

## HB-2X2MX-8-M

~30° wide beam. New revision.

### SPECIFICATION:

Dimensions	90.0 x 90.0 mm
Height	16.4 mm
Fastening	screw
Ingress protection classes	IP67
ROHS compliant	yes ⓘ

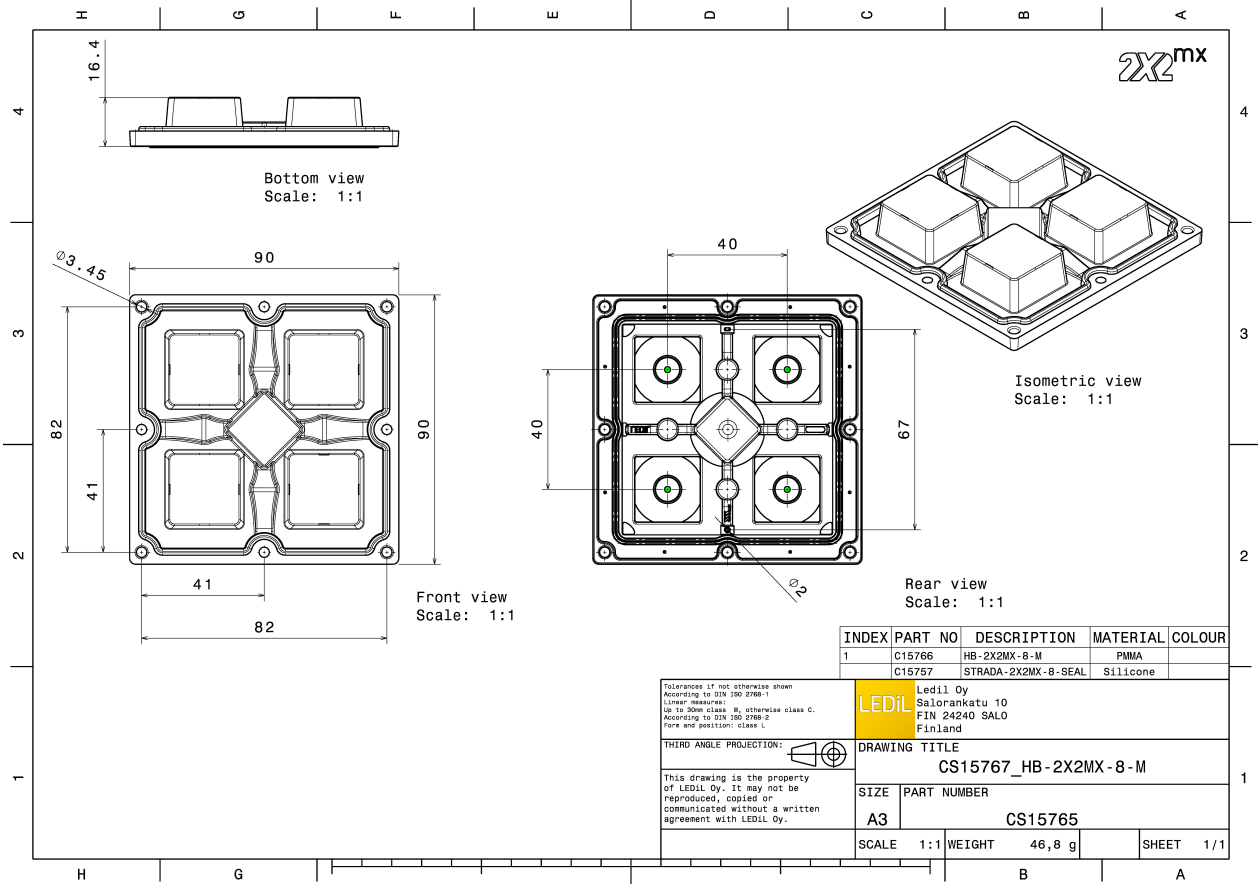
### MATERIALS:

Component	Type	Material	Colour	Finish
HB-2X2MX-8-M	Multi-lens	PMMA	clear	
STRADA-2X2MX-8-SEAL	Seal	Silicone	clear	



