

## TINA2-D

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

### SPECIFICATION:

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

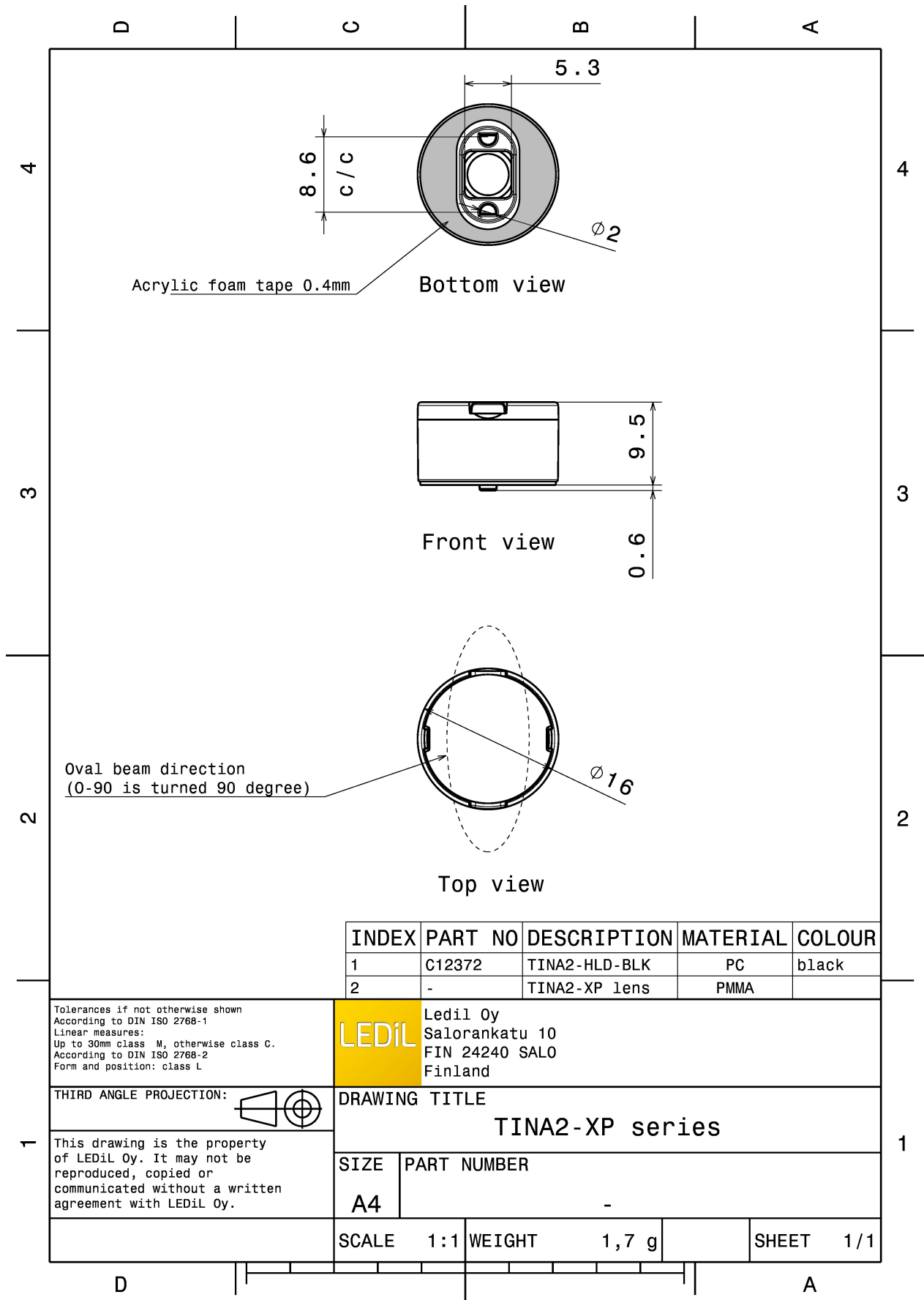


### MATERIALS:

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	-

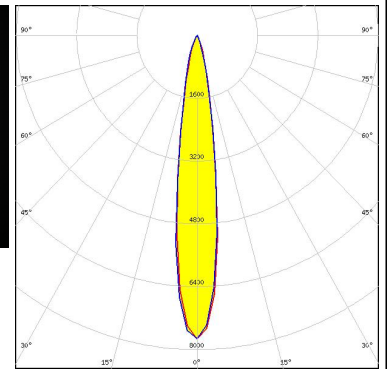
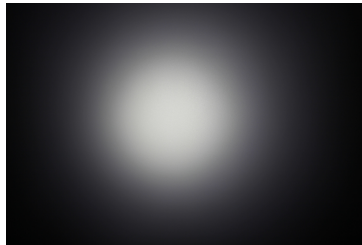
SCALE	1:1	WEIGHT	1,7 g	SHEET	1/1
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See also our general installation guide: [www.ledil.com/installation\\_guide](http://www.ledil.com/installation_guide)

