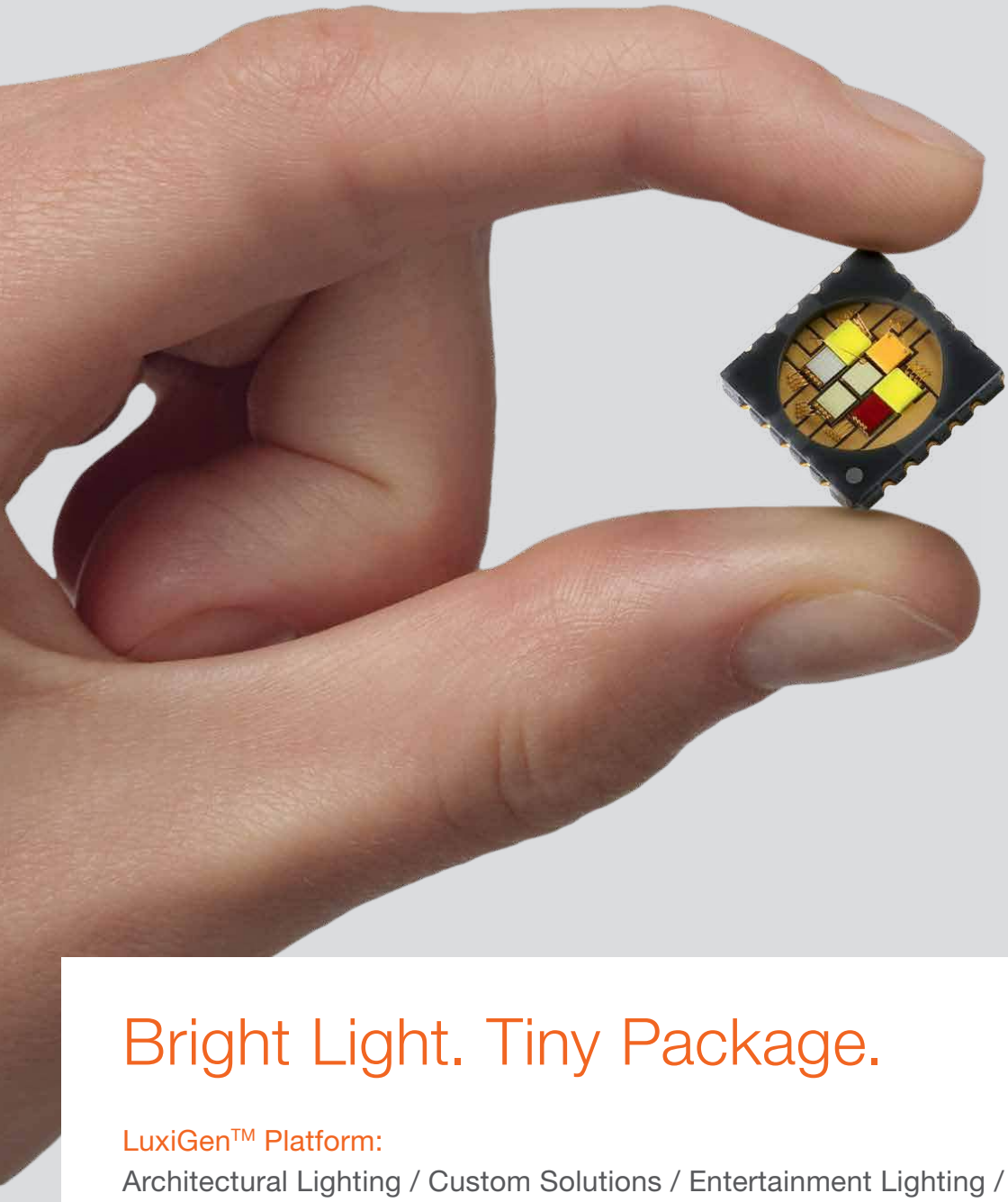


Bright Light. Tiny Package.

LuxiGen™ Platform:
Architectural Lighting / Custom Solutions / Entertainment Lighting /
High-End Interior Spaces / Human Centric Lighting / Infrared Illumination / UV Curing.

