

CRYSTAL-MINE

~4.9° spot beam especially designed for mining headlamps. Assembly with holder.

TECHNICAL SPECIFICATIONS:

Dimensions	Ø 50.3 mm
Height	28.7 mm
Fastening	pin, screw
ROHS compliant	yes ⓘ

MATERIAL SPECIFICATIONS:

Component	Type	Material	Colour	Finish
F12985_CRYSTAL-MINE	Single lens	PMMA	clear	
C13478_CRYSTAL-HLD	Holder	PC	white	

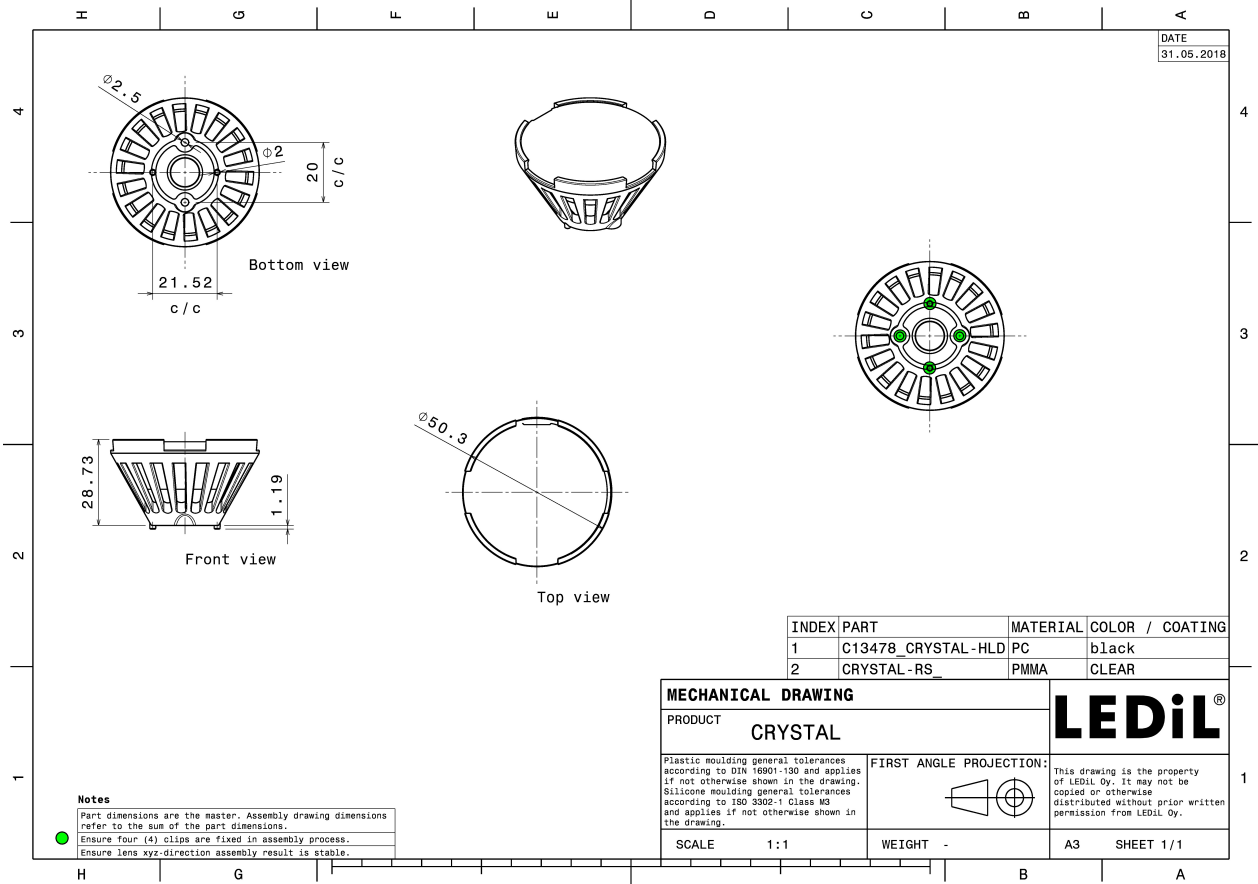
ORDERING INFORMATION:

Quantities for one set:

Single lens	1
Holder	1



Component		Qty in box	MOQ	MPQ	Box weight (kg)
F12985_CRYSTAL-MINE	Single lens	288	64	32	7.1
» Box size: 480 x 280 x 300 mm					
C13478_CRYSTAL-HLD	Holder	1152	64	32	6.1
» Box size: 480 x 280 x 300 mm					

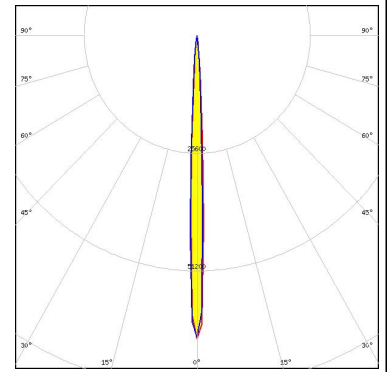


See also our general installation guide: www.ledil.com/installation_guide

PHOTOMETRIC DATA (MEASURED):

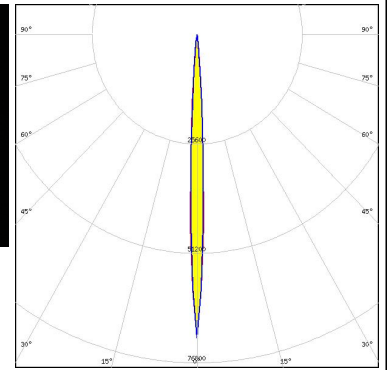
CREE LED

LED XP-G
 FWHM / FWTM 4.7° / 10.5°
 Efficiency 90 %
 Peak intensity 66.9 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



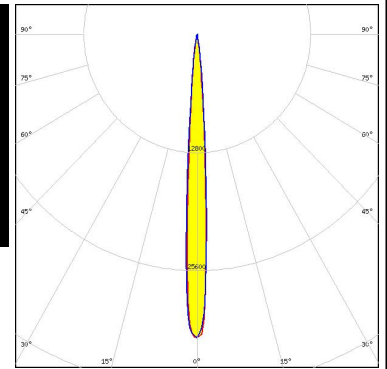
CREE LED

LED XP-G2
 FWHM / FWTM 4.6° / 12.0°
 Efficiency 90 %
 Peak intensity 65.2 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



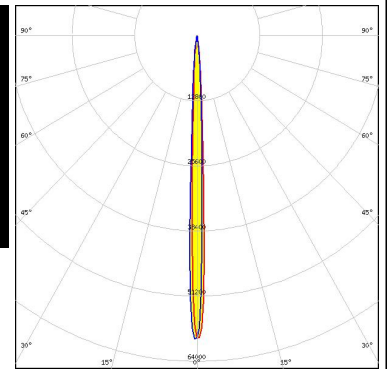
CREE LED

LED XP-L HD
 FWHM / FWTM 7.0° / 14.0°
 Efficiency 86 %
 Peak intensity 33 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:

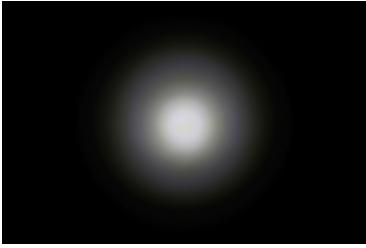
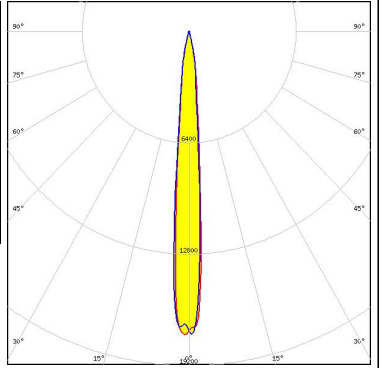
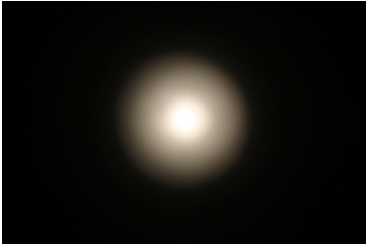


