

## TINA2-RS

~14° spot beam optimized for Nichia NS6x83.  
Assembly with holder and installation tape.

### SPECIFICATION:

Dimensions	Ø 16.1 mm
Height	11 mm
Fastening	tape
ROHS compliant	yes ⓘ

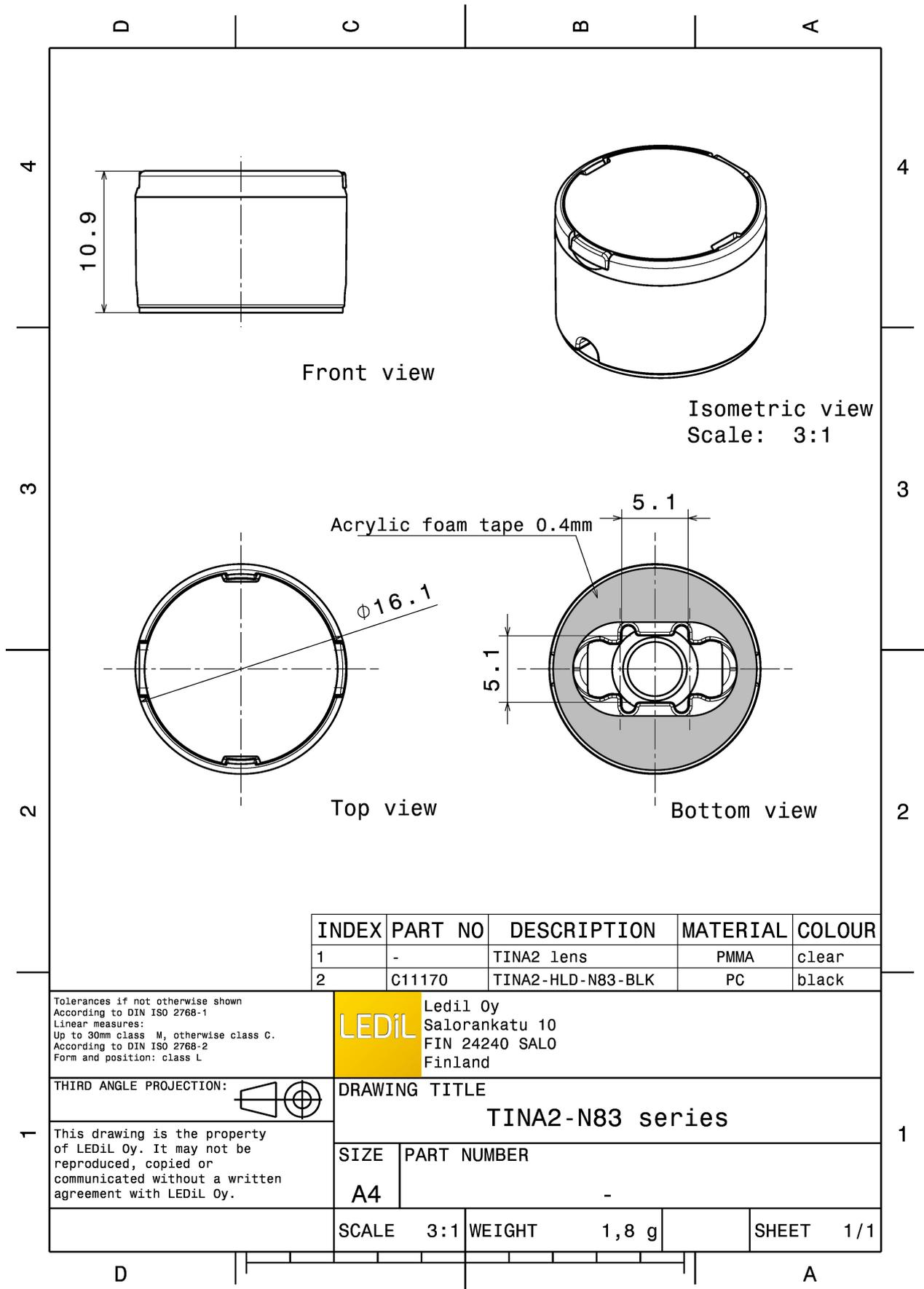


### MATERIALS:

Component	Type	Material	Colour	Finish
TINA2-RS	Single lens	PMMA	clear	
TINA2-HLD-N83-BLK	Holder	PC	black	
TINA-TAPE3	Tape	Acrylic foam	black	

