

# Luxeon™ V Emitter

power light source

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Luxeon™ is a revolutionary, energy efficient and ultra compact new light source, combining the lifetime and reliability advantages of Light Emitting Diodes with the brightness of conventional lighting.

Luxeon Emitters give you total design freedom and unmatched brightness, creating a new world of light.

The Luxeon V offers extreme luminous density, providing lumens per package of 4X a Luxeon or up to 50X that of alternative solid state light sources creating new opportunities for solid state lighting to displace conventional lighting technologies.

Luxeon V Emitters can be purchased in reels for high volume assembly. For high volume applications, custom Luxeon power light source designs are available upon request, to meet your specific needs.



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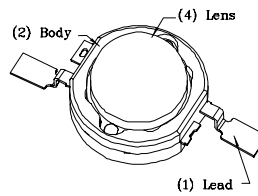
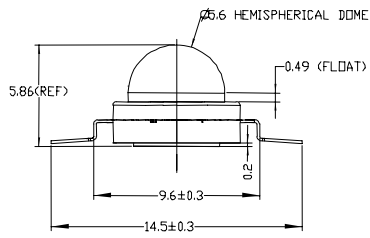
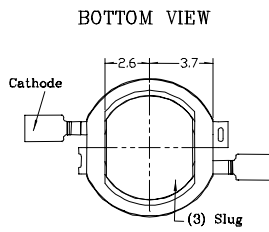
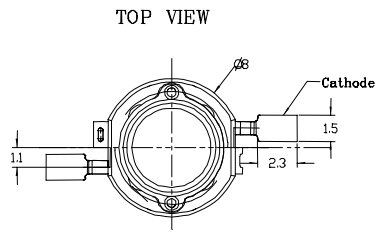
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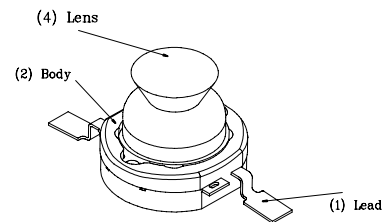
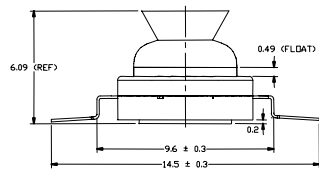
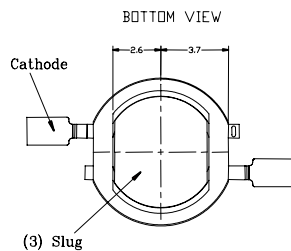
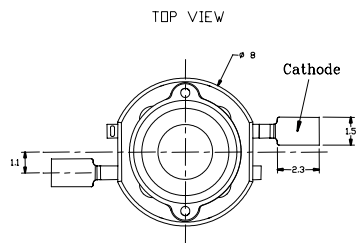
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Side Emitting

