

HB-2X2-M

~25° medium beam optimized for CREE XP-L
and XM-L

TECHNICAL SPECIFICATIONS:

Dimensions	50.0 mm
Height	8.5 mm
Fastening	pin, screw
ROHS compliant	yes ⓘ

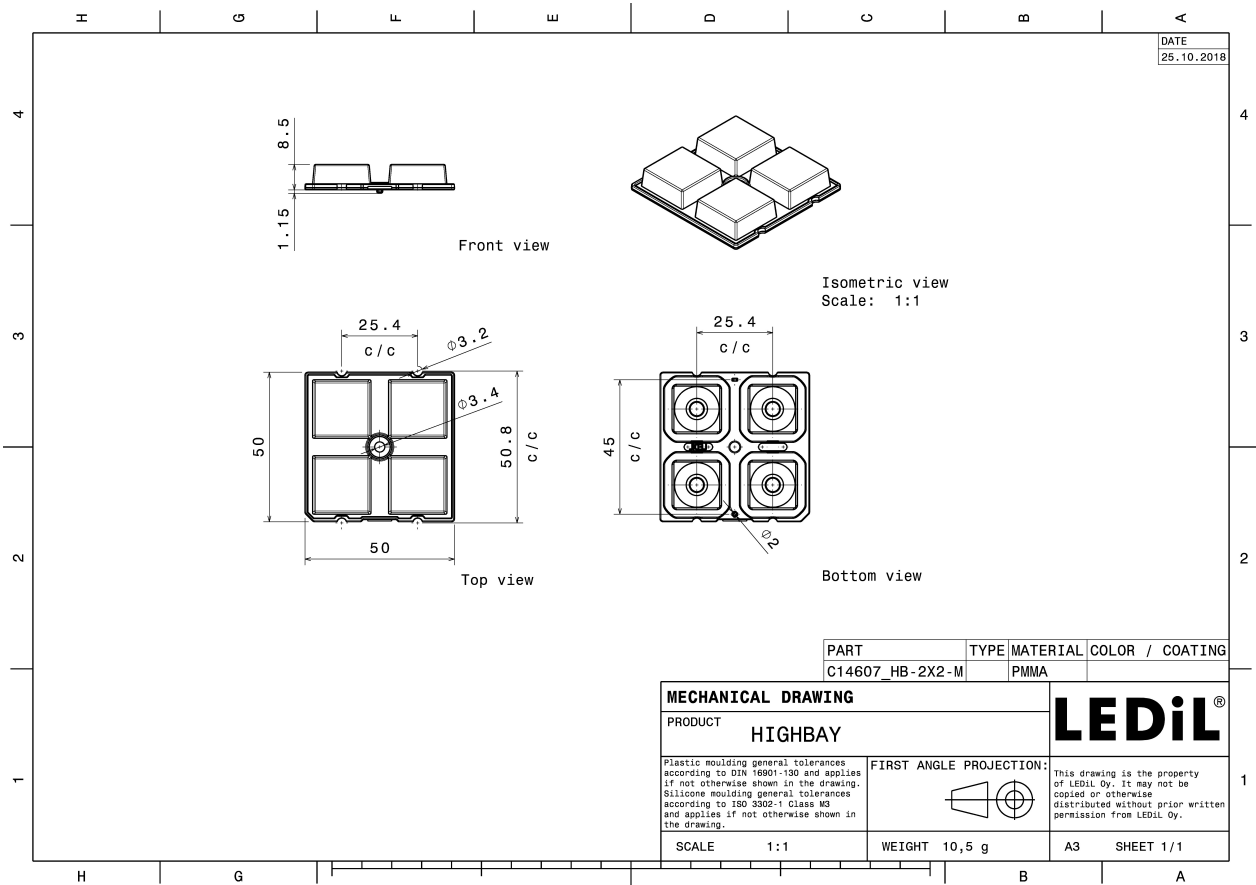
MATERIAL SPECIFICATIONS:

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



ORDERING INFORMATION:

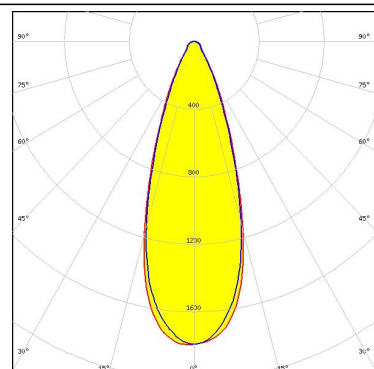
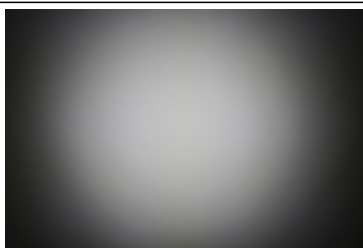
Component	Qty in box	MOQ	MPQ	Box weight (kg)
C14607_HB-2X2-M » Box size: 480 x 280 x 300 mm	800	160	160	9.2



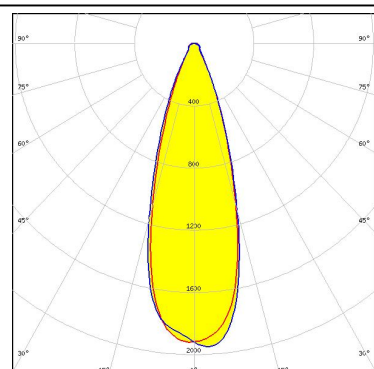
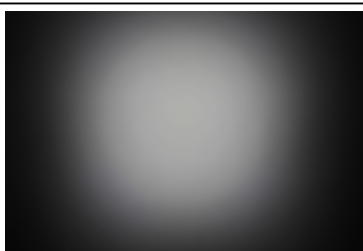
PHOTOMETRIC DATA (MEASURED):



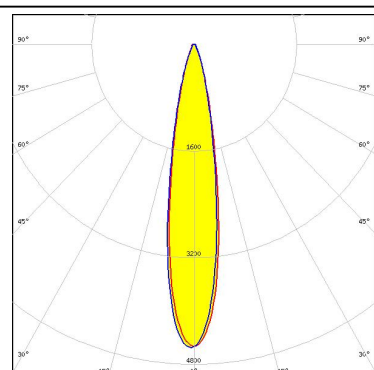
LED Bridgelux SMD 5050
 FWHM 36.0°
 Efficiency 94 %
 Peak intensity 1.8 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



