

## HB-2X2-M

~25° medium beam

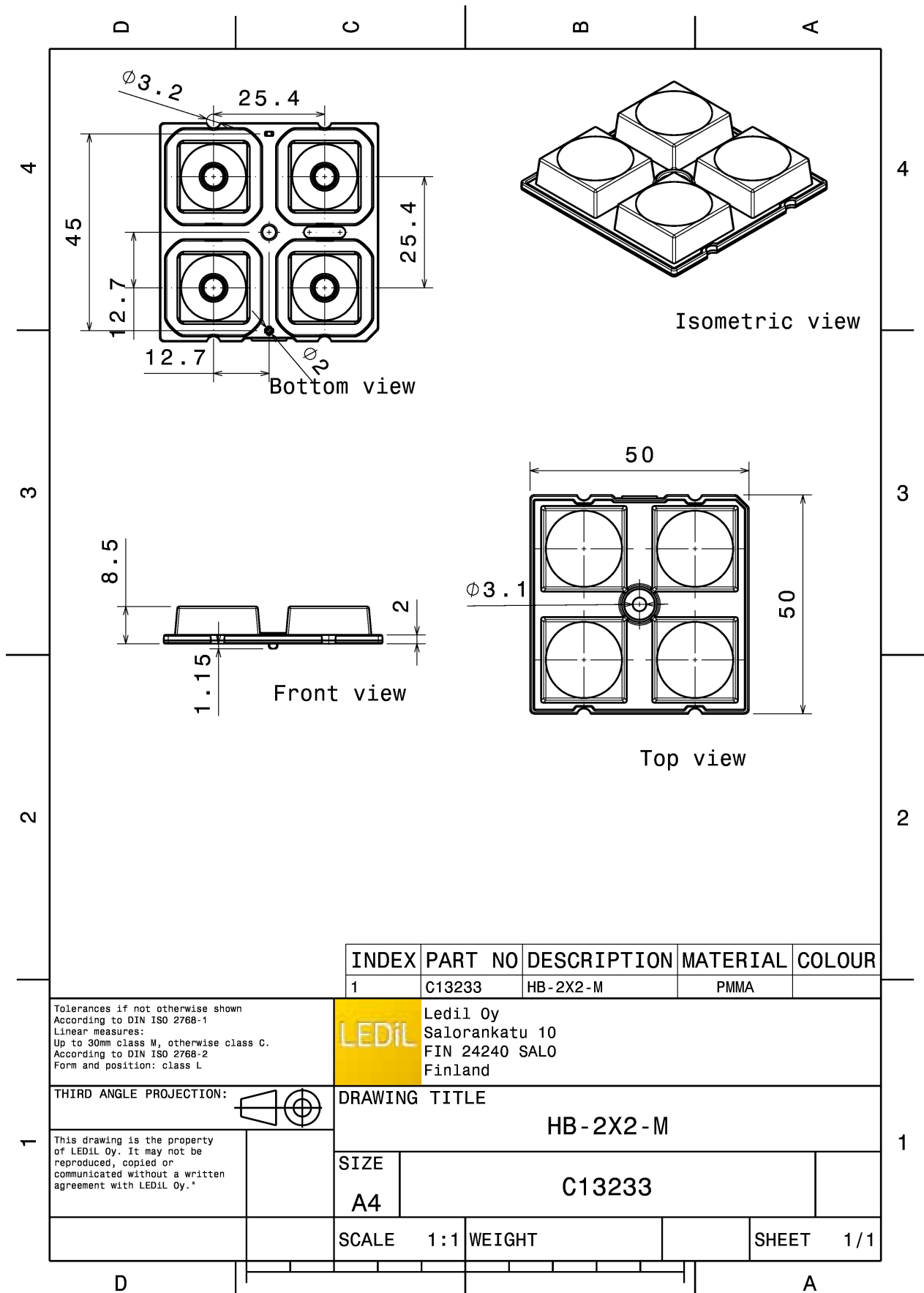
### TECHNICAL SPECIFICATIONS:

Dimensions	50.0 mm
Height	8.5 mm
Fastening	glue, screw, pin
Colour	clear
Box size	480 x 280 x 300 mm
Box weight	9.2 kg
Quantity in Box	800 pcs
ROHS compliant	yes ⓘ