### ORDERING INFORMATION:

Component	Type	Qty in box	MOQ	MPQ	Box weight (kg)
CS15767_HB-2X2MX-8-M » Box size: 480 x 280 x 300 mm	Multi-lens	156	52	52	8.3

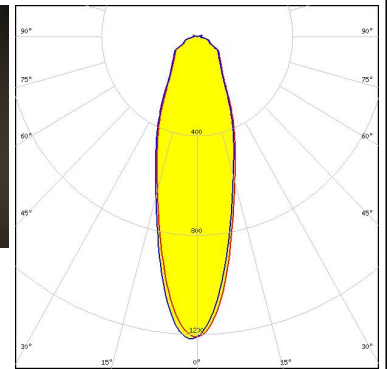
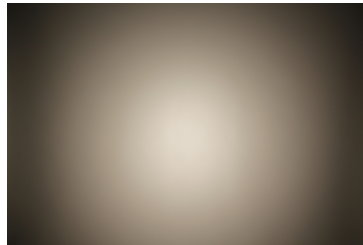


See also our general installation guide: [www.ledil.com/installation\\_guide](http://www.ledil.com/installation_guide)

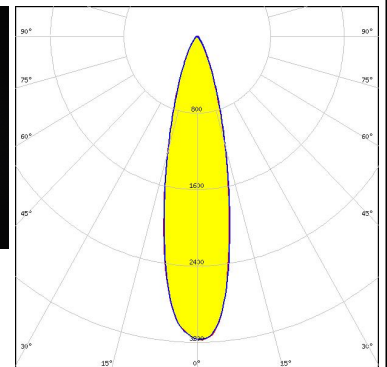
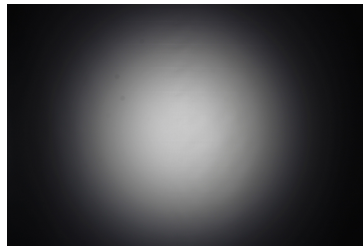
#### OPTICAL RESULTS (MEASURED):



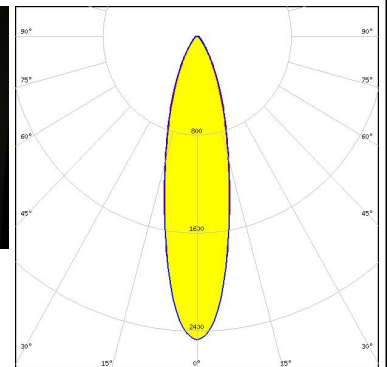
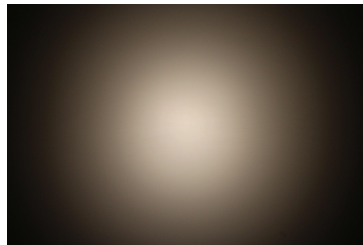
LED CXA/B 15xx  
 FWHM / FWTM 31.0° / 101.0°  
 Efficiency 91 %  
 Peak intensity 1.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 Bender Wirth: 441 Typ 2x2MX HV



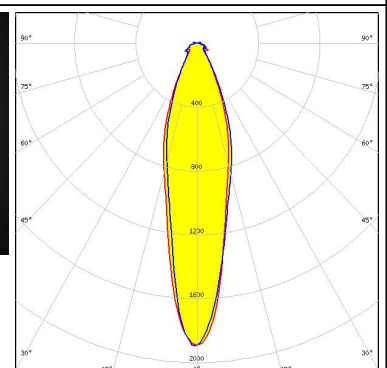
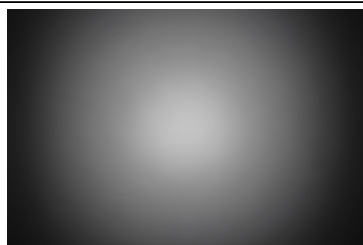
LED LUXEON M/MX  
 FWHM / FWTM 25.0° / 52.0°  
 Efficiency 94 %  
 Peak intensity 3.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:




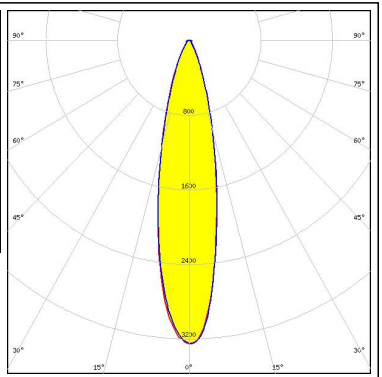

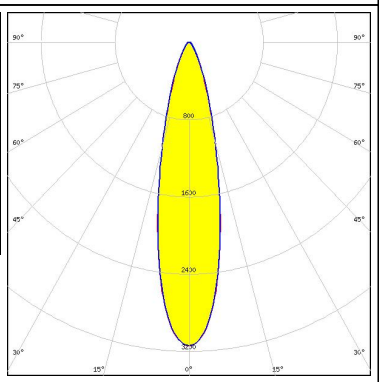

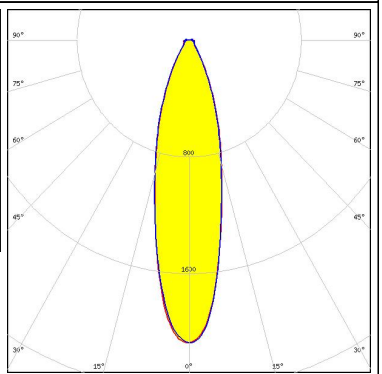
LED LUXEON XR-7070 (L224-xxx004MLU010)  
 FWHM / FWTM 26.0° / 61.0°  
 Efficiency 94 %  
 Peak intensity 2.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:




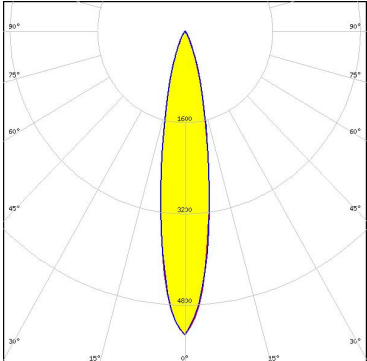
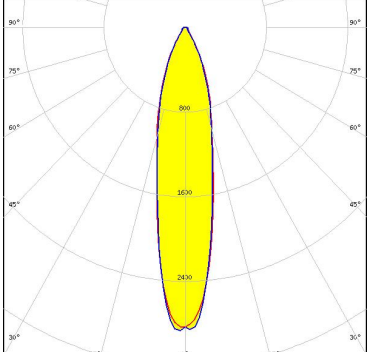

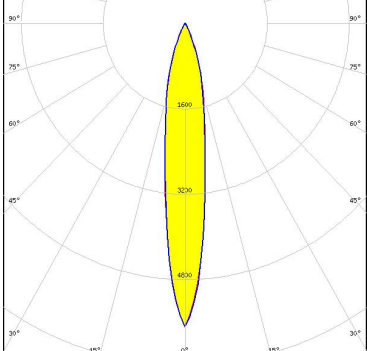

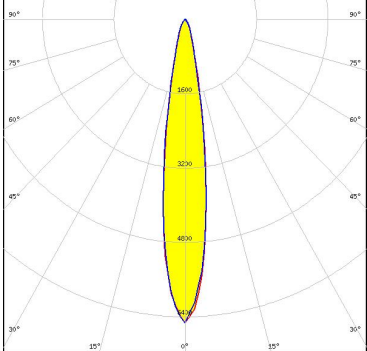
LED HiLOM SC16 (LH181B)  
 FWHM / FWTM 25.0° / 64.0°  
 Efficiency 93 %  
 Peak intensity 1.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