Light is OSRAM

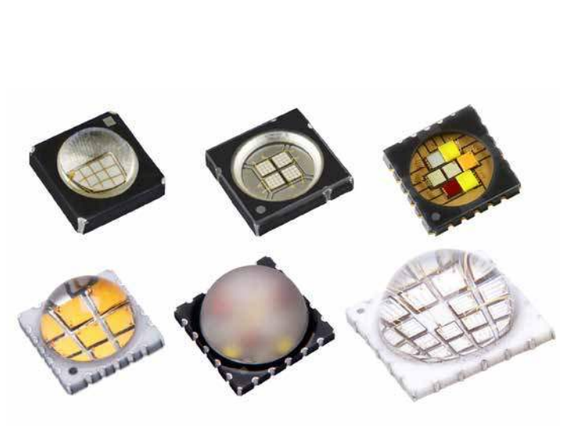
Our Brand
LED ENGIN

OSRAM
Opto Semiconductors

Bright Light. Tiny Package.

The building blocks of light.

LuxiGen™ Platform
Innovation starts with our LuxiGen™ platform. The remarkably powerful output from our small packaged light sources allows for freedom of design wherever high-flux density, directional light is required. With secondary optics specifically designed for our light sources, LED Engin aims to enable different lighting applications with their unique needs.



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.

Entertainment Lighting

When high-intensity, dynamic lighting for stage and studio is required, LuxiGen™ delivers. With a package that delivers high intensity light, flexibility in beam shaping, ability to combine colors for a fuller spectrum and superior color quality, LuxiGen™ emitters enable the ultimate viewing experience for all kinds of entertainment events.

Infrared Illumination

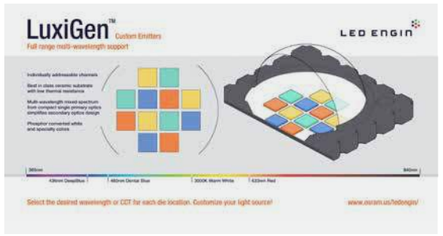
The highly flexible LuxiGen™ platform is ideally suited to address the needs of specialized lighting industries such as infrared illumination and sensing.

High-End Interior Spaces

Retail and experiential interior environments demand high quality light and illumination. LuxiGen™ single emitter solutions for down lighting, accent and decorative lighting offer superior color-rendering, color stability and control. In combination with LED Engin's uniquely tailored TIR lenses or with secondary optics from third parties, LuxiGen™ emitters deliver the highest lux on target.

UV Curing

High speed UV curing requires very high flux density, reliability and tunable wavelength options. LuxiGen™ emitters provide a robust and reliable, energy-efficient solution to handle the demanding environments of printing and curing applications. High power density also leads to savings in curing and processing time.