### MATERIAL SPECIFICATIONS:

Component	Type	Material	Colour
HB-2X2-M	Multi-lens	PMMA	clear



INDEX	PART NO	DESCRIPTION	MATERIAL	COLOUR
1	C13233	HB-2X2-M	PMMA	

Tolerances if not otherwise shown  
According to DIN ISO 2768-1  
Linear measures:  
Up to 30mm class M, otherwise class C.  
According to DIN ISO 2768-2  
Form and position: class L

**LEDiL**  
LediL Oy  
Salorankatu 10  
FIN 24240 SALO  
Finland

THIRD ANGLE PROJECTION:

DRAWING TITLE  
**HB-2X2-M**

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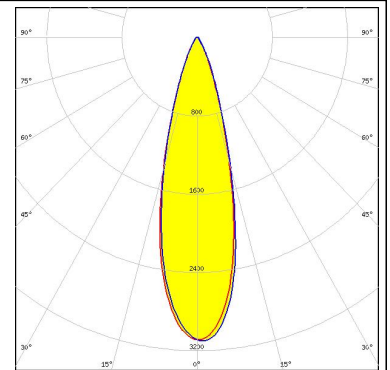
SIZE  
**A4**  
**C13233**

SCALE 1:1 WEIGHT SHEET 1/1

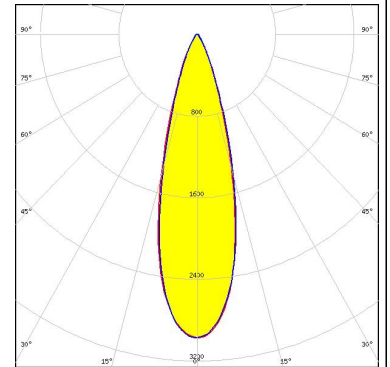
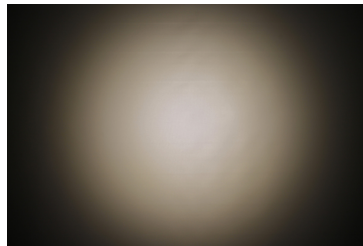
#### PHOTOMETRIC DATA (MEASURED):



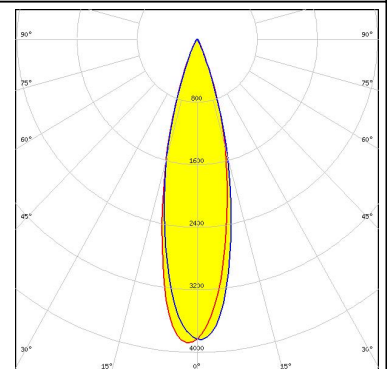
LED QUICK FLUX XTP 2x4 xxx LS G5  
 FWHM 28.0°  
 Efficiency 94 %  
 Peak intensity 3.100 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



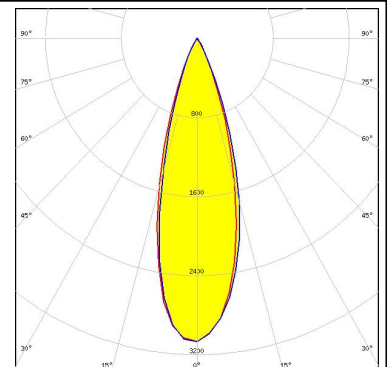
LED QUICK FLUX XTP 2x6 xxx LS G5  
 FWHM 29.0°  
 Efficiency 94 %  
 Peak intensity 3.000 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED XB-D  
 FWHM 26.0°  
 Efficiency 94 %  
 Peak intensity 3.900 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



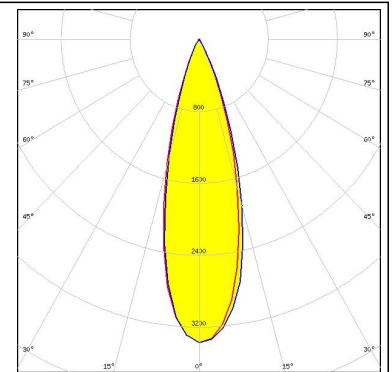
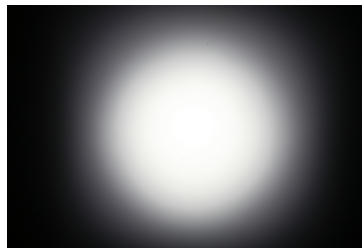
LED XP-G  
 FWHM 31.0°  
 Efficiency 91 %  
 Peak intensity 3.100 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