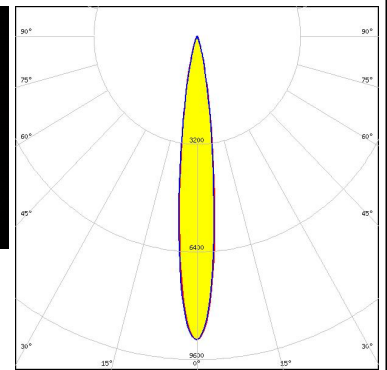
### OPTICAL RESULTS (MEASURED):



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:



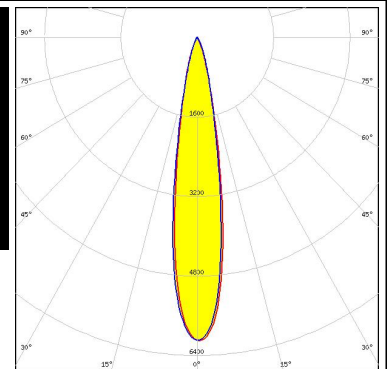
LED XD16  
 FWHM / FWTM 14.0° / 29.0°  
 Efficiency 82 %  
 Peak intensity 9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



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



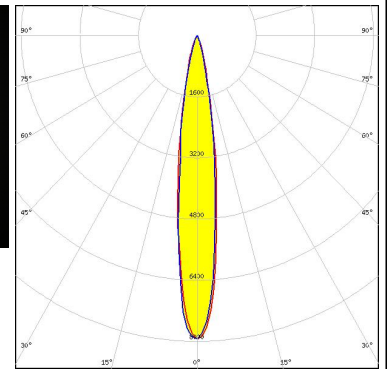
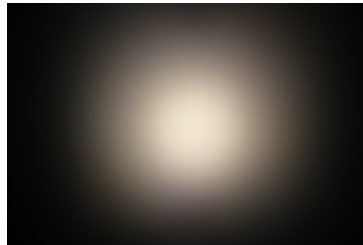
LED NVSxx19B/NVSxx19C  
 FWHM / FWTM 18.0° / 36.0°  
 Efficiency 87 %  
 Peak intensity 6.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



### OPTICAL RESULTS (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

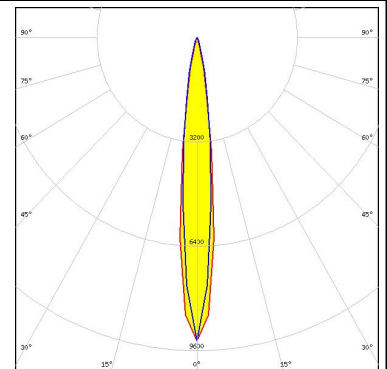
LED OSLON Square EC  
 FWHM / FWTM 16.0° / 34.0°  
 Efficiency 87 %  
 Peak intensity 6.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