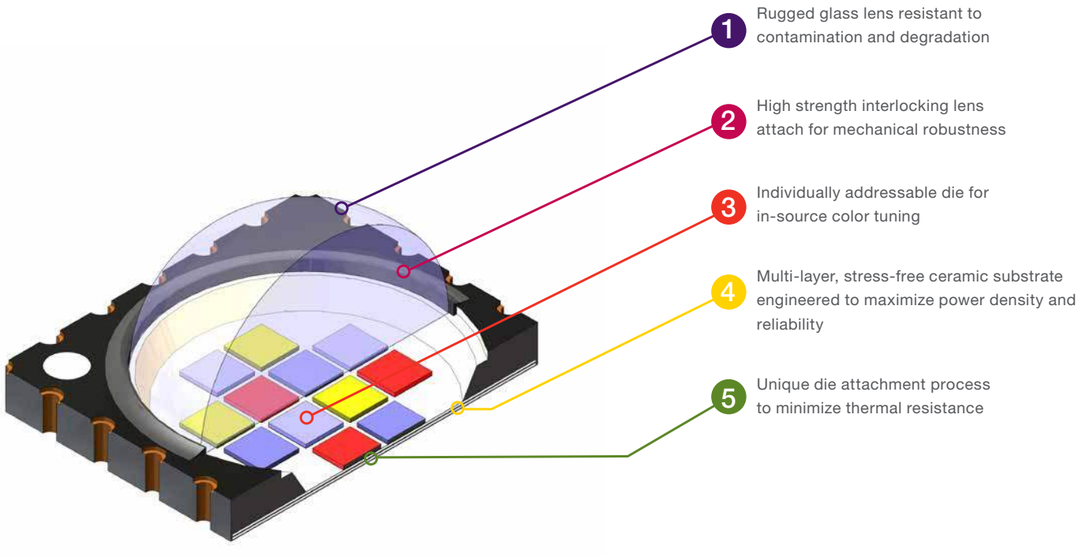


Custom Applications

With tested moisture resistance, heat resilience, and glass primary optics, LuxiGen™ emitters are well suited for industrial and horticulture environments. A full range of wavelengths from UV to IR – including the ability to mix wavelengths within a single package – enables medical, dental, analytical, horticulture, and other specialty applications to design LuxiGen™ emitters in to their products. Compact form-factor, excellent thermal conductivity and small LES are other reasons why critical designs like cameras and other small devices prefer to use these emitters.

LuxiGen™ Packaging Technology

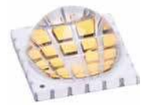
In demanding applications where dynamic directional light is required, choosing the right packaged LED solution is vital. The LuxiGen™ platform delivers high-quality, high-brightness light from a tiny light source. A small light-emitting surface with in-source mixing is essential when combining high lumen density and lux-on-target requirements with the need to tune colors in directional lighting applications.



LuxiGen™ Family of Products

LuxiGen™ products benefit from a low thermal resistance, narrow binning options, multiple mounting options and 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.

LuxiGen™ Family of LED Emitters

	LZ1-Series	LZ4-Series	LZ7-Series	LZC-Series	LZP-Series
					
Number of Die	1	4	7	12	24 or 25
Light Emitting Surface (LES) mm	3.2	6.2 (Dome) 2.15 x 2.15 (Flat)	3.4 x 3.4 (Flat)	8.2	10.5 (Dome)
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
Maximum Drive Current mA	1000–2500**	1000–3000	1000 – 3000	1000–1200	1000–1200
Thermal Resistance °C/W	4.2 / 6.0	0.9 / 1.1 / 2.8	0.8	0.7	0.5 / 0.6

* Please refer to product datasheet for more detailed information

** Refers to 2.5A CW only

LuxiGen™ Multi-Color LED Emitters

LuxiGen™ LZ4 RGBW Emitters

Typical Performance	Dome Lens*		Flat Lens
Luminous flux (Lumens)	@ 1000mA	@ 1200mA	@ 1000mA
Red 623nm dominant	180	215	110
Green 523nm dominant	215	235	180
Blue 457nm dominant	50	56	43
White 6500K	315	360	285

* Also available in RGBA and RGB options

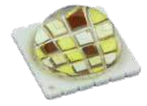
LuxiGen™ LZ7 Plus 60W 7-Die Emitter

Typical Performance	
Luminous flux (Lumens)	**@ maximum current**
Red 623nm dominant	190 @ 2.5A
Green 520nm dominant	340 @ 3.0A
Blue 451nm dominant	97 @ 3.0A
PC Amber 590nm dominant	182 @ 1.5A
Cyan 500nm dominant	135 @ 1.0A
PC Lime	2x620 @ 2.5A

LuxiGen™ LZC RGBW Emitter

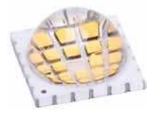
Typical Performance	Dome Lens*
Luminous flux (Lumens)	@ 1000mA
Red 623nm dominant	475
Green 523nm dominant	560
Blue 457nm dominant	130
White 6500K	780

LuxiGen™ LZP RGBW Emitters



Typical Performance	Dome Lens
Luminous flux (Lumens)	@ 1000mA
Red 623nm dominant	1060
Green 523nm dominant	1190
Blue 457nm dominant	300
White 6500K	2000