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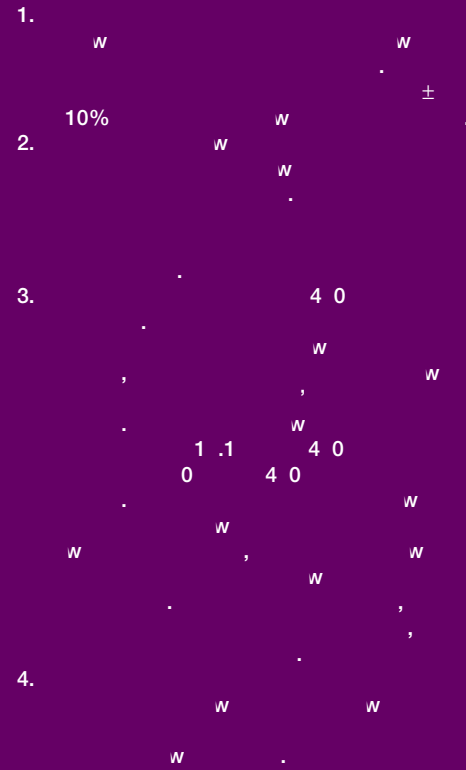
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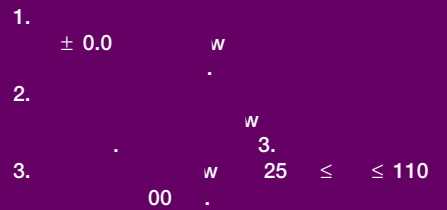
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COLOR	LUXEON V EMITTER	MINIMUM LUMINOUS FLUX (lm) OR RADIOMETRIC POWER (mW)	TYPICAL LUMINOUS FLUX (lm) OR RADIOMETRIC POWER (mW)	RADIATION PATTERN
		$\Phi_v^{[1,2]}$	$\Phi_v^{[2]}$	
GREEN	LXHL-PMO2	67.2	160	LAMBERTIAN
CYAN	LXHL-PEO2	67.2	160	
BLUE <sup>[3]</sup>	LXHL-PBO2	23.5	48	
ROYAL BLUE <sup>[4]</sup>	LXHL-PRO2	275 mW	700 mW	
GREEN	LXHL-DMO2	67.2	145	SIDE EMITTING
CYAN	LXHL-DEO2	67.2	145	
BLUE <sup>[3]</sup>	LXHL-DBO2	23.5	43	
ROYAL BLUE <sup>[4]</sup>	LXHL-DRO2	275 mW	630 mW	



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COLOR	FORWARD VOLTAGE $V_f$ (V) <sup>[1]</sup>			DYNAMIC RESISTANCE <sup>[2]</sup> ( $\Omega$ ) $R_D$	TEMPERATURE COEFFICIENT OF FORWARD VOLTAGE <sup>[3]</sup> (mV/°C) $\Delta V_f / \Delta T_j$	THERMAL RESISTANCE, JUNCTION TO CASE (°C/W) $R_{\theta j,c}$
	MIN.	TYP.	MAX.			
GREEN	5.43	6.84	8.31	1.0	-4.0	8
CYAN	5.43	6.84	8.31	1.0	-4.0	8
BLUE	5.43	6.84	8.31	1.0	-4.0	8
ROYAL BLUE	5.43	6.84	8.31	1.0	-4.0	8



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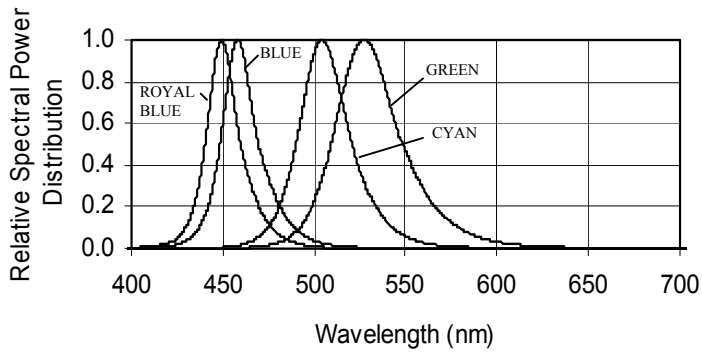
RADIATION PATTERN	COLOR	DOMINANT WAVELENGTH <sup>(1)</sup> λD OR PEAK WAVELENGTH <sup>(2)</sup> λP			SPECTRAL HALF-WIDTH <sup>(3)</sup> (NM) Δλ <sub>1/2</sub>	TEMP COEFFICIENT OF DOMINANT WAVELENGTH (NM/°C) Δλ <sub>D</sub> /ΔT <sub>J</sub>	TOTAL INCLUDED ANGLE <sup>(4)</sup> (DEGREES) θ <sub>0.90V</sub>	VIEWING ANGLE <sup>(5)</sup> (DEGREES) 2θ 1/2
		MIN.	TYP.	MAX.				
LAMBERTIAN	GREEN	520 NM	530 NM	550 NM	35	0.04	150	150
	CYAN	490 NM	505 NM	520 NM	30	0.04	150	150
	BLUE	460 NM	470 NM	490 NM	25	0.04	150	150
	ROYAL BLUE <sup>(2)</sup>	440 NM	455 NM	460 NM	20	0.04	150	150