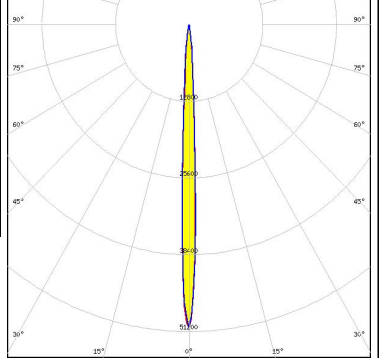


CREE LED


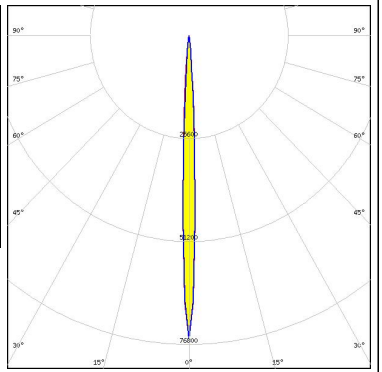
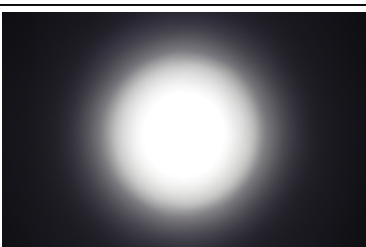
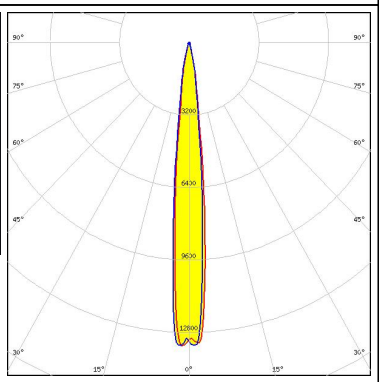
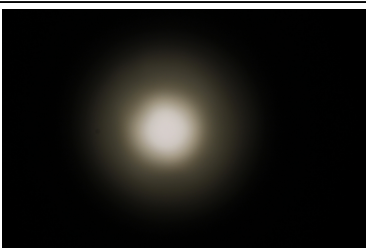
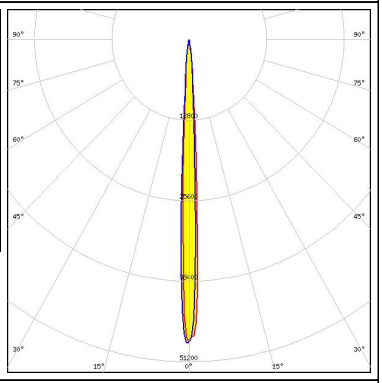

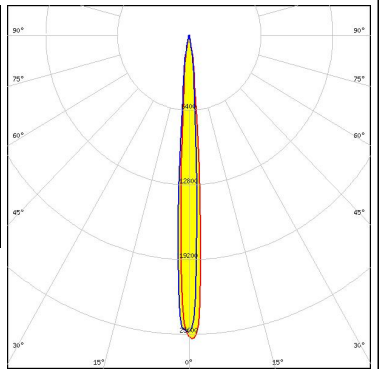
LED XP-L HI
 FWHM / FWTM 4.5° / 12.0°
 Efficiency 92 %
 Peak intensity 60 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



PHOTOMETRIC DATA (MEASURED):

<p>LUMILEDS</p> <p>LED LUXEON 5050 Round LES</p> <p>FWHM / FWTM 9.0° / 23.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 17.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p>LUMILEDS</p> <p>LED LUXEON A</p> <p>FWHM / FWTM 4.9° / 13.0°</p> <p>Efficiency 89 %</p> <p>Peak intensity 58.2 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p>LUMILEDS</p> <p>LED LUXEON T</p> <p>FWHM / FWTM 4.9° / 13.0°</p> <p>Efficiency 89 %</p> <p>Peak intensity 55.1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p>LUMILEDS</p> <p>LED LUXEON TX</p> <p>FWHM / FWTM 5.0° / 12.6°</p> <p>Efficiency 94 %</p> <p>Peak intensity 50.6 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		

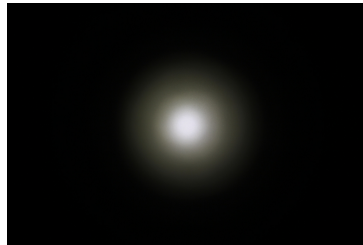
PHOTOMETRIC DATA (MEASURED):