### ORDERING INFORMATION:

Component		Qty in box	MOQ	MPQ	Box weight (kg)
CA11171_TINA2-RS	Single lens	4140	230	230	8.4
» Box size: 451 x 241 x 298 mm					



INDEX	PART NO	DESCRIPTION	MATERIAL	COLOUR
1	-	TINA2 lens	PMMA	clear
2	C11170	TINA2-HLD-N83-BLK	PC	black

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-N83 series**

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SIZE	PART NUMBER
A4	-

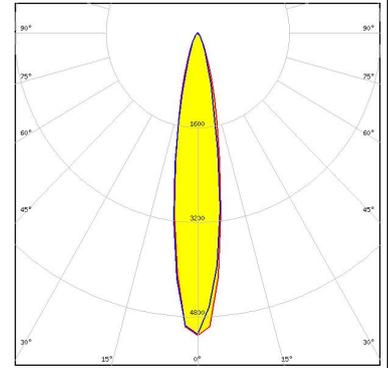
SCALE	3:1	WEIGHT	1,8 g	SHEET	1/1
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See also our general installation guide: [www.ledil.com/installation\\_guide](http://www.ledil.com/installation_guide)

### OPTICAL RESULTS (MEASURED):

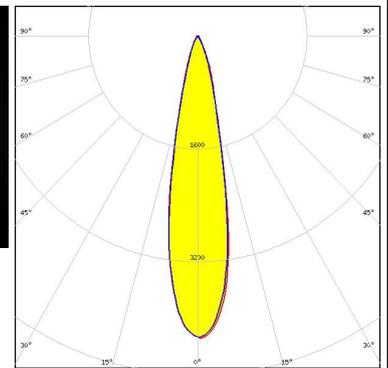
#### CREE LED

LED MX-6  
 FWHM / FWTM 18.0° / 40.0°  
 Efficiency 89 %  
 Peak intensity 5.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### LUMILEDS

LED LUXEON V  
 FWHM / FWTM 21.0° / 41.0°  
 Efficiency 82 %  
 Peak intensity 4.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

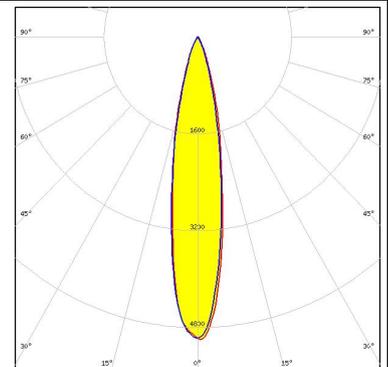


#### NICHIA

LED NS3x83  
 FWHM / FWTM 15.0°  
 Efficiency 93 %  
 LEDs/each optic 1  
 Light colour White  
 Required components:

#### NICHIA

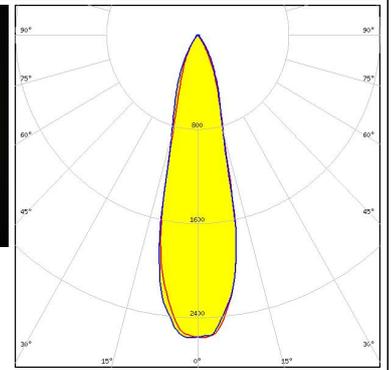
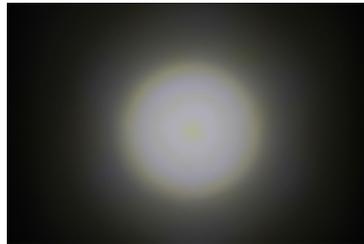
LED NS6x83  
 FWHM / FWTM 19.0° / 42.0°  
 Efficiency 93 %  
 Peak intensity 5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