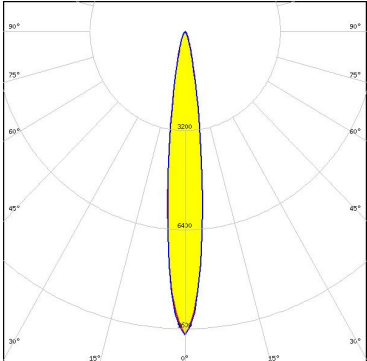
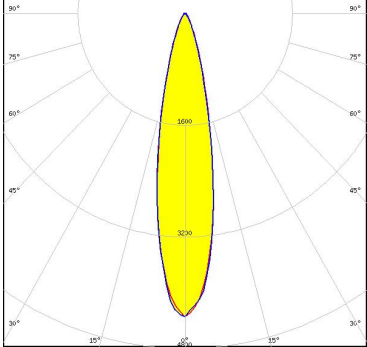
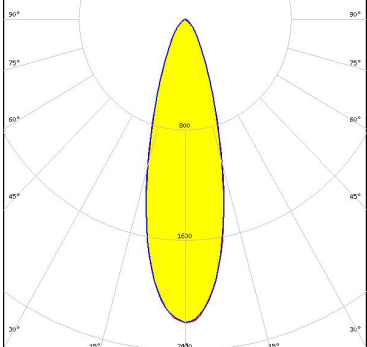
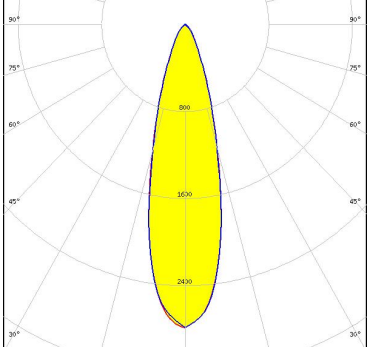
#### OPTICAL RESULTS (MEASURED):

<p><b>SCIOLUX</b></p> <p>LED XLE-S22C4XD16 (XD16)</p> <p>FWHM / FWTM 23.0° / 50.0°</p> <p>Efficiency 93 %</p> <p>Peak intensity 3.3 cd/m</p> <p>LEDs/each optic 4</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>SEOUL SEMICONDUCTOR</b></p> <p>LED WICOP 5050</p> <p>FWHM / FWTM 24.0° / 51.0°</p> <p>Efficiency 95 %</p> <p>Peak intensity 3.1 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>SEOUL SEMICONDUCTOR</b></p> <p>LED Z8Y22</p> <p>FWHM / FWTM 27.0° / 63.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 2.1 cd/m</p> <p>LEDs/each optic 4</p> <p>Light colour White</p> <p>Required components:</p>		

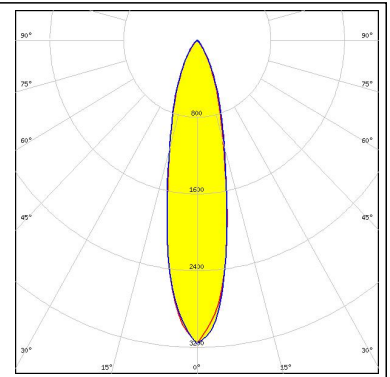
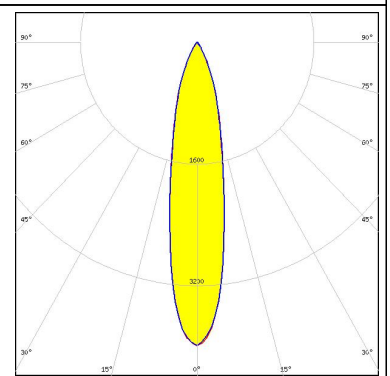
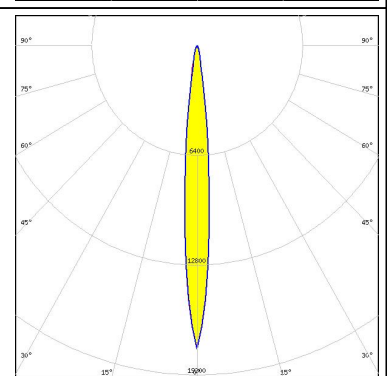
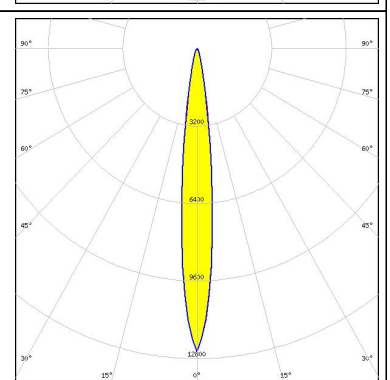
#### OPTICAL RESULTS (SIMULATED):