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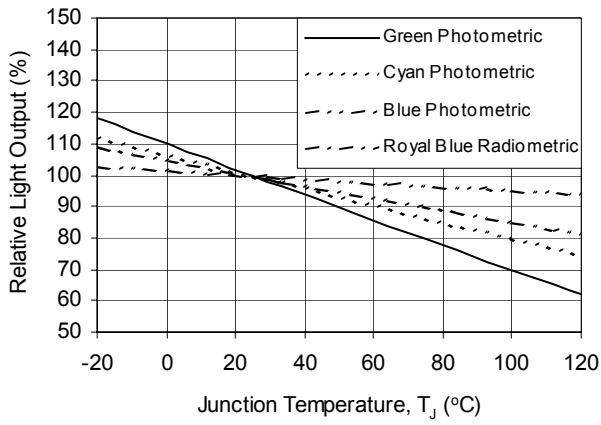
RADIATION PATTERN	COLOR	DOMINANT WAVELENGTH <sup>(1)</sup> λD OR PEAK WAVELENGTH <sup>(2)</sup> λP			SPECTRAL HALF-WIDTH <sup>(3)</sup> (NM) Δλ <sub>1/2</sub>	TEMP COEFFICIENT OF DOMINANT WAVELENGTH (NM/°C) Δλ <sub>D</sub> /ΔT <sub>J</sub>	TYPICAL TOTAL FLUX PERCENT WITHIN FIRST 45° <sup>(6)</sup> CUM Φ <sub>45°</sub>	TYPICAL ANGLE OF OFF AXIS PEAK INTENSITY <sup>(7)</sup> θ <sub>PEAK</sub>
		MIN.	TYP.	MAX.				
SIDE EMITTING	GREEN	520 NM	530 NM	550 NM	35	0.04	<30%	75° - 85°
	CYAN	490 NM	505 NM	520 NM	30	0.04	<30%	75° - 85°
	BLUE	460 NM	470 NM	490 NM	25	0.04	<30%	75° - 85°
	ROYAL BLUE <sup>(2)</sup>	440 NM	455 NM	460 NM	20	0.04	<30%	75° - 85°

PARAMETER	GREEN/CYAN/ BLUE/ROYAL BLUE
DC FORWARD CURRENT (mA) <sup>(1)</sup>	700
PEAK PULSED FORWARD CURRENT (mA)	1000
AVERAGE FORWARD CURRENT (mA)	700
ESD SENSITIVITY <sup>(2)</sup>	± 16,000V HBM
LED JUNCTION TEMPERATURE (°C)	135
STORAGE TEMPERATURE (°C)	-40 to +120
SOLDERING TEMPERATURE (°C) <sup>(3)</sup>	260 FOR 5 SECONDS MAX