#### 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:



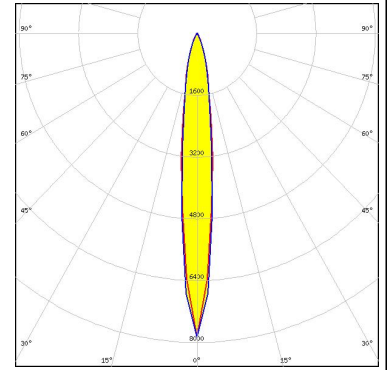


### OPTICAL RESULTS (MEASURED):

#### OSRAM

Opto Semiconductors

LED OSLO<sup>®</sup> 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

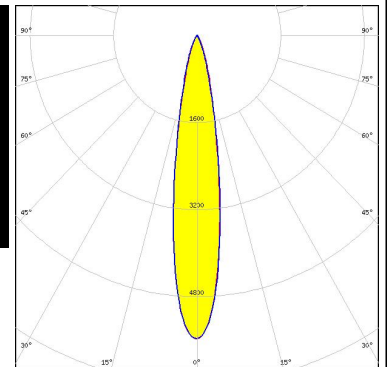
Opto Semiconductors

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



SEOUL SEMICONDUCTOR

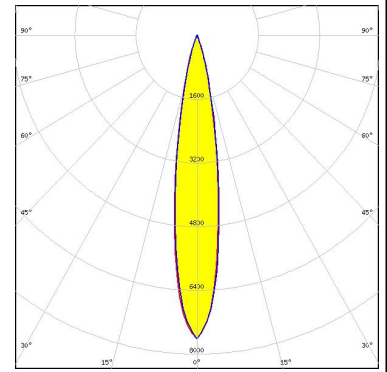
LED Z5M3  
 FWHM / FWTM 18.0° / 38.0°  
 Efficiency 86 %  
 Peak intensity 5.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



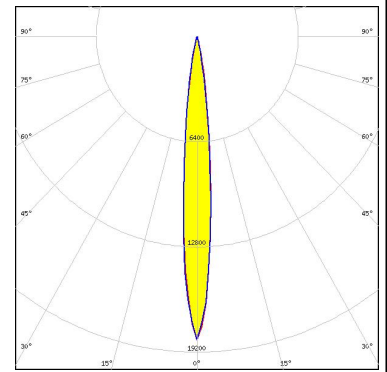
### OPTICAL RESULTS (SIMULATED):



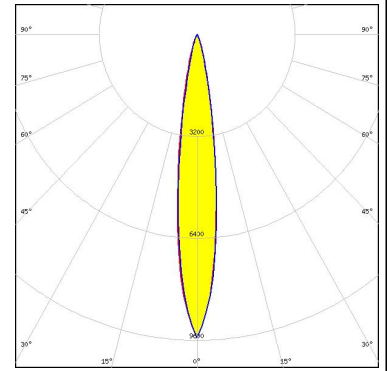
LED XB-D  
 FWHM / FWTM 18.0° / 34.0°  
 Efficiency 88 %  
 Peak intensity 7.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



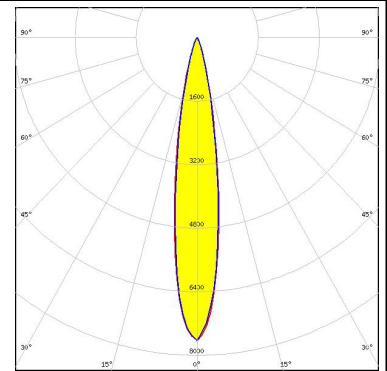
LED XQ-E HI  
 FWHM / FWTM 11.0° / 23.0°  
 Efficiency 91 %  
 Peak intensity 18.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:




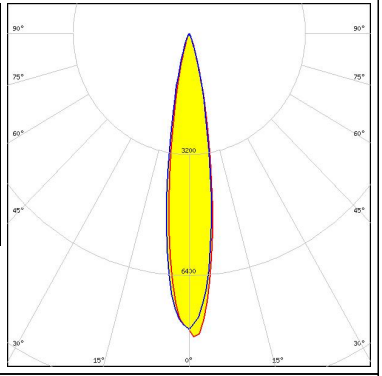
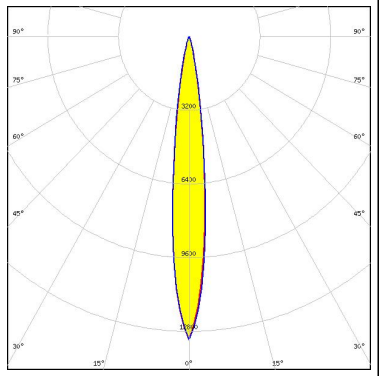
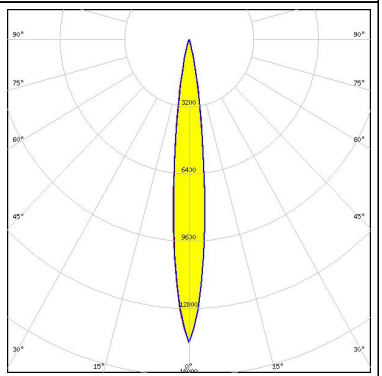