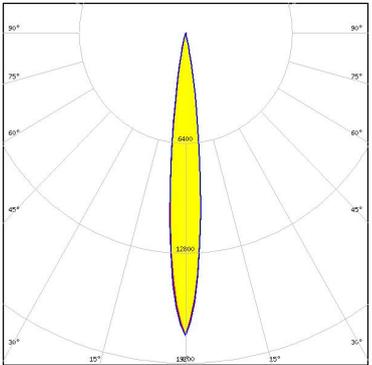
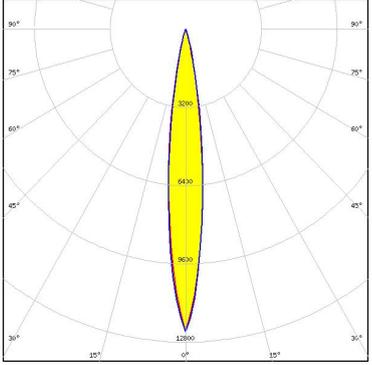
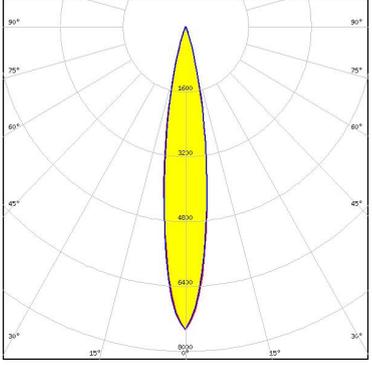
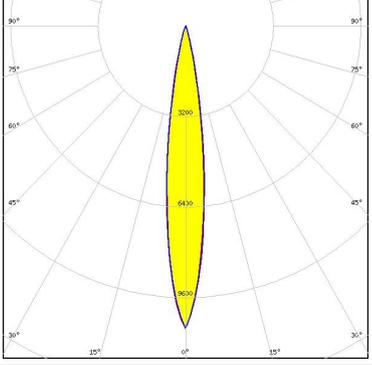
### OPTICAL RESULTS (MEASURED):

#### SAMSUNG

LED LH508A  
FWHM / FWTM 26.0° / 53.0°  
Efficiency 76 %  
Peak intensity 2.6 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



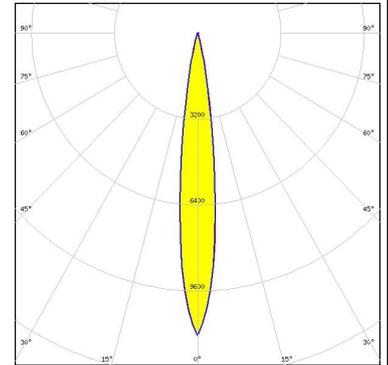
#### OPTICAL RESULTS (SIMULATED):

	<p>LED: XP-E2            FWHM / FWTM: 12.0° / 22.0°            Efficiency: 91 %            Peak intensity: 18.1 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
	<p>LED: XP-G2            FWHM / FWTM: 14.0° / 27.0°            Efficiency: 91 %            Peak intensity: 12.4 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
	<p>LED: XP-G3            FWHM / FWTM: 16.0° / 34.0°            Efficiency: 87 %            Peak intensity: 7.5 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
	<p>LED: XP-L HI            FWHM / FWTM: 14.0° / 28.0°            Efficiency: 92 %            Peak intensity: 10.7 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	

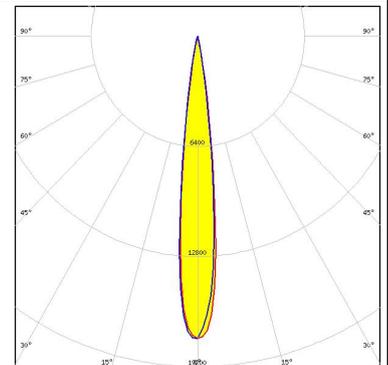
### OPTICAL RESULTS (SIMULATED):



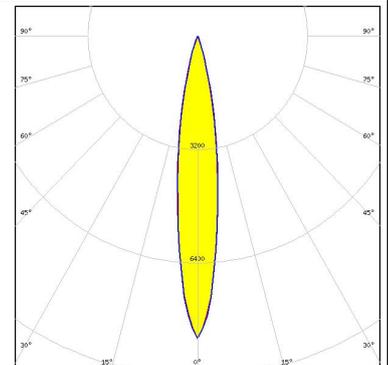
LED XT-E  
 FWHM / FWTM 14.0° / 26.0°  
 Efficiency 85 %  
 Peak intensity 11.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