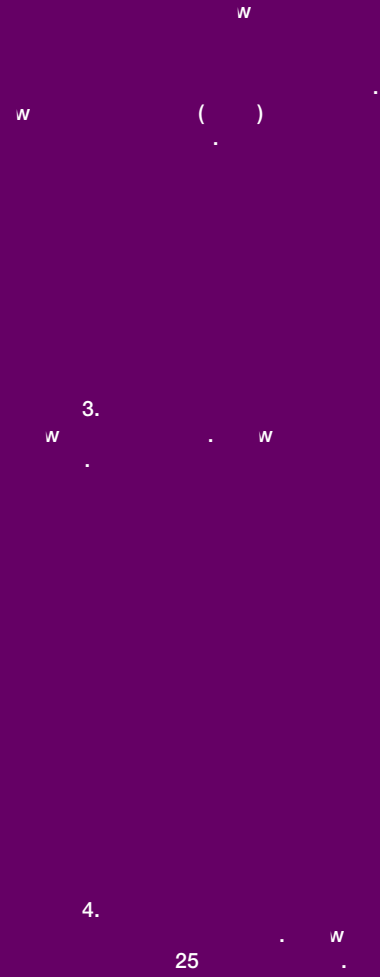
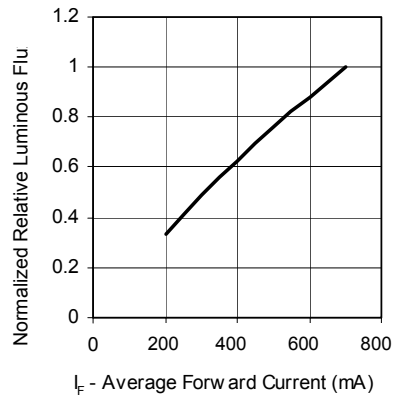
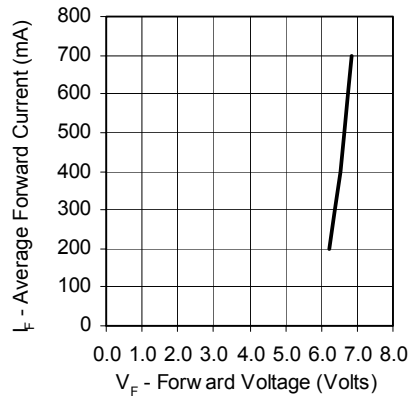