<p> <b>bridgelux</b></p> <p>LED: Bridgelux SMD 5050            FWHM / FWTM: 19.0° / 43.0°            Efficiency: 94 %            Peak intensity: 5.3 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>CITIZEN</b></p> <p>LED: CLU700/701/702/703            FWHM / FWTM: 22.0° / 58.0°            Efficiency: 92 %            Peak intensity: 2.9 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:            Bender Wirth: 434 Typ 2x2MX HV</p>	
<p> <b>CREE LEDs</b></p> <p>LED: CMA1303            FWHM / FWTM: 16.0° / 44.0°            Efficiency: 96 %            Peak intensity: 5.7 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:            Bender Wirth: 448 Typ 2x2MX HV</p>	
<p> <b>CREE LEDs</b></p> <p>LED: XHP35 HD            FWHM / FWTM: 17.0° / 34.0°            Efficiency: 94 %            Peak intensity: 6.6 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	

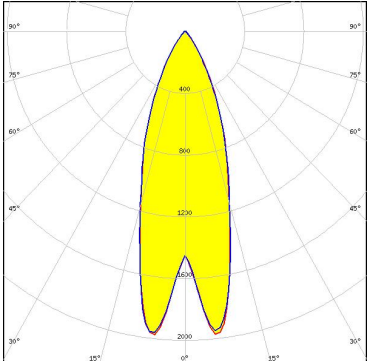
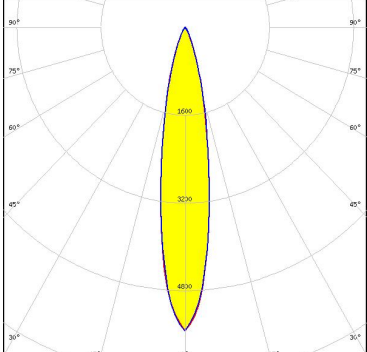
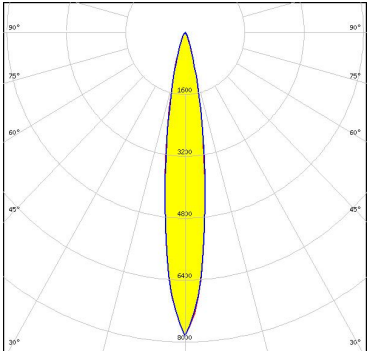
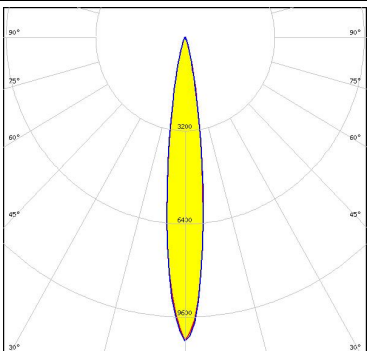
#### OPTICAL RESULTS (SIMULATED):

<p><b>CREE</b> LEDs</p> <p>LED XHP35 HI            FWHM / FWTM 14.0° / 30.0°            Efficiency 94 %            Peak intensity 9.8 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>	
<p><b>CREE</b> LEDs</p> <p>LED XHP50.2            FWHM / FWTM 22.0° / 44.0°            Efficiency 94 %            Peak intensity 4.4 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>	
<p><b>CREE</b> LEDs</p> <p>LED XHP70.2            FWHM / FWTM 30.0° / 62.0°            Efficiency 91 %            Peak intensity 2.2 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p> <p style="background-color: #ADD8E6; padding: 2px;">Protective plate, glass</p>	
<p><b>CREE</b> LEDs</p> <p>LED XHP70.3 HD            FWHM / FWTM 28.0° / 56.0°            Efficiency 96 %            Peak intensity 2.8 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>	

#### OPTICAL RESULTS (SIMULATED):

<p><b>LUMILEDS</b></p> <p>LED: LUXEON 7070            FWHM / FWTM: 24.0° / 58.0°            Efficiency: 96 %            Peak intensity: 3.2 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>LUMINUS</b></p> <p>LED: MP 7070            FWHM / FWTM: 22.0° / 52.0°            Efficiency: 97 %            Peak intensity: 4 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>LUMINUS</b></p> <p>LED: SFT-40-WCS            FWHM / FWTM: 10.0° / 20.0°            Efficiency: 97 %            Peak intensity: 17.7 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>LUMINUS</b></p> <p>LED: SFT-70X-WCS            FWHM / FWTM: 12.0° / 26.0°            Efficiency: 97 %            Peak intensity: 12.5 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	