<p>NICHIA</p> <p>LED NCSxx19B FWHM / FWTM 3.6° / 12.0° Efficiency 90 % Peak intensity 73.3 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>NICHIA</p> <p>LED NV4x144A FWHM / FWTM 11.0° / 24.0° Efficiency 90 % Peak intensity 13.4 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>NICHIA</p> <p>LED NVSxx19B/NVSxx19C FWHM / FWTM 6.0° / 13.0° Efficiency 93 % Peak intensity 48 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>NICHIA</p> <p>LED NWSx229A FWHM / FWTM 7.0° / 18.0° Efficiency 91 % Peak intensity 26 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		

PHOTOMETRIC DATA (MEASURED):

SAMSUNG

LED LH351B
 FWHM / FWTM 5.1° / 13.0°
 Efficiency 90 %
 Peak intensity 51.8 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



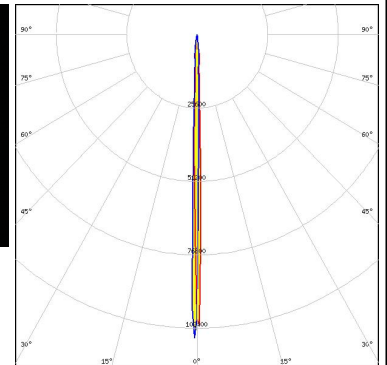
SAMSUNG

LED LH351Z
 FWHM / FWTM 4.2° / 10.0°
 Efficiency 90 %
 Peak intensity 71.4 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



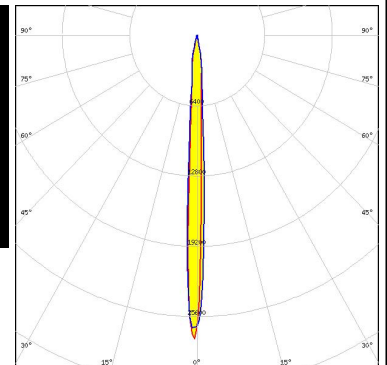
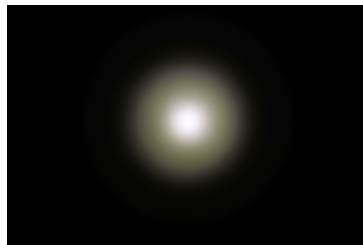
SEOUL SEMICONDUCTOR

LED nPola
 FWHM / FWTM 2.0° / 7.0°
 Efficiency 94 %
 Peak intensity 114 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:


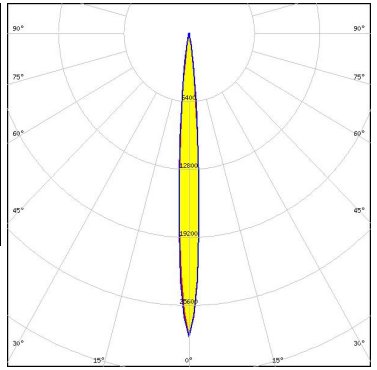

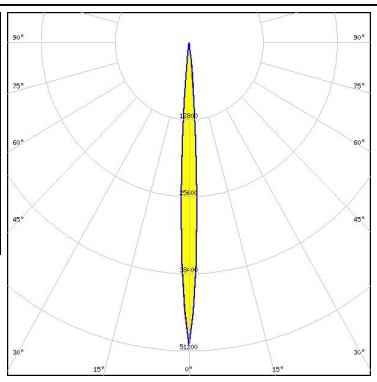

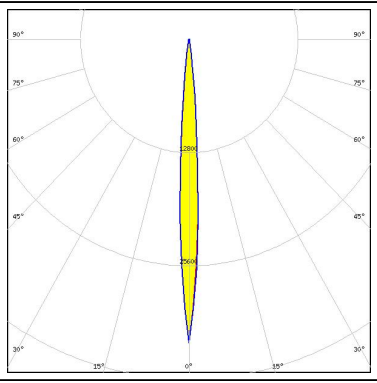

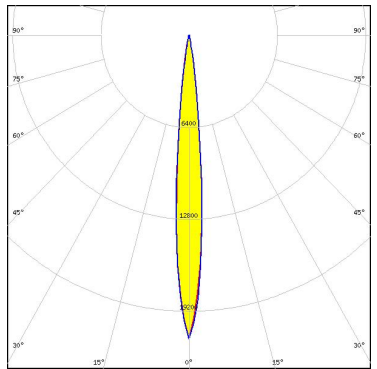


SEOUL SEMICONDUCTOR

LED Z5M3
 FWHM / FWTM 6.0° / 19.0°
 Efficiency 93 %
 Peak intensity 28.6 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