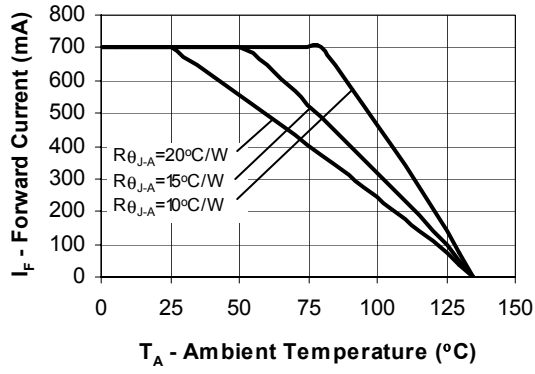


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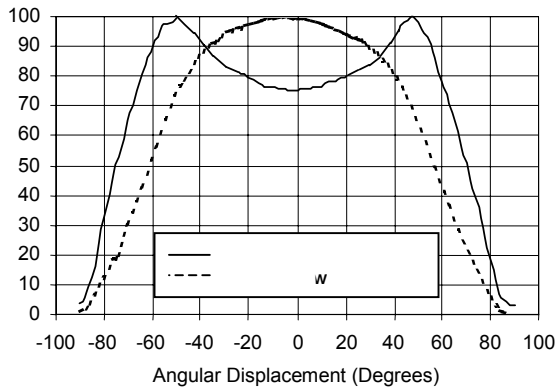
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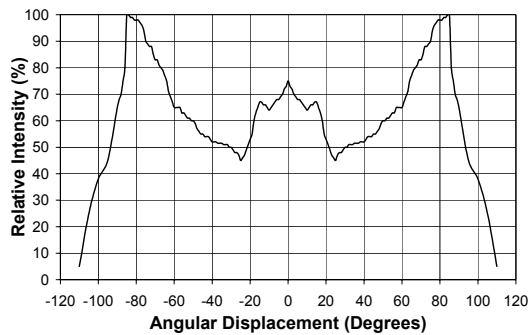
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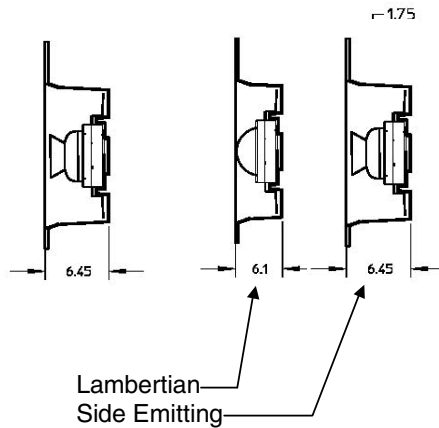
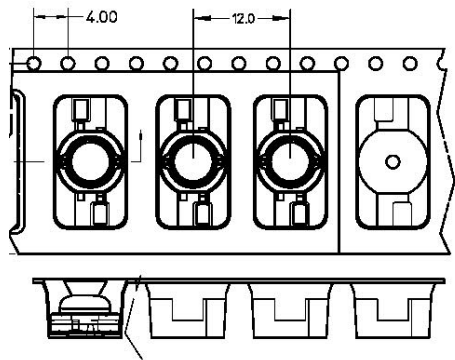
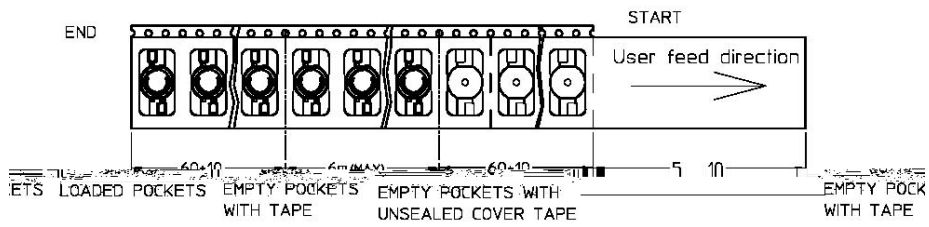
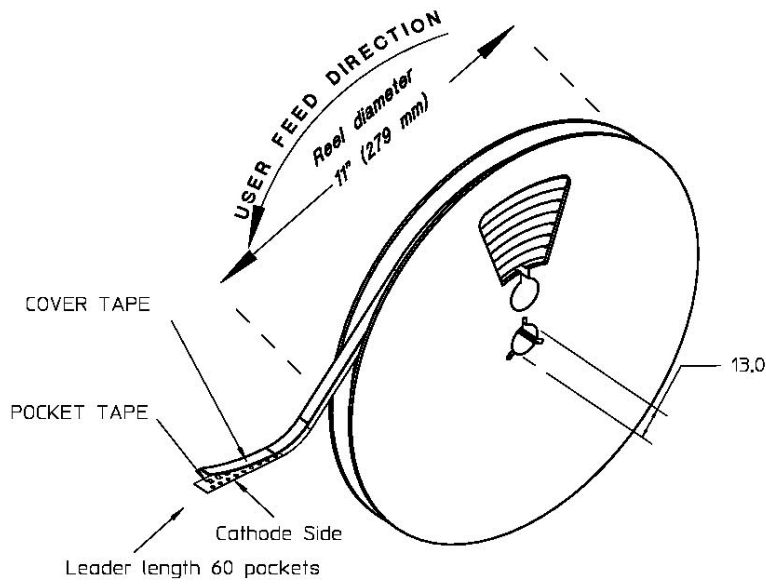
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### Lambertian Radiation Pattern



### Side Emitting Radiation Pattern





SIDE EMITTING

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Luxeon is the new world of solid state lighting (LED) technology. Luxeon Power Light Source Solutions offer huge advantages over conventional lighting and huge advantages over other LED solutions. Luxeon enables partners to create and market products that, until now, were impossible to create. This means the opportunity to create products with a clear competitive advantage in the market. Products that are smaller, lighter, sleeker, cooler, and brighter. Products that are more fun to use, more efficient, and more environmentally conscious than ever before possible!



Luxeon is developed, manufactured and marketed by Lumileds Lighting, LLC. Lumileds is a world-class supplier of Light Emitting Diodes (LEDs) producing billions of LEDs annually. Lumileds is a fully integrated supplier, producing core LED material in all three base colors (Red, Green, Blue) and White. Lumileds has R&D development centers in San Jose, California and Best, The Netherlands. Production capabilities in San Jose, California and Malaysia.

Lumileds is pioneering the high-flux LED technology and bridging the gap between solid state LED technology and the lighting world. Lumileds is absolutely dedicated to bringing the best and brightest LED technology to enable new applications and markets in the Lighting world.



## LUMILEDS

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