

## TINA2-D

~16° diffused spot beam. Assembly with holder, installation tape and location pins.

### TECHNICAL SPECIFICATIONS:

Dimensions	Ø 16.0 mm
Height	9.5 mm
Fastening	tape, pin
ROHS compliant	yes ⓘ

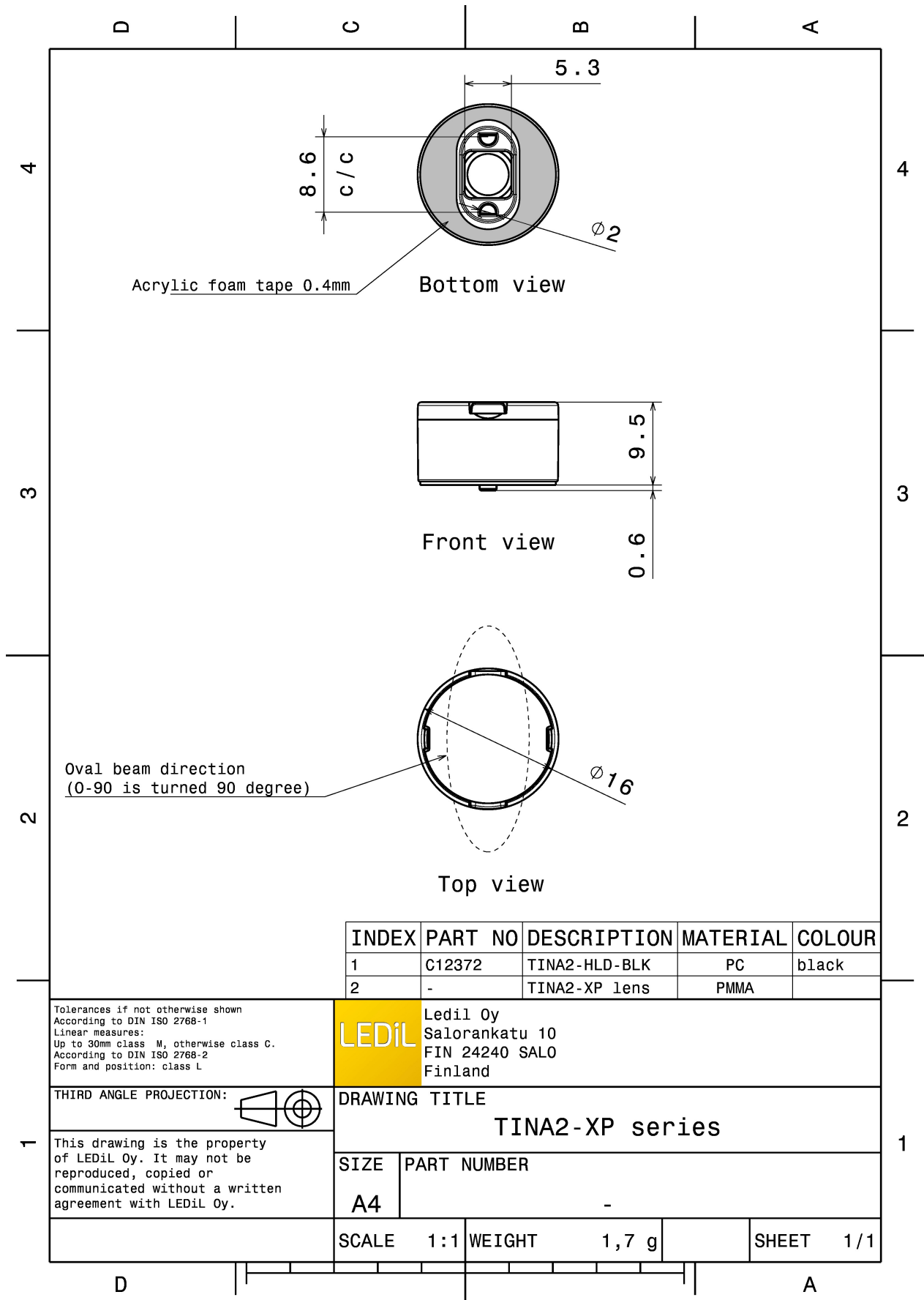


### MATERIAL SPECIFICATIONS:

Component	Type	Material	Colour	Finish
TINA2-XP-D	Single lens	PMMA	clear	
TINA2-HLD-BLK	Holder	PC	black	
TINA-TAPE3	Tape	Acrylic foam	black	