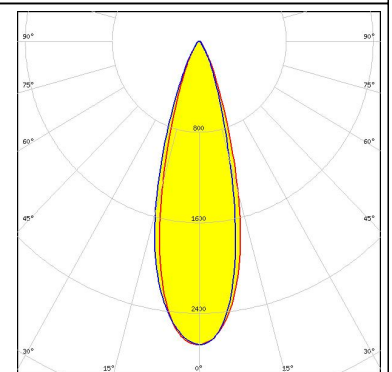
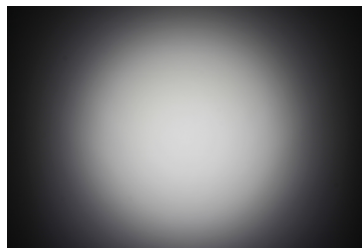
#### PHOTOMETRIC DATA (MEASURED):



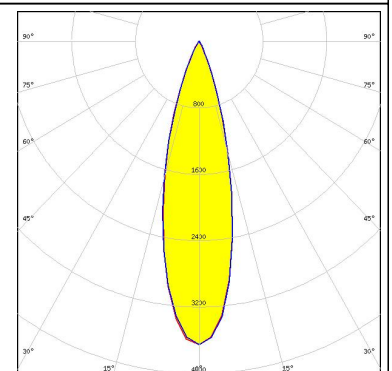
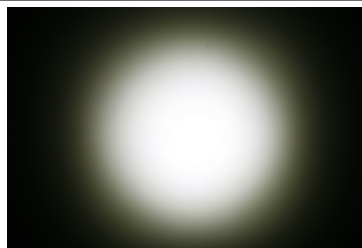
LED XP-G2  
 FWHM 33.0°  
 Efficiency 93 %  
 Peak intensity 3.400 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



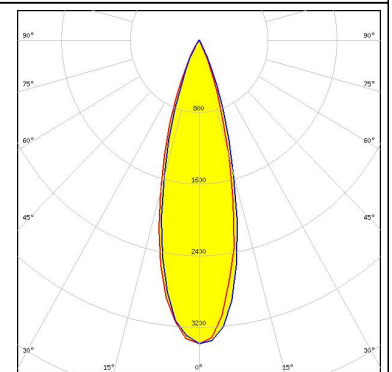
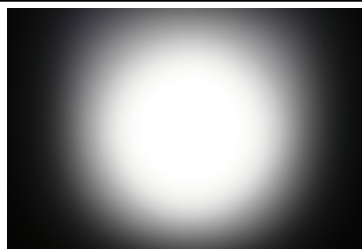
LED XP-G3  
 FWHM 30.0°  
 Efficiency 94 %  
 Peak intensity 2.700 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED XT-E  
 FWHM 25.0°  
 Efficiency 92 %  
 Peak intensity 3.700 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED H35C1 (LEMWA33)  
 FWHM 29.0°  
 Efficiency 91 %  
 Peak intensity 3.400 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

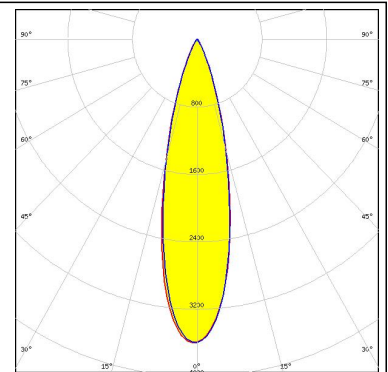




#### PHOTOMETRIC DATA (MEASURED):

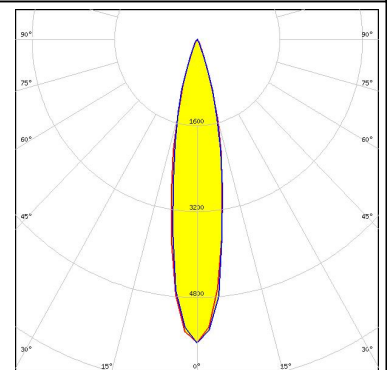
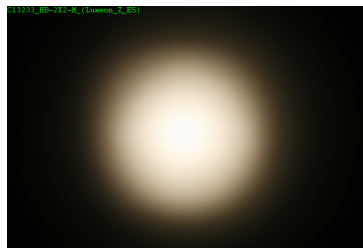
#### LUMILEDS