LuxiGen™ White LED Emitters



Typical Performance	LZ1-series	LZ4-Series	LZC-Series	LZP-Series
Luminous flux (Lumens)	@ 1200mA	@ 1000mA	@ 1000mA	@ 1000mA
Cool White 5500K/6500K; CRI 75	360	1050	3000	5700

LuxiGen™ Single Wavelength LED Emitters

LuxiGen™ UV Emitters




Typical Performance	LZ1-Series	LZ4-Series	LZC-Series	LZP-Series
Radiant flux* (mW)	–	–	–	–
UV 365nm peak	1360 @ 700mA 1930 @ 1000mA	4100 @ 700mA 5700 @ 1000mA**	11000 @ 700mA	22500 @ 700mA
Violet 385, 395, 405nm peak	1940 @ 1000mA	5400 @ 700mA 7600 @ 1000mA	16500 @ 700mA	33000 @ 700mA

* See specific product datasheet for T_C restrictions when driven at maximum drive current in steady state

** Flat lens emitter

LuxiGen™ Infrared Emitters


Typical Performance	LZ1-Series	LZ4-Series
Radiant flux (mW)	@ 1000mA	@ 1000mA
Infrared 850nm peak	930 / 1350*	3600 / 5250*
Infrared 940nm peak	1350	5250
Infrared 1050nm peak	750	–

* Single Junction / Dual Junction product performance

LuxiGen™ Specialty Color Emitters


Typical Performance	LZ1-Series	LZ4-Series
Radiant flux (mW)	@ 1000mA	@ 1000mA
Deep red 660nm peak	1050	–
Far red 740nm peak	950	3600
Dental blue 460nm peak	1100	4200

LuxiGen™ Visible Color Emitters


Typical Performance	LZ1-Series	LZ4-Series
Luminous flux (Lumens)	@ 1000mA	@ 1000mA
Red 623nm dominant	260	700
Green 523nm dominant	270	835
Blue 457nm dominant	68	195
Amber 590nm dominant	132*	520

* Product performance at maximum rated current of 1200mA

TIR Lens Options for LuxiGen™ Emitters

	LZ4-Series
Narrow spot	–
Spot	14°
Narrow flood	25°

Mounting Options for LuxiGen™ Emitters

	Description	Dimension mm	MCPCB Thermal Resistance °C/W	Channel Configuration
	**LZ1 Miniature**	ø 11.5	2.0	1-channel
	**LZ1 Star**	ø 19.9	1.5	1-channel
	**LZ4 Star**	ø 19.9	1.1 / 0.1	1-channel / 4-channel
	**LZ7 Circular**	ø 50.0	0.1	7-channel
	LZC Star	ø 28.3	0.1	1- to 2-channel / 4-channel
	**LZC Star**	ø 28.3	0.1	4-channel / 5-channel
	**LZP Connectorized**	ø 50.0	0.1	4-channel

About LED Engin

LED Engin is a brand of the leading global photonics company OSRAM Opto Semiconductors. OSRAM Opto Semiconductors utilizes the infinite possibilities of light to improve the quality of life for individuals and communities.

LED Engin is based in California's Silicon Valley and specializes in ultra-bright, ultra-compact solid state lighting solutions. LED Engin offers standard catalog products, and is unique in offering customized, non-catalog LEDs and modules. These allow lighting designers & engineers the freedom to create uncompromised yet effective lighting experiences for entertainment, architectural, medical, machine-vision and other specialty applications. Its LuxiGen™ multi-die emitter products and secondary lens combinations reliably deliver industry-leading flux density, in a wide spectrum of wavelengths from ultra violet to infrared, to phosphor converted white and colors in a unique patented compact ceramic package. The LuxiTune™ family of tunable white modules, drivers and control interfaces from LED Engin delivers best in class human centric lighting solutions for connected tunable luminaires. With innovative products, quick development cycles, and customized solutions, LED Engin enables its customers to be competitive and differentiate in their end markets.

RoHS compliant

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Our Brand

LED ENGIN

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