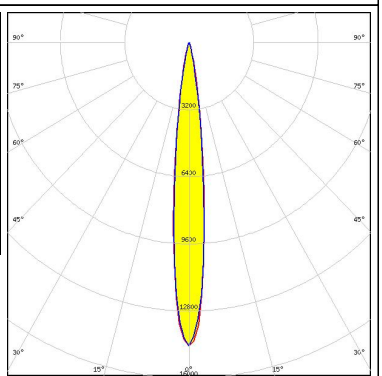
LED LUXEON 2835 Line  
 FWHM / FWTM 15.0° / 31.0°  
 Efficiency 96 %  
 Peak intensity 9.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED Duris E 2835  
 FWHM / FWTM 17.0° / 34.0°  
 Efficiency 92 %  
 Peak intensity 7.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



### OPTICAL RESULTS (SIMULATED):

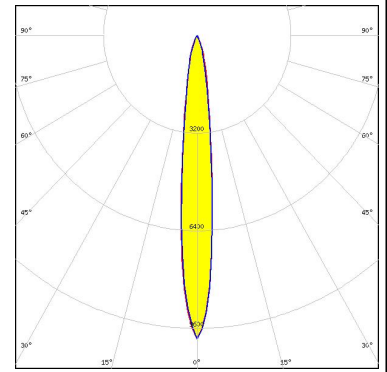
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED Duris S5 (2 chip)</p> <p>FWHM / FWTM 17.0° / 33.0°</p> <p>Efficiency 92 %</p> <p>Peak intensity 8 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED OSCONIQ P 3030</p> <p>FWHM / FWTM 12.0° / 26.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 13.2 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour Blue</p> <p>Required components:</p>		
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED OSOLON Signal</p> <p>FWHM / FWTM 12.0° / 26.0°</p> <p>Efficiency 92 %</p> <p>Peak intensity 14.4 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour Blue</p> <p>Required components:</p>		
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED OSOLON Square Flat</p> <p>FWHM / FWTM 12.0° / 24.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 14.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		

### OPTICAL RESULTS (SIMULATED):

#### OSRAM

Opto Semiconductors

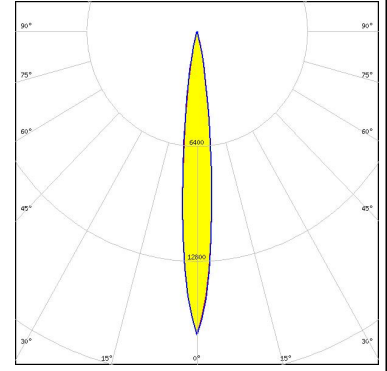
LED OSLOL SSL 80  
 FWHM / FWTM 12.0° / 31.0°  
 Efficiency 90 %  
 Peak intensity 9.9 cd/lm  
 LEDs/each optic 1  
 Light colour Far Red  
 Required components:



#### OSRAM

Opto Semiconductors

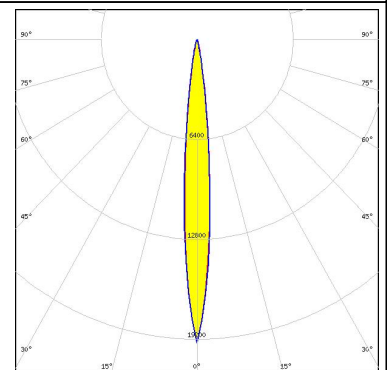
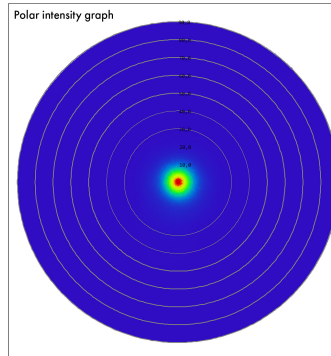
LED OSTAR Projection Compact (KW.CSLNM1.TG)  
 FWHM / FWTM 12.0° / 24.0°  
 Efficiency 92 %  
 Peak intensity 16.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OSRAM

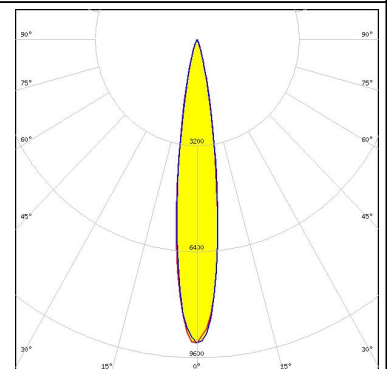
Opto Semiconductors

LED SFH 4770S  
 FWHM / FWTM 10.0° / 22.0°  
 Efficiency 91 %  
 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:



### OPTICAL RESULTS (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.

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