#### OPTICAL RESULTS (SIMULATED):

<p><b>NICHIA</b></p> <p>LED: NF2x757G            FWHM / FWTM: 34.0° / 66.0 + 67.0°            Efficiency: 97 %            Peak intensity: 2 cd/lm            LEDs/each optic: 4            Light colour: White            Required components:</p>	
<p><b>NICHIA</b></p> <p>LED: NFMW48xA            FWHM / FWTM: 19.0° / 42.0°            Efficiency: 94 %            Peak intensity: 5.5 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>NICHIA</b></p> <p>LED: NV4WB35AM            FWHM / FWTM: 16.0° / 34.0°            Efficiency: 97 %            Peak intensity: 7.8 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>NICHIA</b></p> <p>LED: NVSxE21A            FWHM / FWTM: 14.0° / 28.0°            Efficiency: 94 %            Peak intensity: 10.4 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	

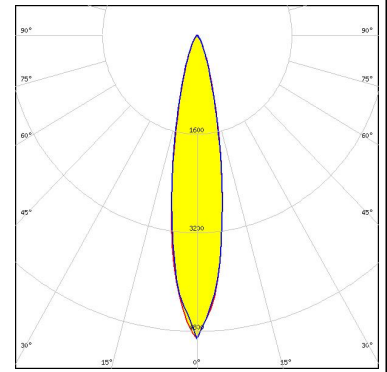


#### OPTICAL RESULTS (SIMULATED):

#### OSRAM

Opto Semiconductors

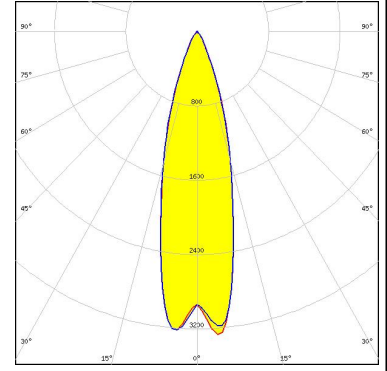
LED Duris S10  
 FWHM / FWTM 20.0° / 43.0°  
 Efficiency 94 %  
 Peak intensity 4.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OSRAM

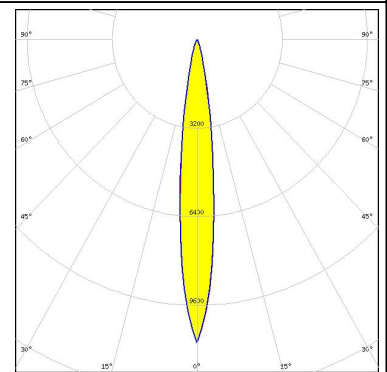
Opto Semiconductors

LED OSCONIQ C 2424  
 FWHM / FWTM 28.0° / 52.0°  
 Efficiency 97 %  
 Peak intensity 3.3 cd/lm  
 LEDs/each optic 4  
 Light colour White  
 Required components:



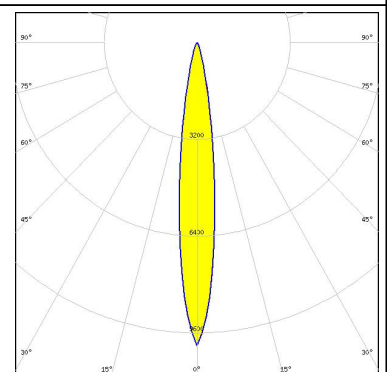
#### SAMSUNG

LED LH181B  
 FWHM / FWTM 14.0° / 28.0°  
 Efficiency 96 %  
 Peak intensity 11 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### SAMSUNG

LED LH231B  
 FWHM / FWTM 14.0° / 30.0°  
 Efficiency 96 %  
 Peak intensity 10 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



### 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.

Due to use of high power COB's with this product, special attention to proper thermal design is highly recommended. LEDiL has no liability for direct, indirect or consecutive damages arising from the LEDiL products being used outside of the recommended temperature range.

### 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:

The measured data in the provided downloadable LEDiL Product Datasheets and Mechanical 2D-Drawings is rounded and provided as reference for planning. LEDiL Oy's optical specifications have been verified by conducting performance testing of the products in accordance with the company's quality system. The reported data are averaged results of multiple measurements with typical variation. LEDiL Oy reserves the right to without prior notification make changes and improvements to its products.

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