LED LUXEON Q  
 FWHM 26.0°  
 Efficiency 94 %  
 Peak intensity 3.600 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



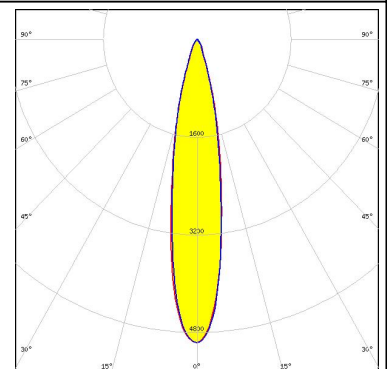
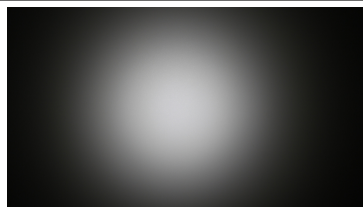
#### LUMILEDS

LED LUXEON Z ES  
 FWHM 21.0°  
 Efficiency 91 %  
 Peak intensity 5.640 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



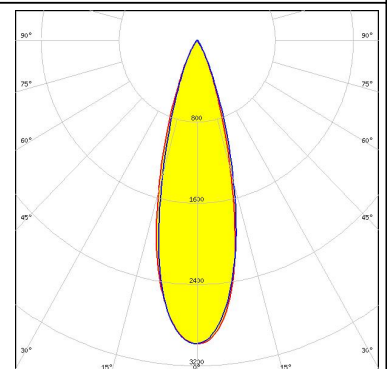
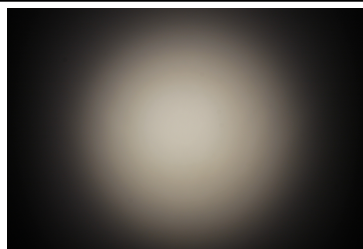
#### NICHIA

LED NVSxE21A  
 FWHM 20.0°  
 Efficiency 94 %  
 Peak intensity 4.970 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### NICHIA

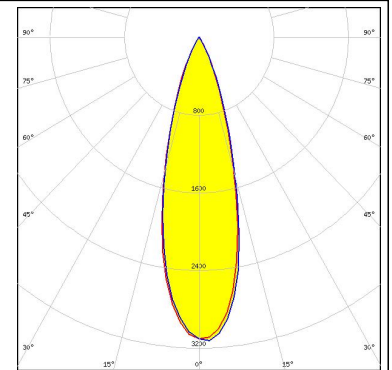
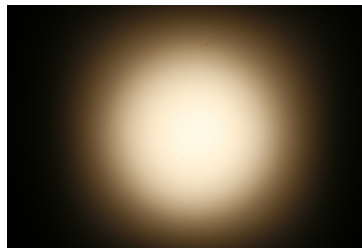
LED NVSxx19B/NVSxx19C  
 FWHM 29.0°  
 Efficiency 90 %  
 Peak intensity 3.000 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