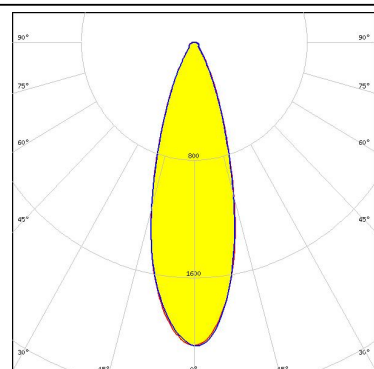
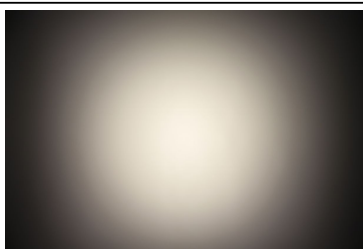
LED XD16
 FWHM 33.0°
 Efficiency 94 %
 Peak intensity 2 cd/lm
 LEDs/each optic 4
 Light colour White
 Required components:



LED XD16
 FWHM 19.0°
 Efficiency 90 %
 Peak intensity 4.6 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



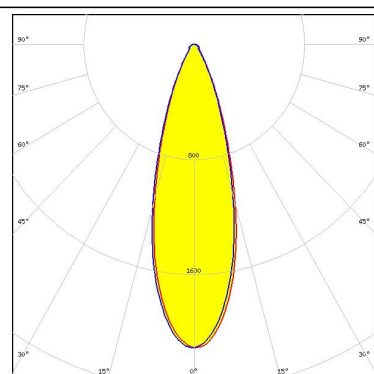
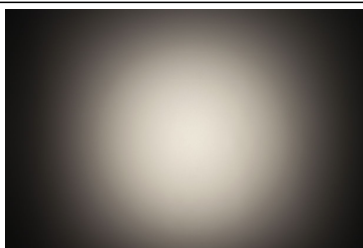
LED XM-L
 FWHM 32.0°
 Efficiency 93 %
 Peak intensity 2 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



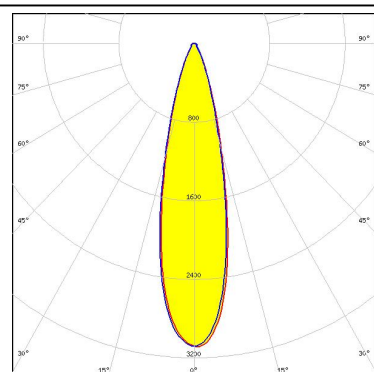
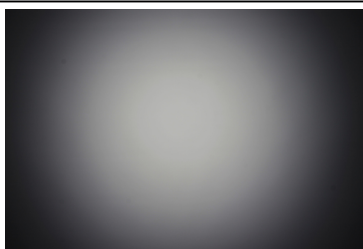
PHOTOMETRIC DATA (MEASURED):



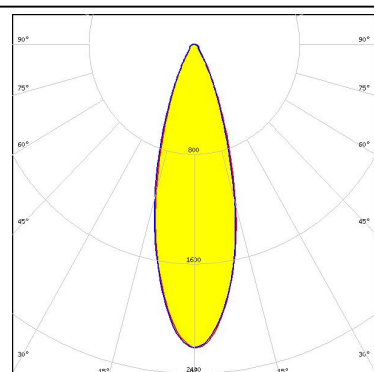
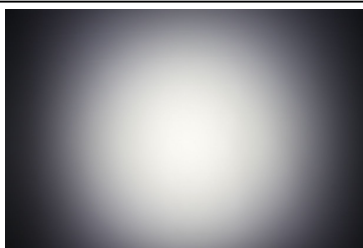
LED XM-L2
FWHM 32.0°
Efficiency 92 %
Peak intensity 2.1 cd/lm
LEDs/each optic 1
Light colour White
Required components:



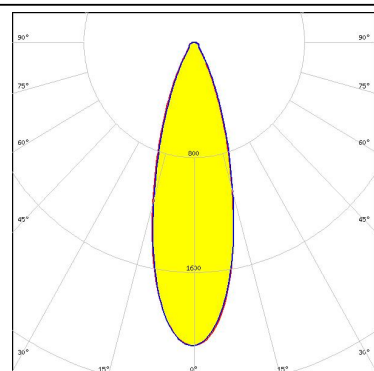
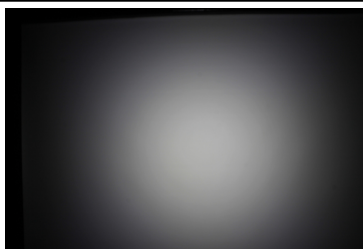
LED XP-G2
FWHM 25.0°
Efficiency 0 %
Peak intensity 3.1 cd/lm
LEDs/each optic 1
Light colour White
Required components:



LED XP-L HD
FWHM 31.0°
Efficiency 94 %
Peak intensity 2.2 cd/lm
LEDs/each optic 1
Light colour White
Required components:



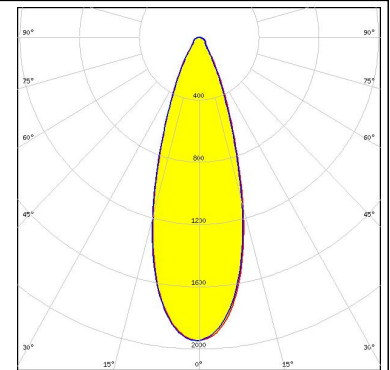
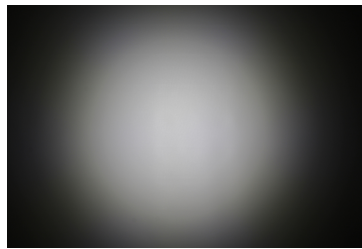
LED XP-L2
FWHM 31.0°
Efficiency 93 %
Peak intensity 2.1 cd/lm
LEDs/each optic 1
Light colour White
Required components:



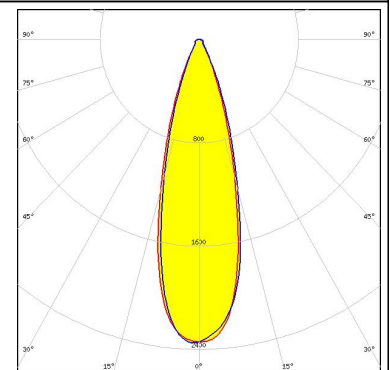
PHOTOMETRIC DATA (MEASURED):