### ORDERING INFORMATION:

Component		Qty in box	MOQ	MPQ	Box weight (kg)
CA12375_TINA2-D	Single lens	4140	230	230	8.1
» Box size: 451 x 241 x 298 mm					



INDEX	PART NO	DESCRIPTION	MATERIAL	COLOUR
1	C12372	TINA2-HLD-BLK	PC	black
2	-	TINA2-XP lens	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  
**TINA2-XP series**

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SIZE	PART NUMBER
A4	-

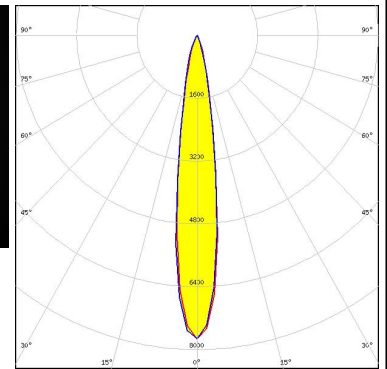
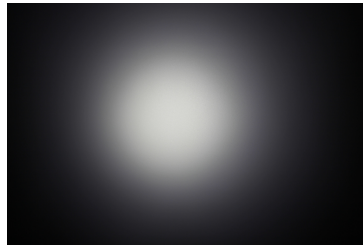
SCALE	1:1	WEIGHT	1,7 g	SHEET	1/1
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See also our general installation guide: [www.ledil.com/installation\\_guide](http://www.ledil.com/installation_guide)

### PHOTOMETRIC DATA (MEASURED):

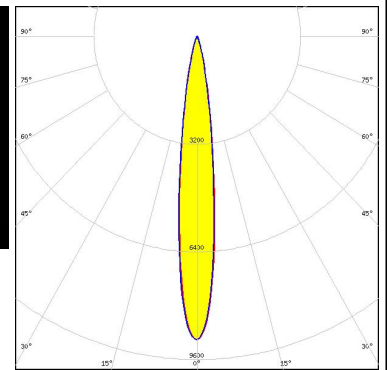
#### CREE LED

LED XB-H  
 FWHM / FWTM 16.0° / 34.0°  
 Efficiency 86 %  
 Peak intensity 7.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### CREE LED

LED XD16  
 FWHM / FWTM 14.0° / 29.0°  
 Efficiency 82 %  
 Peak intensity 9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



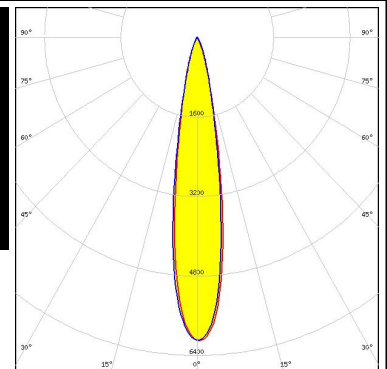
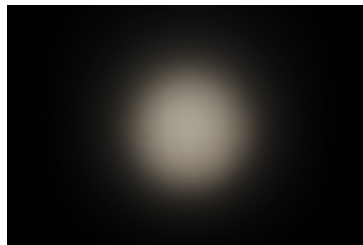
#### LUMILEDS

LED LUXEON Z ES  
 FWHM / FWTM 12.0° / 27.0°  
 Efficiency %  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### NICHIA

LED NVSxx19B/NVSxx19C  
 FWHM / FWTM 18.0° / 36.0°  
 Efficiency 87 %  
 Peak intensity 6.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

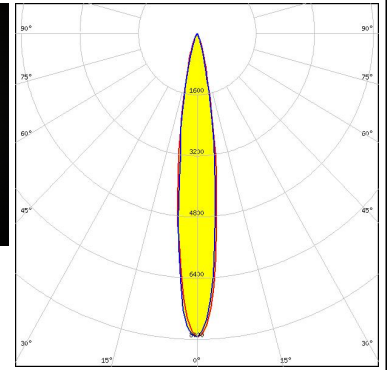


### PHOTOMETRIC DATA (MEASURED):

#### OSRAM

Opto Semiconductors

LED OSLON Square EC  
 FWHM / FWTM 16.0° / 33.0°  
 Efficiency 82 %  
 Peak intensity 7.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OSRAM