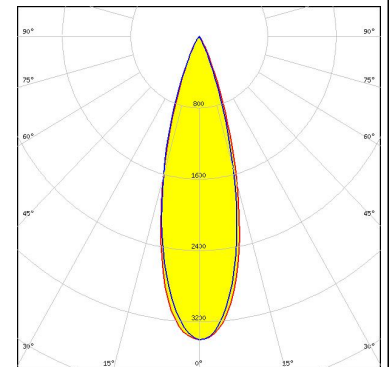
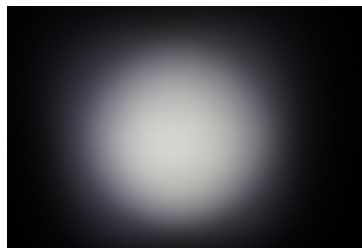
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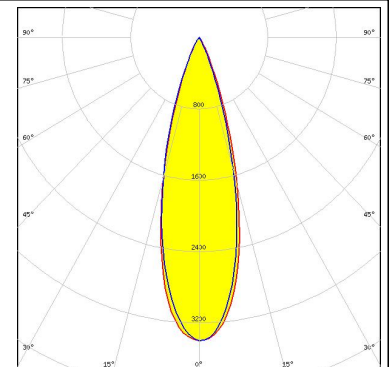
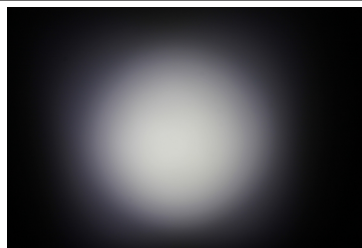
LED NVSxx19B/NVSxx19C  
 FWHM 29.0°  
 Efficiency 91 %  
 Peak intensity 3.100 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



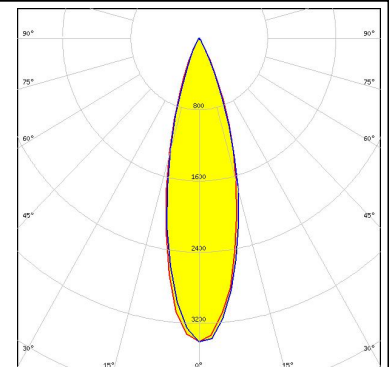
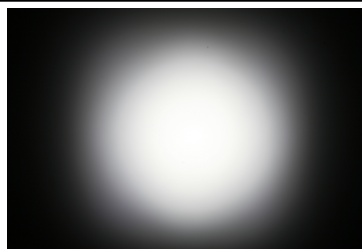
LED PrevalLED Brick HP 2x8  
 FWHM 30.0°  
 Efficiency 93 %  
 Peak intensity 3.400 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED OSLON Square CSSRM2/CSSRM3  
 FWHM 30.0°  
 Efficiency 93 %  
 Peak intensity 3.400 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



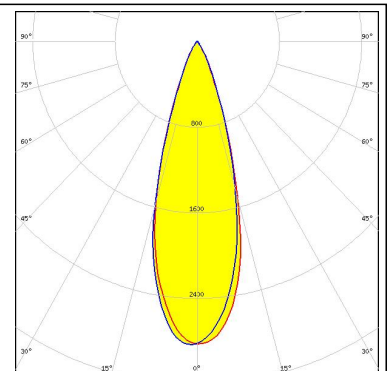
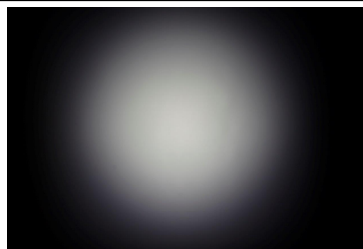
LED OSLON Square PC  
 FWHM 30.0°  
 Efficiency 91 %  
 Peak intensity 3.400 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### PHOTOMETRIC DATA (MEASURED):

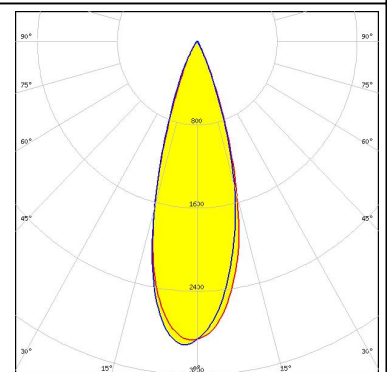
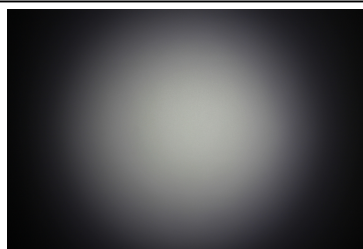
#### SAMSUNG

LED LH351B  
 FWHM 31.0°  
 Efficiency 94 %  
 Peak intensity 2.800 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:



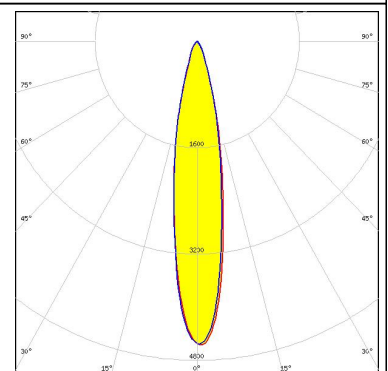
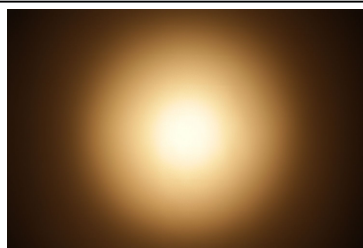
#### SAMSUNG

LED LH351Z  
 FWHM 32.0°  
 Efficiency 93 %  
 Peak intensity 2.900 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:



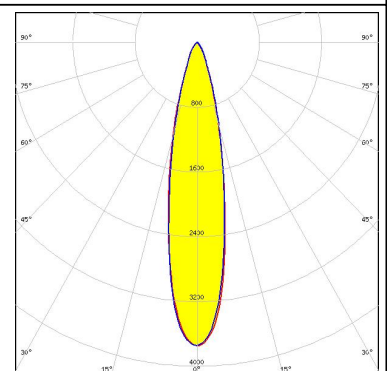
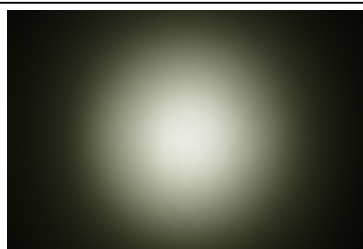
SEOUL SEMICONDUCTOR

LED Z8Y15  
 FWHM 20.0°  
 Efficiency 89 %  
 Peak intensity 4.600 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:


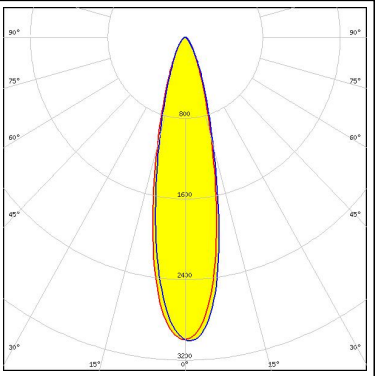

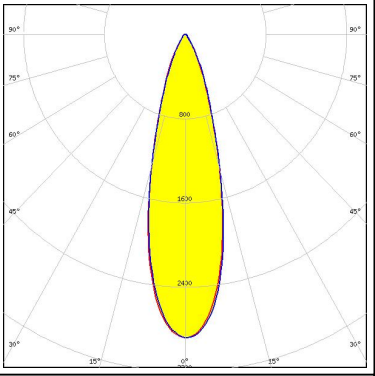
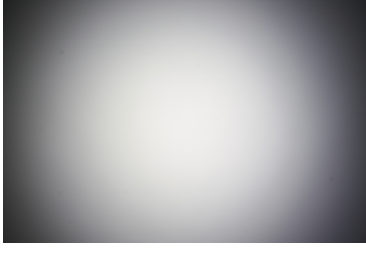
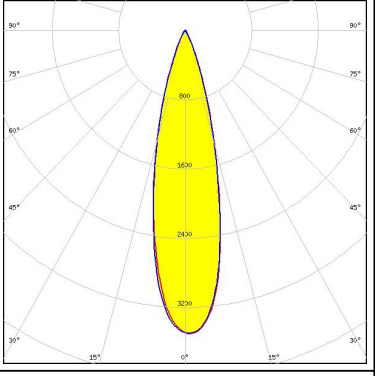

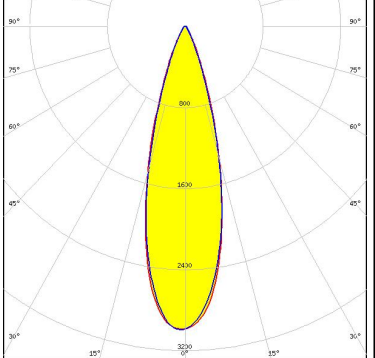


SEOUL SEMICONDUCTOR

LED Z8Y19  
 FWHM 22.0°  
 Efficiency 89 %  
 Peak intensity 3.800 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:



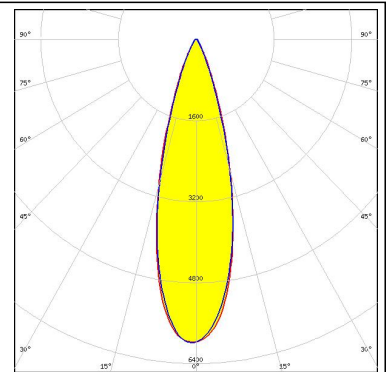
#### PHOTOMETRIC DATA (MEASURED):

<p><b>SEOL</b> SEOUL SEMICONDUCTOR</p> <p>LED Z8Y22 FWHM 24.0° Efficiency 94 % Peak intensity 3.000 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p><b>SEOL</b> SEOUL SEMICONDUCTOR</p> <p>LED Z8Y22P FWHM 28.0° Efficiency 94 % Peak intensity 2.900 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p><b>TOSHIBA</b> Leading Innovation &gt;&gt;&gt;</p> <p>LED TL1L4 FWHM 25.0° Efficiency 85 % Peak intensity 3.500 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p><b>TRIDONIC</b></p> <p>LED RLE G1 49x121mm 2000lm xxx EXC OTD FWHM 29.0° Efficiency 94 % Peak intensity 3.000 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		

#### PHOTOMETRIC DATA (MEASURED):

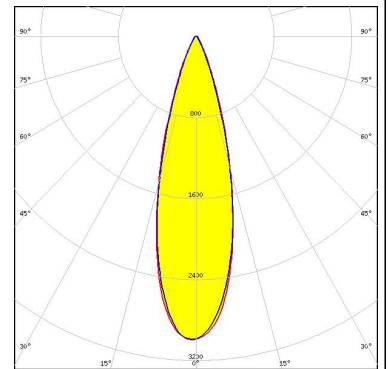
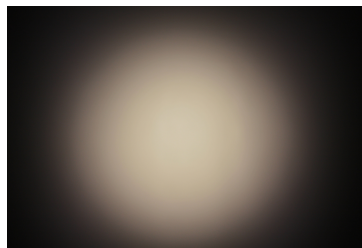
#### TRIDONIC

LED RLE G1 49x133mm 2000lm xxx EXC OTD  
FWHM 29.0°  
Efficiency 94 %  
Peak intensity 3.000 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



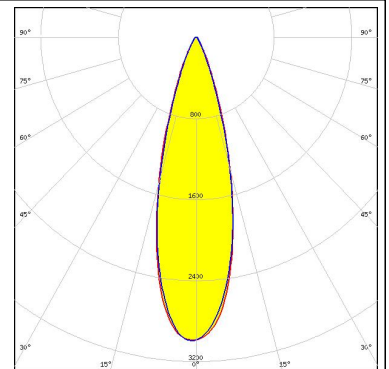
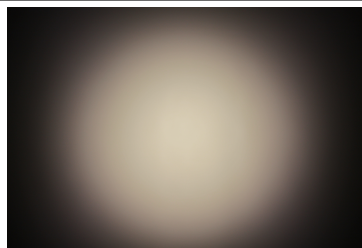
#### TRIDONIC

LED RLE G1 49x223mm 4000lm xxx EXC OTD  
FWHM 29.0°  
Efficiency 94 %  
Peak intensity 3.000 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



#### TRIDONIC

LED RLE G1 49x245mm 4000lm xxx EXC OTD  
FWHM 29.0°  
Efficiency 94 %  
Peak intensity 3.000 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



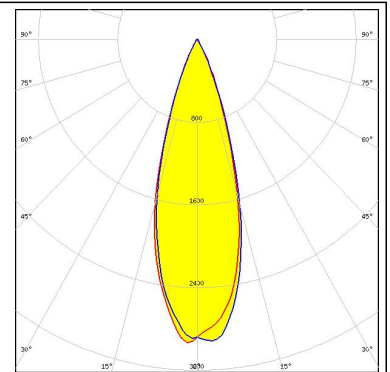


#### PHOTOMETRIC DATA (SIMULATED):

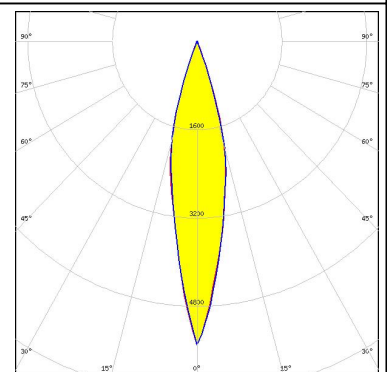


LED XP-G2  
 FWHM 32.0°  
 Efficiency 93 %  
 Peak intensity 3.000 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