PHOTOMETRIC DATA (SIMULATED):

<p>CREE → LED</p> <p>LED: XHP35 HD FWHM / FWTM: 7.8° / 17.0° Efficiency: 94 % Peak intensity: 28.6 cd/lm LEDs/each optic: 1 Light colour: White Required components:</p>		
<p>CREE → LED</p> <p>LED: XHP35 HI FWHM / FWTM: 6.2° / 13.0° Efficiency: 94 % Peak intensity: 50.4 cd/lm LEDs/each optic: 1 Light colour: White Required components:</p>		
<p>CREE → LED</p> <p>LED: XHP35.2 HD FWHM / FWTM: 8.0° / 16.0° Efficiency: 96 % Peak intensity: 34.3 cd/lm LEDs/each optic: 1 Light colour: White Required components:</p>		
<p>CREE → LED</p> <p>LED: XHP35.2 HD FWHM / FWTM: 10.0° / 19.0° Efficiency: 94 % Peak intensity: 21.1 cd/lm LEDs/each optic: 1 Light colour: White Required components:</p>		

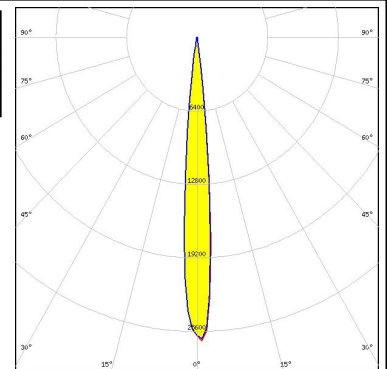
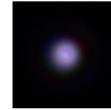
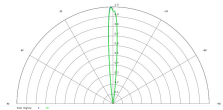
PHOTOMETRIC DATA (SIMULATED):

<p>CREE → LED</p> <p>LED: XHP50.2 FWHM / FWTM: 12.0° / 22.0° Efficiency: 95 % Peak intensity: 15.1 cd/lm LEDs/each optic: 1 Light colour: White Required components:</p>	
<p>CREE → LED</p> <p>LED: XM-L2 FWHM / FWTM: 8.0° / 16.0° Efficiency: 97 % Peak intensity: 35 cd/lm LEDs/each optic: 1 Light colour: White Required components:</p>	
<p>LUMILEDS</p> <p>LED: LUXEON C FWHM / FWTM: 4.0° / 10.0° Efficiency: 94 % Peak intensity: 80.9 cd/lm LEDs/each optic: 1 Light colour: White Required components:</p>	
<p>LUMILEDS</p> <p>LED: LUXEON Rubix FWHM / FWTM: 4.0° / 10.0° Efficiency: 95 % Peak intensity: 104 cd/lm LEDs/each optic: 1 Light colour: Blue Required components:</p>	

PHOTOMETRIC DATA (SIMULATED):

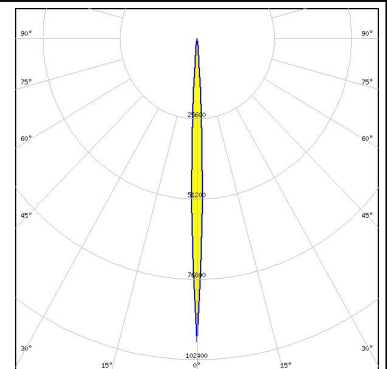
LUMILEDS

LED LUXEON Rubix
 FWHM / FWTM 10.0° / 17.0°
 Efficiency 97 %
 Peak intensity 26.6 cd/lm
 LEDs/each optic 4
 Light colour RGBW
 Required components:



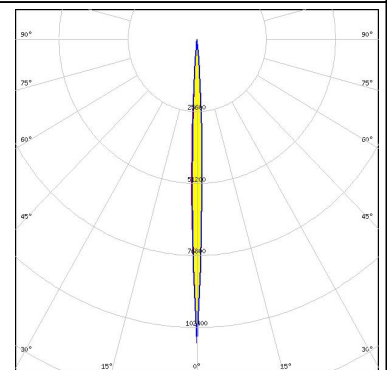
LUMILEDS

LED LUXEON Rubix
 FWHM / FWTM 4.0° / 10.0°
 Efficiency 95 %
 Peak intensity 96.7 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



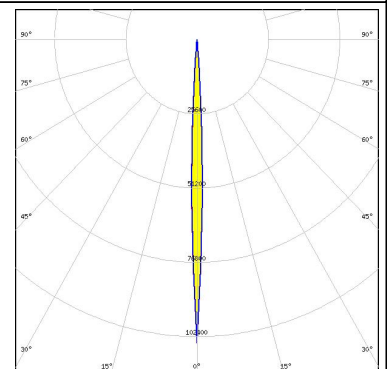
LUMILEDS

LED LUXEON Rubix
 FWHM / FWTM 4.0° / 10.0°
 Efficiency 95 %
 Peak intensity 107.9 cd/lm
 LEDs/each optic 1
 Light colour Red
 Required components:


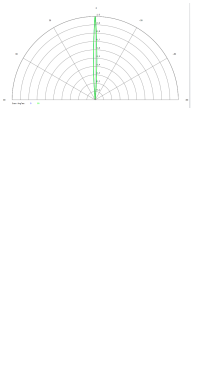

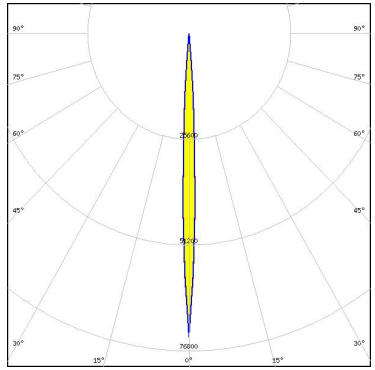

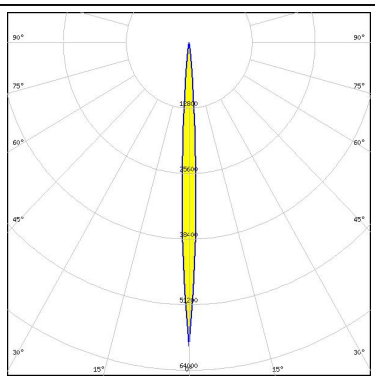

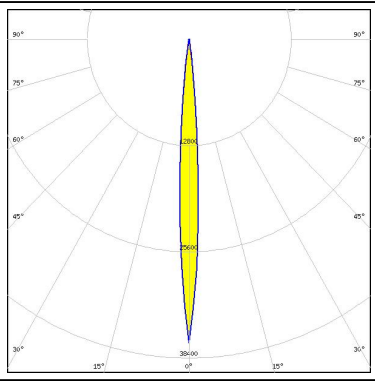


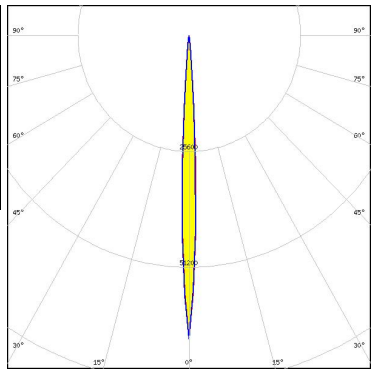


LUMILEDS

LED LUXEON Rubix
 FWHM / FWTM 4.0° / 10.0°
 Efficiency 95 %
 Peak intensity 104.6 cd/lm
 LEDs/each optic 1
 Light colour Green
 Required components:



PHOTOMETRIC DATA (SIMULATED):