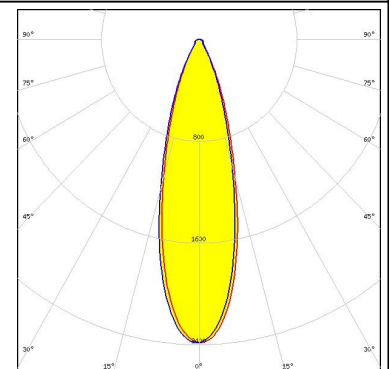
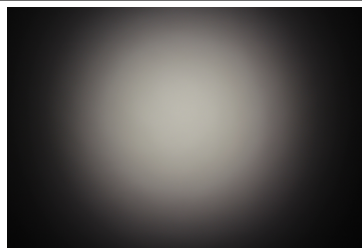
LED LUXEON 5050 Round LES
FWHM 34.0°
Efficiency 94 %
Peak intensity 2 cd/Im
LEDs/each optic 1
Light colour White
Required components:



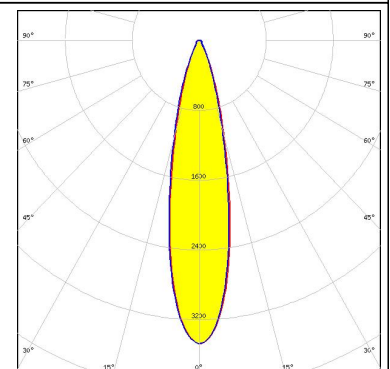
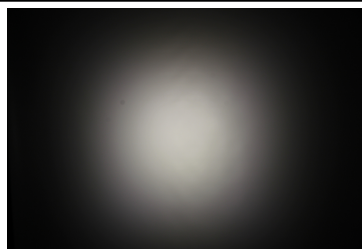
LED LUXEON MZ
FWHM 30.0°
Efficiency 91 %
Peak intensity 2.4 cd/Im
LEDs/each optic 1
Light colour White
Required components:



LED LUXEON V
FWHM 29.0°
Efficiency 94 %
Peak intensity 2.4 cd/Im
LEDs/each optic 1
Light colour White
Required components:



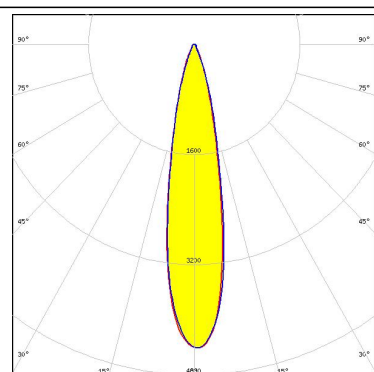
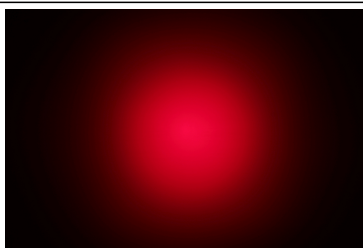
LED LUXEON V2
FWHM 23.0°
Efficiency 94 %
Peak intensity 3.5 cd/Im
LEDs/each optic 1
Light colour White
Required components:



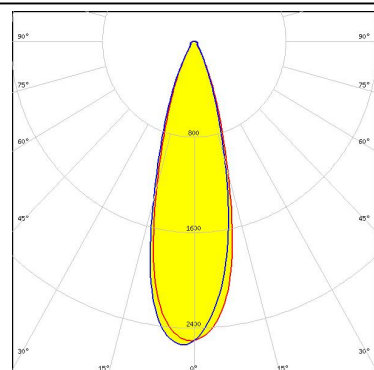
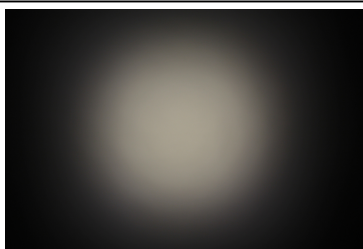
PHOTOMETRIC DATA (MEASURED):



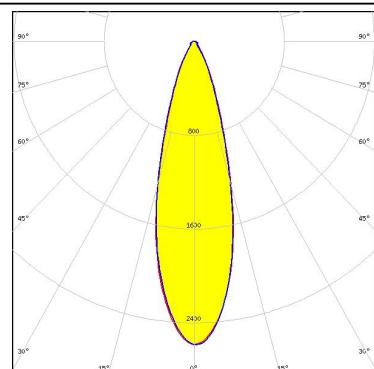
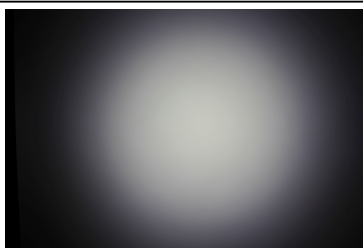
LED SST-10-B130
FWHM 21.0°
Efficiency 95 %
Peak intensity 4.4 cd/lm
LEDs/each optic 1
Light colour Deep Red
Required components:



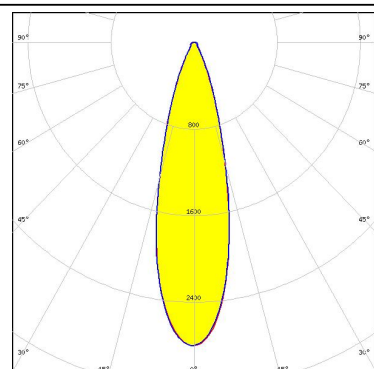
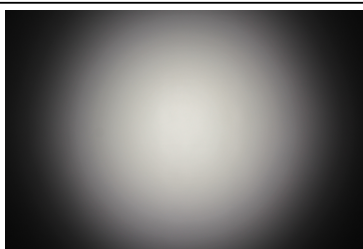
LED NVSW219D
FWHM 29.0°
Efficiency 94 %
Peak intensity 2.5 cd/lm
LEDs/each optic 1
Light colour White
Required components:



LED NVSW319B
FWHM 29.0°
Efficiency 94 %
Peak intensity 2.6 cd/lm
LEDs/each optic 1
Light colour White
Required components:



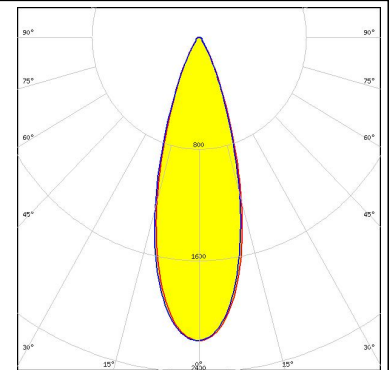
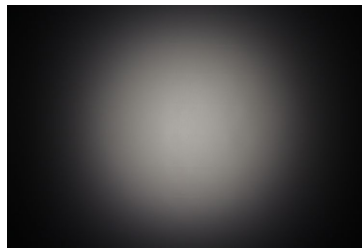
LED NVSW3x9A
FWHM 28.0°
Efficiency 94 %
Peak intensity 2.8 cd/lm
LEDs/each optic 1
Light colour White
Required components:



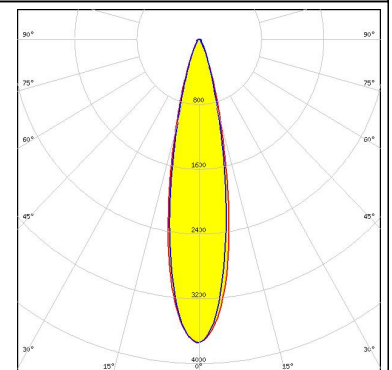
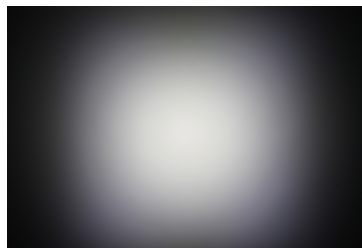
PHOTOMETRIC DATA (MEASURED):



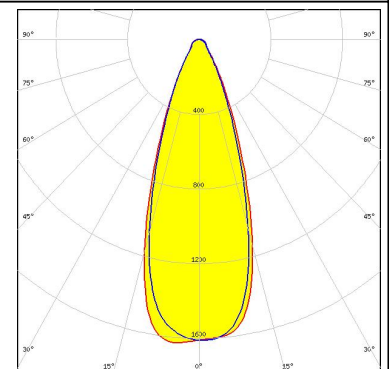
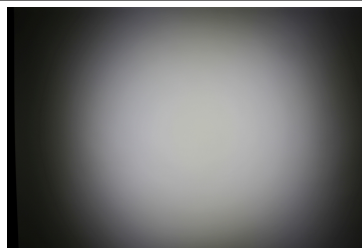
LED NWSx229A
FWHM 33.0°
Efficiency 87 %
Peak intensity 2.2 cd/lm
LEDs/each optic 1
Light colour White
Required components:



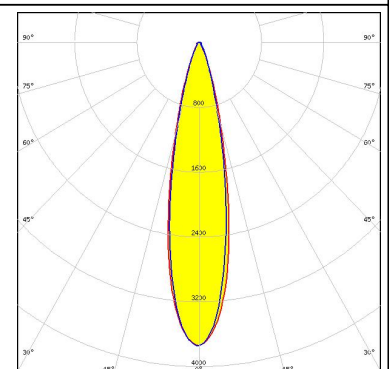
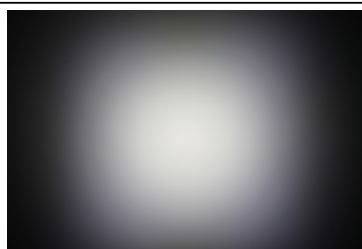
LED PrevaLED Brick HP 2x8
FWHM 23.0°
Efficiency 91 %
Peak intensity 3.8 cd/lm
LEDs/each optic 1
Light colour White
Required components:



LED Duris S8
FWHM 38.0°
Efficiency 94 %
Peak intensity 1.6 cd/lm
LEDs/each optic 1
Light colour White
Required components:



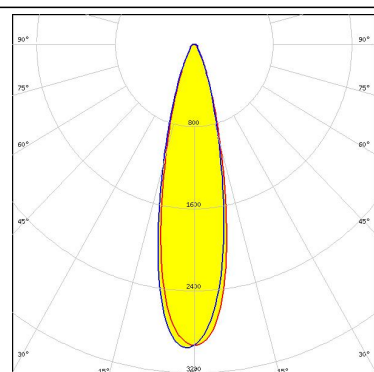
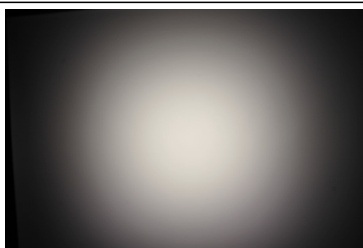
LED OSLON Square CSSRM2/CSSRM3
FWHM 23.0°
Efficiency 91 %
Peak intensity 3.8 cd/lm
LEDs/each optic 1
Light colour White
Required components:



PHOTOMETRIC DATA (MEASURED):

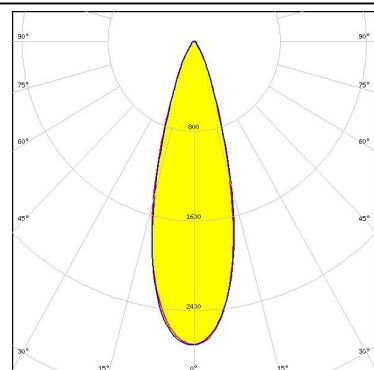
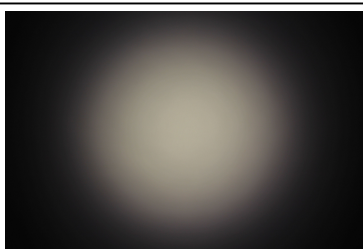
PHILIPS

LED Fortimo FastFlex LED 2x8 DA G4
 FWHM 25.0°
 Efficiency 92 %
 Peak intensity 3 cd/Im
 LEDs/each optic 1
 Light colour White
 Required components:



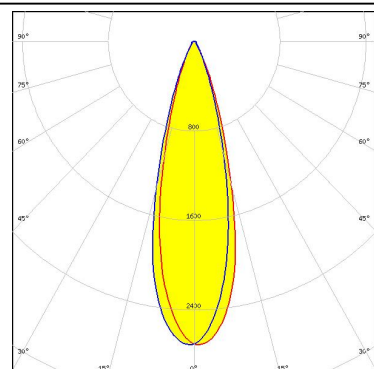
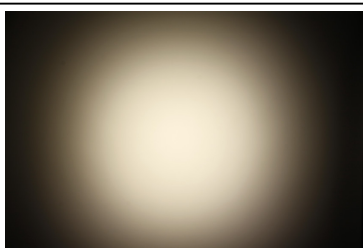
SAMSUNG

LED HiLOM RH16 (LH351C)
 FWHM 30.0°
 Efficiency 94 %
 Peak intensity 2.7 cd/Im
 LEDs/each optic 1
 Light colour White
 Required components:



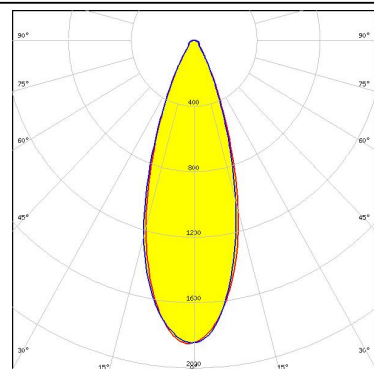
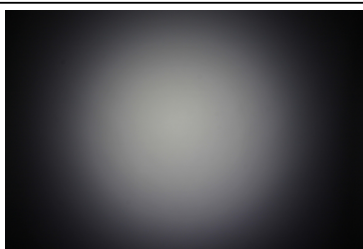
SAMSUNG

LED LH351B
 FWHM 28.0°
 Efficiency 85 %
 Peak intensity 2.7 cd/Im
 LEDs/each optic 1
 Light colour White
 Required components:


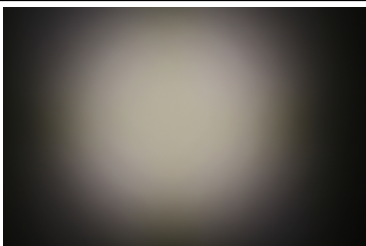
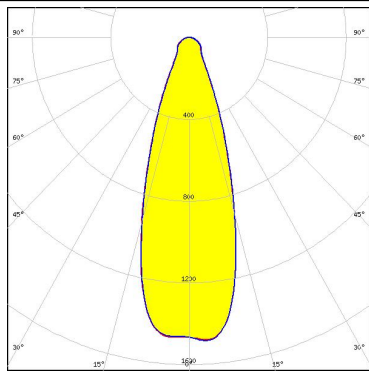


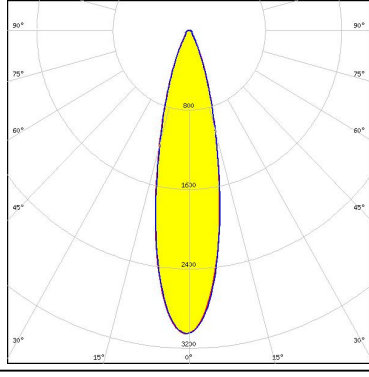

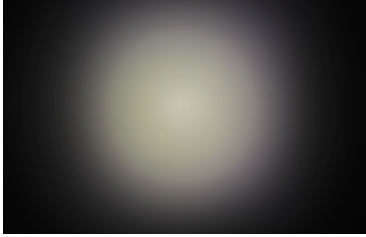
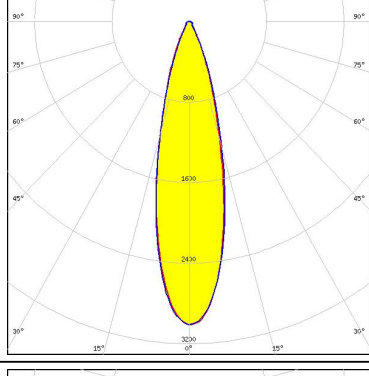

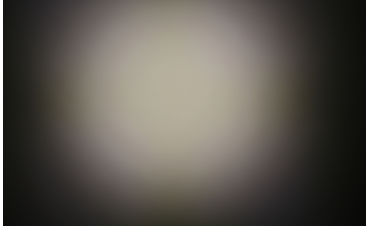
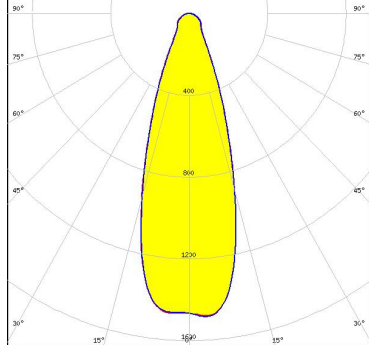


SAMSUNG

LED LH351D
 FWHM 35.0°
 Efficiency 91 %
 Peak intensity 1.9 cd/Im
 LEDs/each optic 1
 Light colour White
 Required components:



PHOTOMETRIC DATA (MEASURED):

<p> SEOUL SEMICONDUCTOR</p> <p>LED 2x2 Y22 module - SMJQ-D48W16AA-XX FWHM 34.0° Efficiency 93 % Peak intensity 1.5 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p> SEOUL SEMICONDUCTOR</p> <p>LED Z5M3 FWHM 25.0° Efficiency 94 % Peak intensity 3.1 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p> SEOUL SEMICONDUCTOR</p> <p>LED Z5M4 FWHM 26.0° Efficiency 95 % Peak intensity 3 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p> SEOUL SEMICONDUCTOR</p> <p>LED Z8Y19 FWHM 34.0° Efficiency 93 % Peak intensity 1.5 cd/lm LEDs/each optic 4 Light colour White Required components:</p>		

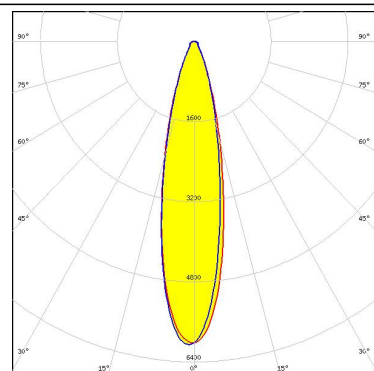
PHOTOMETRIC DATA (MEASURED):