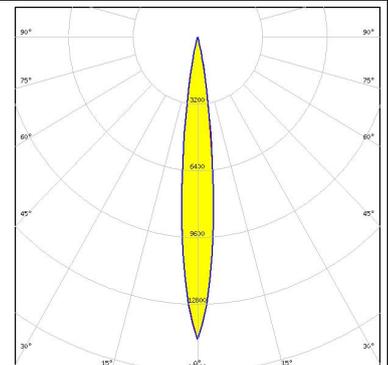
LED LUXEON CZ  
 FWHM / FWTM 12.0° / 22.0°  
 Efficiency 92 %  
 Peak intensity 17.7 cd/lm  
 LEDs/each optic 1  
 Light colour Red  
 Required components:



LED LUXEON HL2X  
 FWHM / FWTM 16.0° / 32.0°  
 Efficiency 91 %  
 Peak intensity 8.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



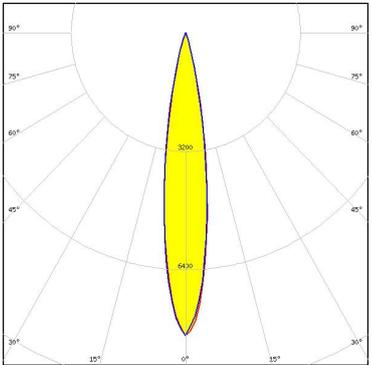
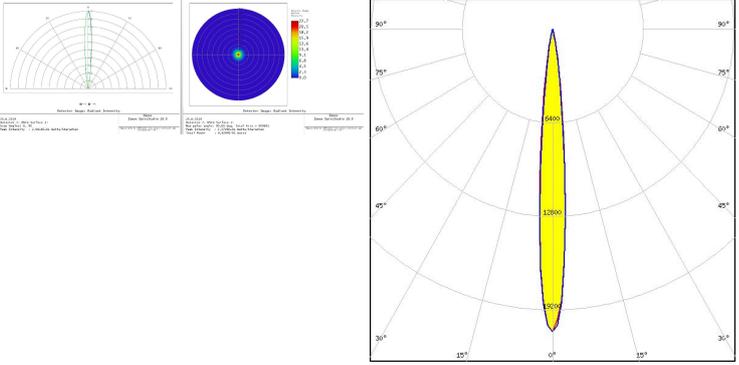
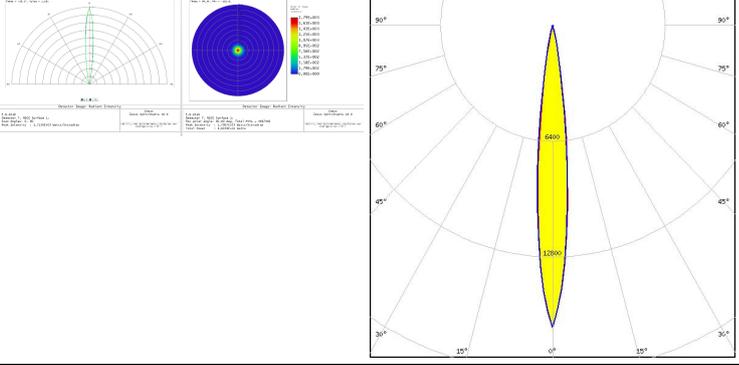
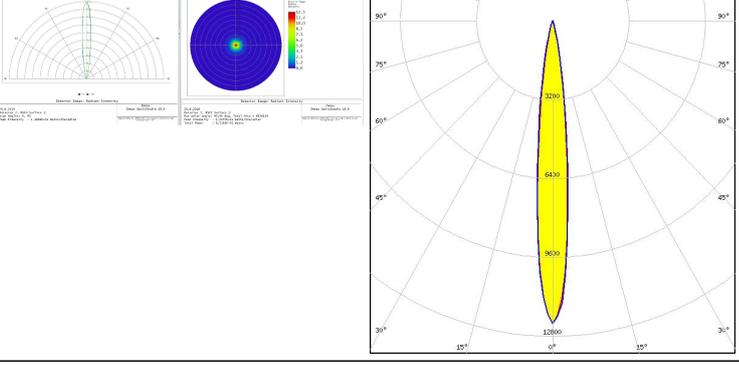
LED SST-20  
 FWHM / FWTM 12.0° / 24.0°  
 Efficiency 88 %  
 Peak intensity 14.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