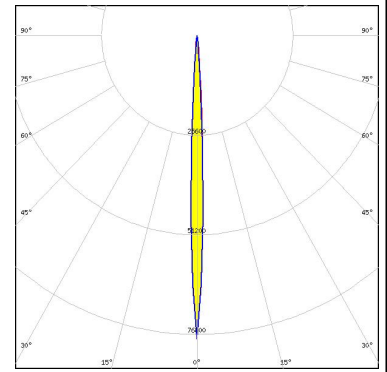
	<p>LED SST-10-B130</p> <p>FWHM / FWTM 5.0° / 10.0°</p> <p>Efficiency 95 %</p> <p>LEDs/each optic 1</p> <p>Light colour IR</p> <p>Required components:</p>			
	<p>LED OSCONIQ P 3737 (2W version)</p> <p>FWHM / FWTM 5.5° / 12.8°</p> <p>Efficiency 94 %</p> <p>Peak intensity 59.3 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>			
	<p>LED OSCONIQ P 3737 (3W version)</p> <p>FWHM / FWTM 5.5° / 12.8°</p> <p>Efficiency 94 %</p> <p>Peak intensity 59.3 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>			
	<p>LED OSLOM Square CSSRM2/CSSRM3</p> <p>FWHM / FWTM 5.4° / 11.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 67 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>			

PHOTOMETRIC DATA (SIMULATED):

OSRAM

Opto Semiconductors

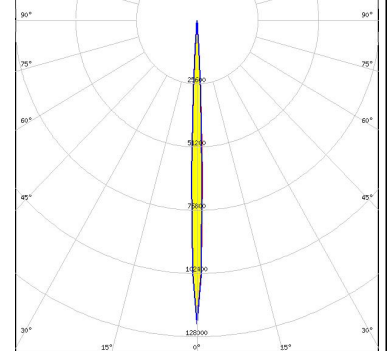
LED OSLON Square Flat
 FWHM / FWTM 4.8° / 10.0°
 Efficiency 94 %
 Peak intensity 78 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



OSRAM

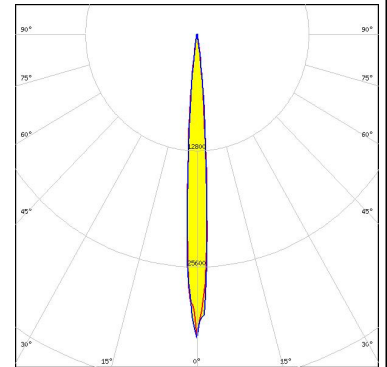
Opto Semiconductors

LED OSTAR Projection Compact (Kx.CSLNM1.xx)
 FWHM / FWTM 4.0° / 8.0°
 Efficiency 94 %
 Peak intensity 122.8 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



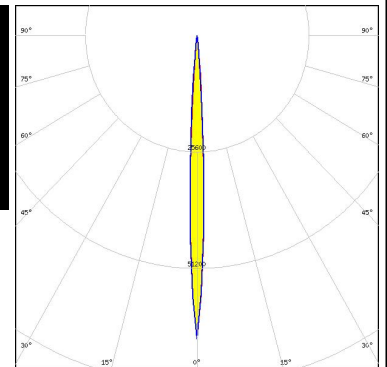
SAMSUNG

LED LH351D
 FWHM / FWTM 7.5° / 15.0°
 Efficiency 97 %
 Peak intensity 34.2 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



SEOUL SEMICONDUCTOR

LED Z5M1/Z5M2
 FWHM / FWTM 5.4° / 11.0°
 Efficiency 94 %
 Peak intensity 66.7 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



PHOTOMETRIC DATA (SIMULATED):

<p> SEOUL SEMICONDUCTOR</p> <p>LED Z8Y22P</p> <p>FWHM / FWTM 7.8°</p> <p>Efficiency 94 %</p> <p>Peak intensity 29.9 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	
<p> SEOUL SEMICONDUCTOR</p> <p>LED Z8Y50P</p> <p>FWHM / FWTM 12.0° / 24.0°</p> <p>Efficiency 97 %</p> <p>Peak intensity 12.7 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	

GENERAL INFORMATION:

NOTE: The typical beam angle will be changed by different color, chip size and chip position tolerance. The typical total beam angle is the full angle measured where the luminous intensity is half of the peak value.

MATERIALS:

As part of our continuous research and improvement processes, and to ensure the best possible quality and availability of our products, LEDiL reserves the right to change material grades without notice.

PRODUCT DATA USER AGREEMENT AND DISCLAIMER:

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[CS15759_HB-2X2MX-8-W](#) [CA16435_LXP2-SS-WAS](#) [CS13756_STRADA-IP-2X6-DWC-PC](#) [CN16210_GABRIELLA-MIDI-W](#)
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