<p>SEOUL SEMICONDUCTOR</p> <p>LED Z8Y19</p> <p>FWHM 34.0°</p> <p>Efficiency 93 %</p> <p>Peak intensity 1.5 cd/lm</p> <p>LEDs/each optic 4</p> <p>Light colour White</p> <p>Required components:</p>		
<p>SEOUL SEMICONDUCTOR</p> <p>LED Z8Y22P</p> <p>FWHM 25.0°</p> <p>Efficiency 92 %</p> <p>Peak intensity 3.1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p>TRIDONIC</p> <p>LED RLE 2x4 2000lm HP EXC2 OTD</p> <p>FWHM 23.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 3.4 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p>TRIDONIC</p> <p>LED RLE 2x8 4000lm HP EXC2 OTD</p> <p>FWHM 23.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 3.4 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		

PHOTOMETRIC DATA (MEASURED):

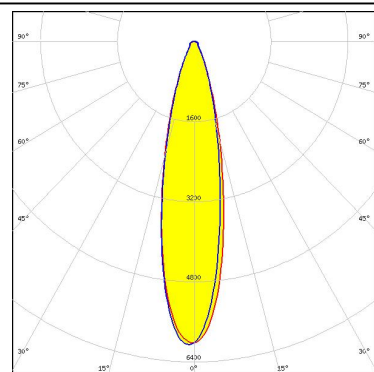
TRIDONIC

LED RLE G1 49x121mm 2000lm xxx EXC OTD
FWHM 24.0°
Efficiency 94 %
Peak intensity 3 cd/lm
LEDs/each optic 1
Light colour White
Required components:



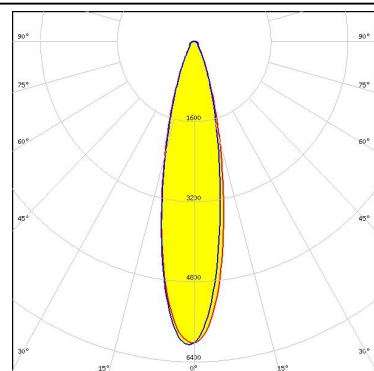
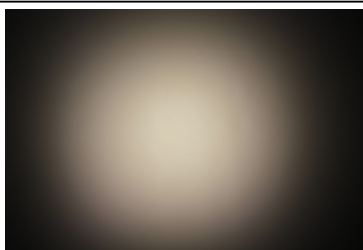
TRIDONIC

LED RLE G1 49x133mm 2000lm xxx EXC OTD
FWHM 24.0°
Efficiency 94 %
Peak intensity 3 cd/lm
LEDs/each optic 1
Light colour White
Required components:



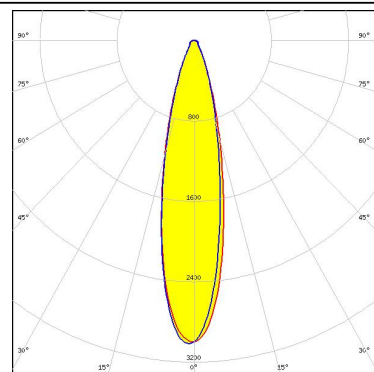
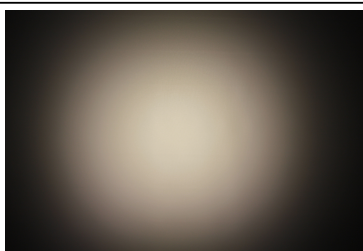
TRIDONIC

LED RLE G1 49x223mm 4000lm xxx EXC OTD
FWHM 24.0°
Efficiency 94 %
Peak intensity 3 cd/lm
LEDs/each optic 1
Light colour White
Required components:



TRIDONIC

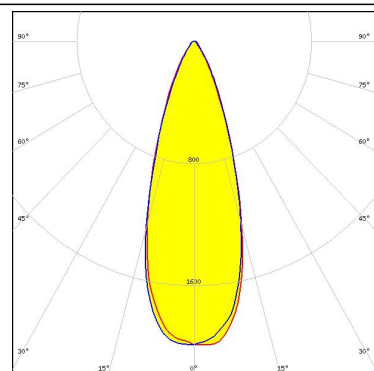
LED RLE G1 49x245mm 4000lm xxx EXC OTD
FWHM 24.0°
Efficiency 94 %
Peak intensity 3 cd/lm
LEDs/each optic 1
Light colour White
Required components:



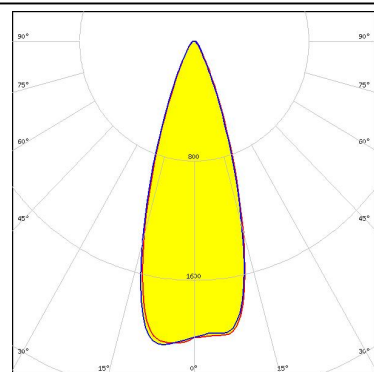
PHOTOMETRIC DATA (SIMULATED):



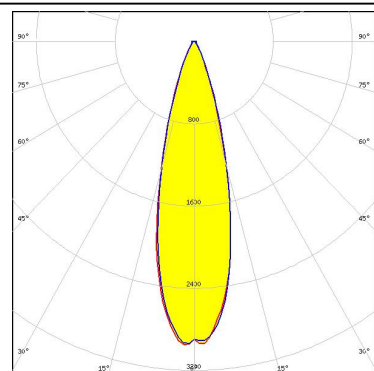
LED J Series 5050
FWHM 35.0°
Efficiency 92 %
Peak intensity 2 cd/lm
LEDs/each optic 1
Light colour White
Required components:



LED XP-G2 HE
FWHM 35.0°
Efficiency 92 %
Peak intensity 2.1 cd/lm
LEDs/each optic 1
Light colour White
Required components:

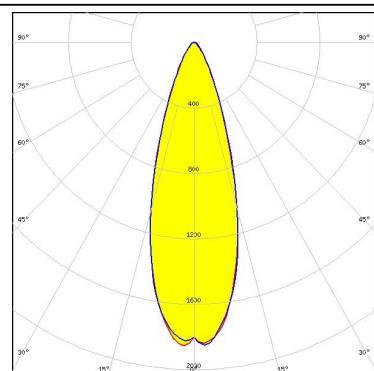


LED XP-G3
FWHM 28.0°
Efficiency 92 %
Peak intensity 3 cd/lm
LEDs/each optic 1
Light colour White
Required components:



LED XP-L2
FWHM 32.0°
Efficiency 82 %
Peak intensity 1.9 cd/lm
LEDs/each optic 1
Light colour White
Required components:

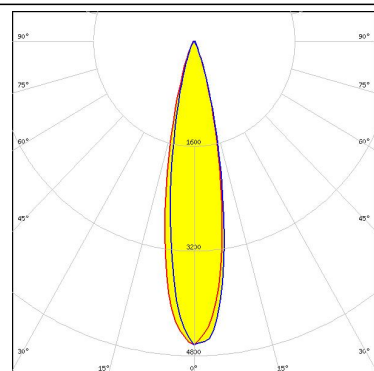
Transparent protective cover



PHOTOMETRIC DATA (SIMULATED):

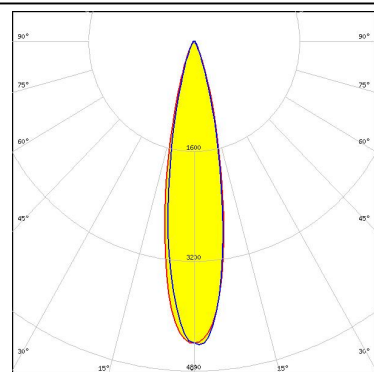
LUMILEDS

LED LUXEON 3030 2D (Round LES)
 FWHM 21.0°
 Efficiency 91 %
 Peak intensity 4.7 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



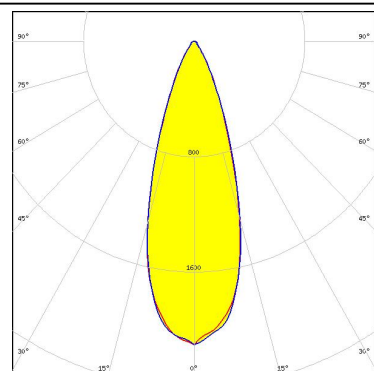
LUMILEDS

LED LUXEON 3535 2D
 FWHM 22.0°
 Efficiency 92 %
 Peak intensity 4.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



LUMILEDS

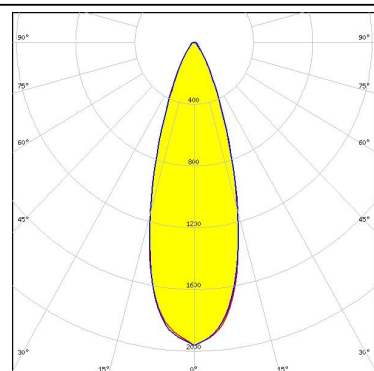
LED LUXEON 5050 Square LES
 FWHM 34.0°
 Efficiency 93 %
 Peak intensity 2.1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



LUMILEDS

LED LUXEON 5050 Square LES
 FWHM 34.0°
 Efficiency 88 %
 Peak intensity 2 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:

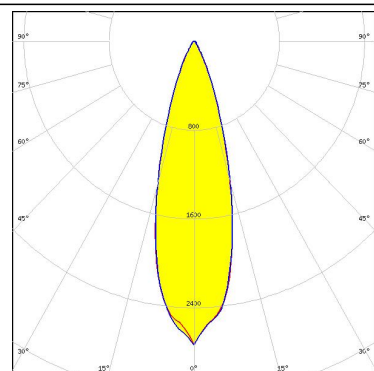
Transparent protective cover



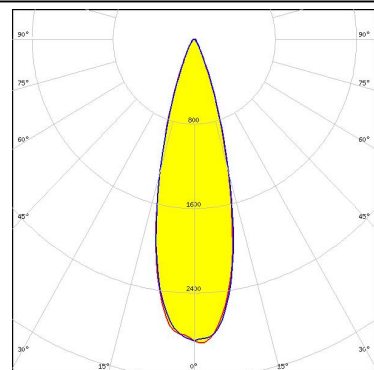
PHOTOMETRIC DATA (SIMULATED):



LED NV4WB35AM
FWHM 30.0°
Efficiency 93 %
Peak intensity 2.7 cd/lm
LEDs/each optic 1
Light colour White
Required components:

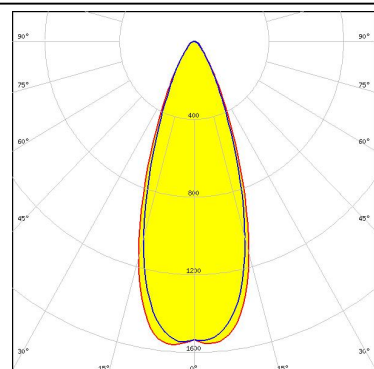


LED NVSxx19B/NVSxx19C
FWHM 28.0°
Efficiency 92 %
Peak intensity 2.9 cd/lm
LEDs/each optic 1
Light colour White
Required components:

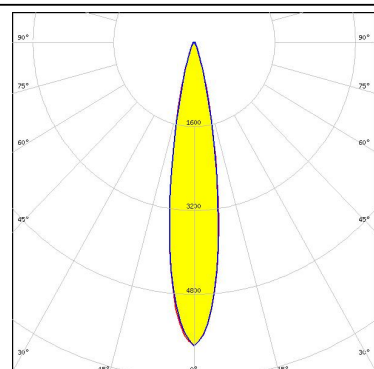


LED Duris S8
FWHM 38.0°
Efficiency 89 %
Peak intensity 1.6 cd/lm
LEDs/each optic 1
Light colour White
Required components:

Transparent protective cover



LED OSCONIQ P 3030
FWHM 18.0°
Efficiency 94 %
Peak intensity 5.8 cd/lm
LEDs/each optic 1
Light colour White
Required components:

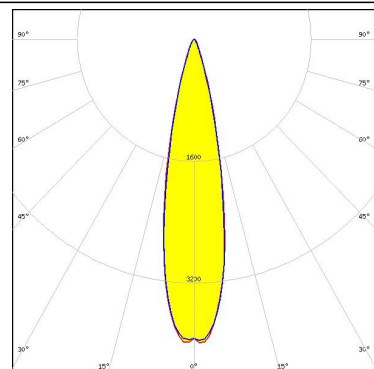


PHOTOMETRIC DATA (SIMULATED):