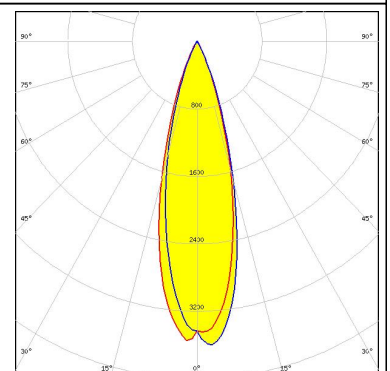
Transparent protective cover



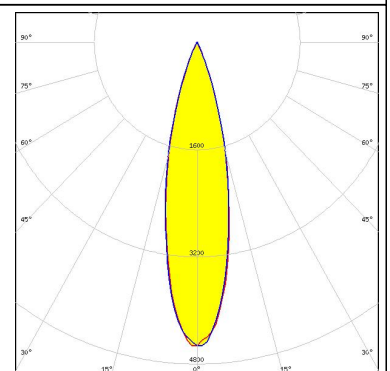
LED XQ-E HI  
 FWHM 22.0°  
 Efficiency 93 %  
 Peak intensity 5.500 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED LUXEON 3030 2D (Round LES)  
 FWHM 28.0°  
 Efficiency 94 %  
 Peak intensity 3.600 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED LUXEON C  
 FWHM 25.0°  
 Efficiency 94 %  
 Peak intensity 4.600 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



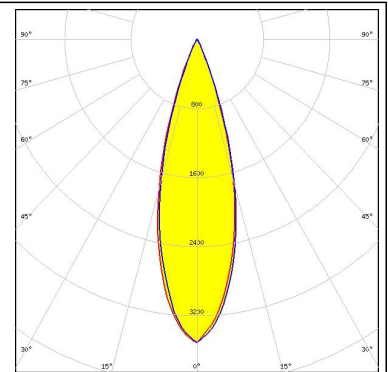


#### PHOTOMETRIC DATA (SIMULATED):

#### OSRAM

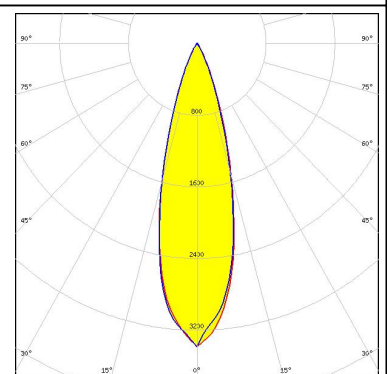
Opto Semiconductors

LED OSLON SSL 80  
FWHM 29.6°  
Efficiency 94 %  
Peak intensity 3.500 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



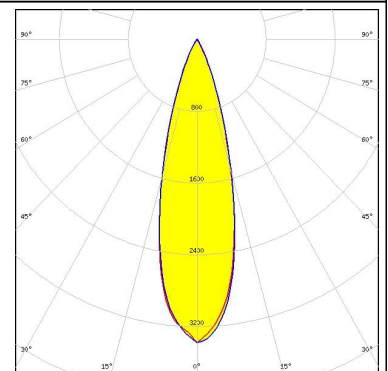
#### SAMSUNG

LED LH231B  
FWHM 28.0°  
Efficiency 94 %  
Peak intensity 3.387 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



SEOUL SEMICONDUCTOR

LED Z8Y22T  
FWHM 28.0°  
Efficiency 94 %  
Peak intensity 3.380 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.

### 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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#### LEDiL Oy

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#### LEDiL Inc.

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Sycamore IL 60178  
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#### Local sales and technical support

[www.ledil.com/  
where\\_to\\_buy](http://www.ledil.com/where_to_buy)

#### Shipping locations

Salo, Finland  
Hong Kong, China

#### Distribution Partners

[www.ledil.com/  
where\\_to\\_buy](http://www.ledil.com/where_to_buy)