Opto Semiconductors

LED OSLON Square EC  
 FWHM / FWTM 16.0° / 34.0°  
 Efficiency 87 %  
 Peak intensity 6.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

#### OSRAM

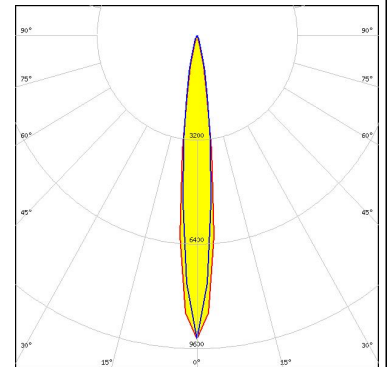
Opto Semiconductors

LED OSLON Square PC  
 FWHM / FWTM 13.0° / 32.0°  
 Efficiency 87 %  
 Peak intensity 6.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

#### OSRAM

Opto Semiconductors

LED OSLON SSL 150  
 FWHM / FWTM 14.0° / 28.0°  
 Efficiency 89 %  
 Peak intensity 9.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

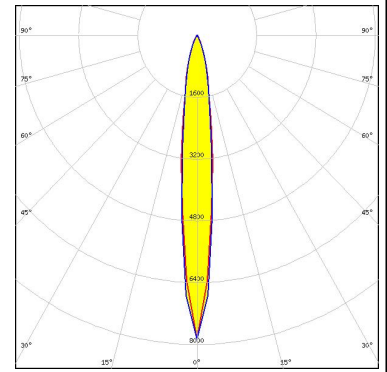


### PHOTOMETRIC DATA (MEASURED):

#### OSRAM

Opto Semiconductors

LED OSLOM SSL 80  
 FWHM / FWTM 12.0° / 35.0°  
 Efficiency 87 %  
 Peak intensity 7.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OSRAM

Opto Semiconductors

LED SFH 4170S  
 FWHM / FWTM 8.0° / 20.0°  
 Efficiency %  
 LEDs/each optic 1  
 Light colour IR  
 Required components:

#### OSRAM

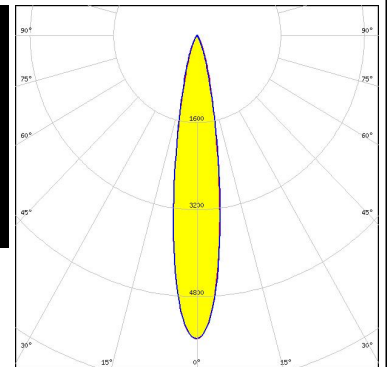
Opto Semiconductors

LED SFH 4180S  
 FWHM / FWTM 8.0° / 20.0°  
 Efficiency %  
 LEDs/each optic 1  
 Light colour IR  
 Required components:



SEOUL SEMICONDUCTOR

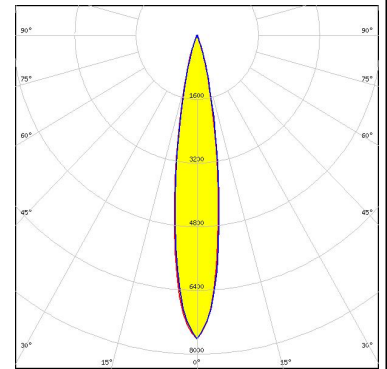
LED Z5M3  
 FWHM / FWTM 18.0° / 38.0°  
 Efficiency 86 %  
 Peak intensity 5.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



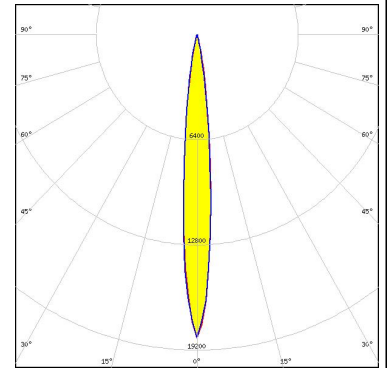
### PHOTOMETRIC DATA (SIMULATED):