OSRAM
Opto Semiconductors

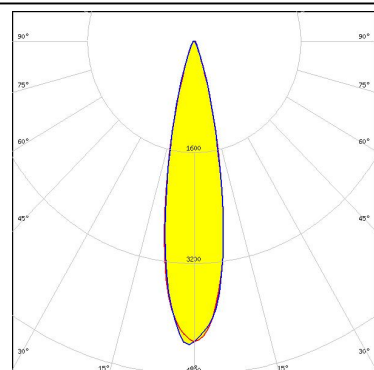
LED OSCONIQ P 3737 (2W version)
FWHM 22.0°
Efficiency 87 %
Peak intensity 4 cd/lm
LEDs/each optic 1
Light colour White
Required components:

Transparent protective cover



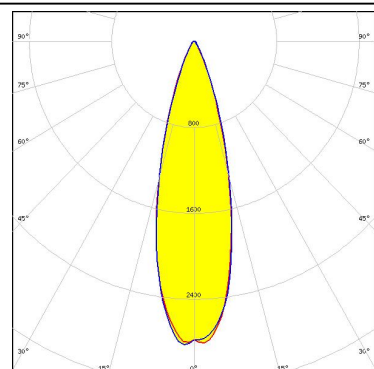
OSRAM
Opto Semiconductors

LED OSCONIQ P 3737 (2W version)
FWHM 22.0°
Efficiency 92 %
Peak intensity 4.4 cd/lm
LEDs/each optic 1
Light colour White
Required components:



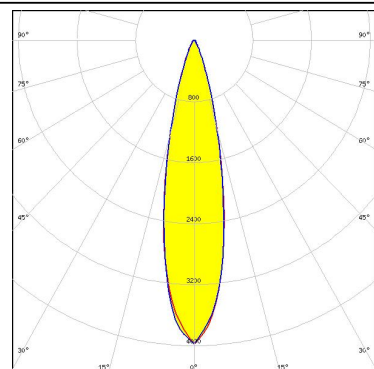
OSRAM
Opto Semiconductors

LED OSCONIQ P 3737 (3W version)
FWHM 29.0°
Efficiency 93 %
Peak intensity 2.8 cd/lm
LEDs/each optic 1
Light colour White
Required components:



OSRAM
Opto Semiconductors

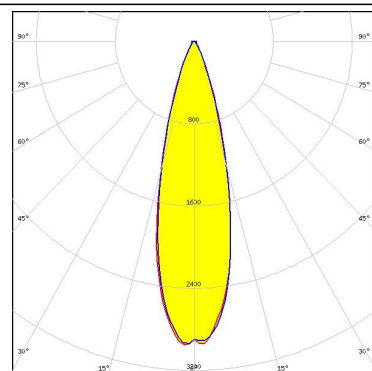
LED OSCONIQ P 3737 Flat
FWHM 24.0°
Efficiency 93 %
Peak intensity 4 cd/lm
LEDs/each optic 1
Light colour White
Required components:



PHOTOMETRIC DATA (SIMULATED):

PHILIPS

LED Fortimo FastFlex LED 2x8 DAX G4
FWHM 28.0°
Efficiency 92 %
Peak intensity 3 cd/lm
LEDs/each optic 1
Light colour White
Required components:

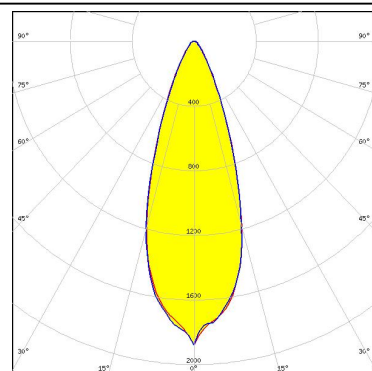


SAMSUNG

LED LH231B
FWHM 24.0°
Efficiency 92 %
Peak intensity 3.7 cd/lm
LEDs/each optic 4
Light colour White
Required components:

SAMSUNG


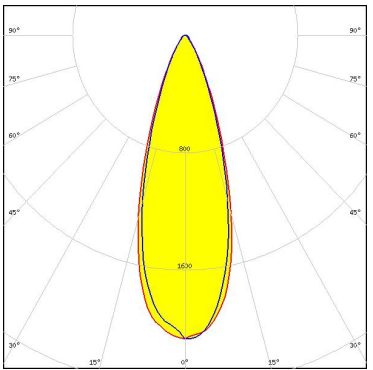

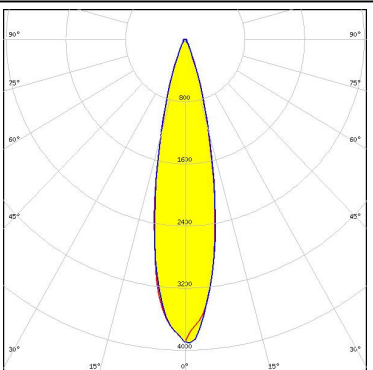
LED LH351D
FWHM 36.0°
Efficiency 92 %
Peak intensity 1.9 cd/lm
LEDs/each optic 1
Light colour White
Required components:



SAMSUNG

LED LH508A Plus
FWHM 32.0°
Efficiency 93 %
Peak intensity 2.1 cd/lm
LEDs/each optic 1
Light colour White
Required components:

PHOTOMETRIC DATA (SIMULATED):

<p> SEOUL SEMICONDUCTOR</p> <p>LED SEOUL DC 5050 6V</p> <p>FWHM 34.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 2.1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	
<p> SEOUL SEMICONDUCTOR</p> <p>LED Z8Y22T</p> <p>FWHM 23.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 3.9 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:

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.

LEDiL Oy assumes neither warranty, nor guarantee nor any other liability of any kind for the contents and correctness of the provided data. The provided data has been generated with highest diligence but the provided data may in reality not represent the complete possible variation range of all intrinsic parameters. Therefore, in certain cases a deviation from the provided data could occur.

LEDiL Oy reserves the right to undertake technical changes of its products without further notification which could lead to changes in the provided data. LEDiL Oy assumes no liability of any kind for the possible deviation from any provided data or any other damage resulting from the usage of the provided data.

The user agrees to this disclaimer and user agreement with the download or usage of the provided files.

LEDiL Oy

Joensuunkatu 13
FI-24240 SALO
Finland

LEDiL Inc.

228 West Page Street
Suite D
Sycamore IL 60178
USA

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)