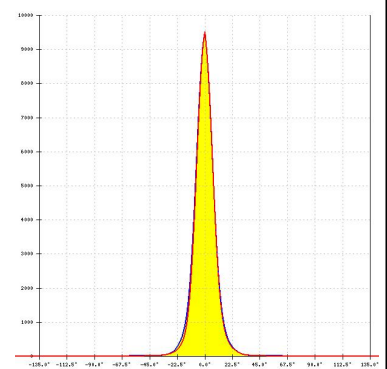
LED XB-D White  
 FWHM / FWTM 18.0° / 34.0°  
 Efficiency 88 %  
 Peak intensity 7.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



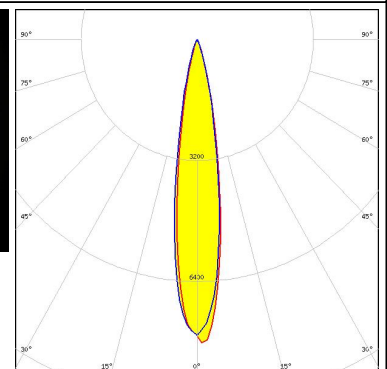
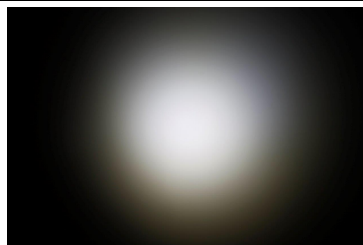
LED XQ-E HI  
 FWHM / FWTM 11.0° / 23.0°  
 Efficiency 91 %  
 Peak intensity 18.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED LUXEON 2835 Line  
 FWHM / FWTM 15.0° / 31.0°  
 Efficiency 96 %  
 Peak intensity 9.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



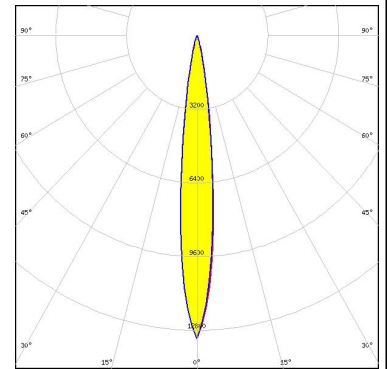
LED Duris S5 (2 chip)  
 FWHM / FWTM 17.0° / 33.0°  
 Efficiency 92 %  
 Peak intensity 8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



### PHOTOMETRIC DATA (SIMULATED):

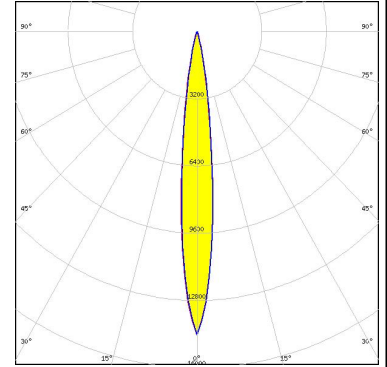
#### OSRAM Opto Semiconductors

LED OSCONIQ P 3030  
 FWHM / FWTM 12.0° / 26.0°  
 Efficiency 91 %  
 Peak intensity 13.2 cd/lm  
 LEDs/each optic 1  
 Light colour Blue  
 Required components:



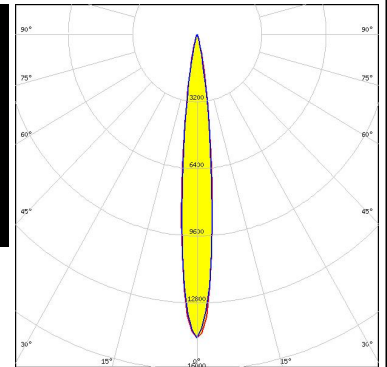
#### OSRAM Opto Semiconductors

LED OSLON Signal  
 FWHM / FWTM 12.0° / 26.0°  
 Efficiency 92 %  
 Peak intensity 14.4 cd/lm  
 LEDs/each optic 1  
 Light colour Blue  
 Required components:



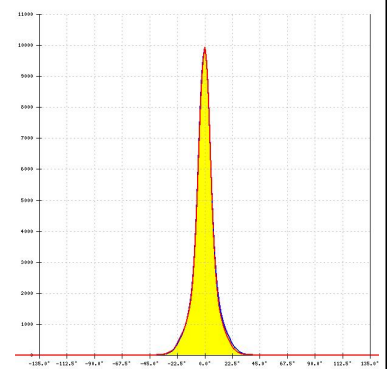
#### OSRAM Opto Semiconductors

LED OSLON Square Flat  
 FWHM / FWTM 12.0° / 24.0°  
 Efficiency 91 %  
 Peak intensity 14.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OSRAM Opto Semiconductors

LED OSLON SSL 80  
 FWHM / FWTM 12.0° / 31.0°  
 Efficiency 90 %  
 Peak intensity 9.9 cd/lm  
 LEDs/each optic 1  
 Light colour Far Red  
 Required components:

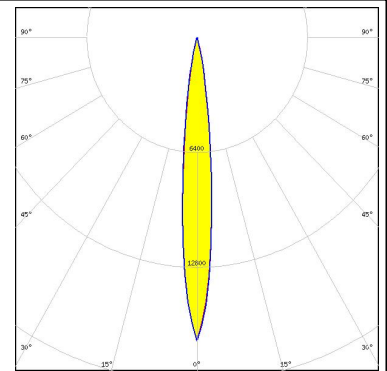


#### PHOTOMETRIC DATA (SIMULATED):

#### OSRAM

Opto Semiconductors

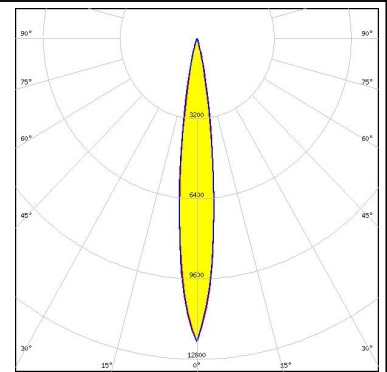
LED OSTAR Projection Compact (Kx.CSLNM1.xx)  
 FWHM / FWTM 12.0° / 24.0°  
 Efficiency 92 %  
 Peak intensity 16.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OSRAM

Opto Semiconductors

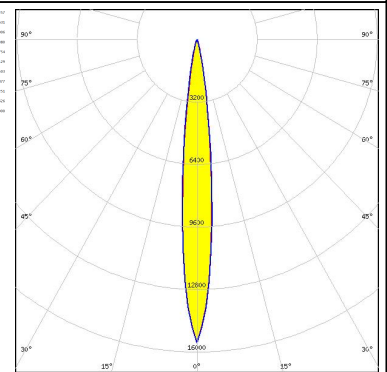
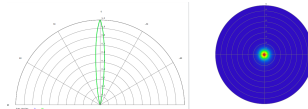
LED SFH 4715AS  
 FWHM / FWTM 14.0° / 26.0°  
 Efficiency 90 %  
 LEDs/each optic 1  
 Light colour IR  
 Required components:



#### OSRAM

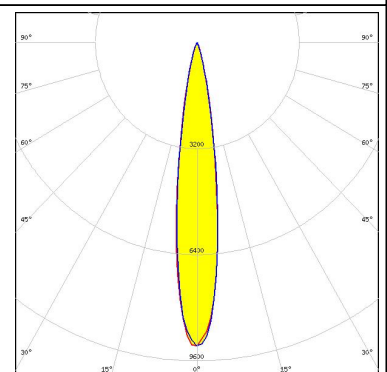
Opto Semiconductors

LED SFH 4770S  
 FWHM / FWTM 12.0° / 22.0°  
 Efficiency 92 %  
 LEDs/each optic 1  
 Light colour IR  
 Required components:



#### SAMSUNG

LED LH181B  
 FWHM / FWTM 16.0° / 30.5°  
 Efficiency 92 %  
 Peak intensity 9.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:





### PHOTOMETRIC DATA (SIMULATED):



### 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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