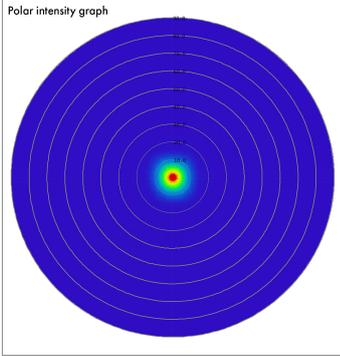
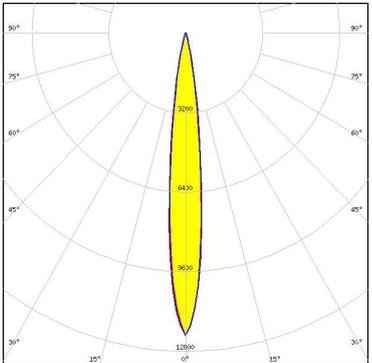
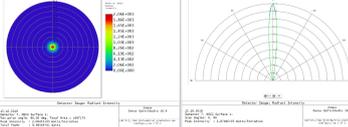
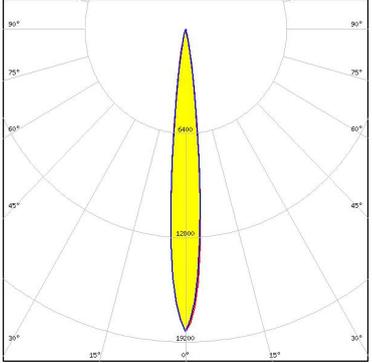
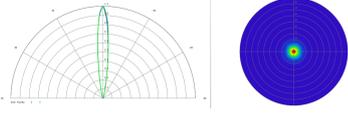
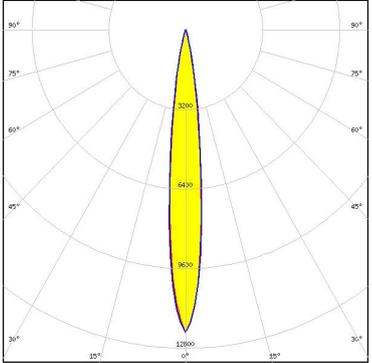
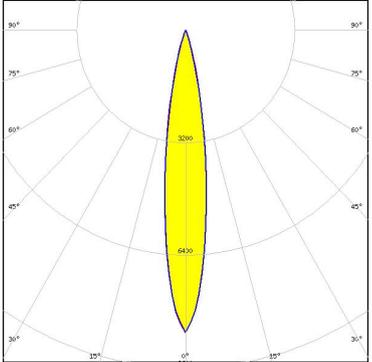
### OPTICAL RESULTS (SIMULATED):

<p><b>NICHIA</b></p> <p>LED: NV4WB35AM            FWHM / FWTM: 22.0° / 40.0°            Efficiency: 89 %            Peak intensity: 4.7 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>NICHIA</b></p> <p>LED: NV4WB35AM            FWHM / FWTM: 22.0° / 40.0°            Efficiency: 89 %            Peak intensity: 4.7 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>NICHIA</b></p> <p>LED: NVSW219F            FWHM / FWTM: 16.0° / 32.0°            Efficiency: 91 %            Peak intensity: 8.5 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>NICHIA</b></p> <p>LED: NVSW519A            FWHM / FWTM: 20.0° / 39.0°            Efficiency: 86 %            Peak intensity: 5.5 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	

### OPTICAL RESULTS (SIMULATED):

	<p>LED NVSxx19B/NVSxx19C            FWHM / FWTM 16.0° / 31.0°            Efficiency 86 %            Peak intensity 8.2 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>	
	<p>LED SFH 4715AS            FWHM / FWTM 10.0° / 20.0°            Efficiency 89 %            LEDs/each optic 1            Light colour IR            Required components:</p>	
	<p>LED SFH 4716AS            FWHM / FWTM 12.0° / 22.0°            Efficiency 88 %            LEDs/each optic 1            Light colour IR            Required components:</p>	
	<p>LED SFH 4717AS            FWHM / FWTM 12.0° / 25.0°            Efficiency 85 %            LEDs/each optic 1            Light colour IR            Required components:</p>	

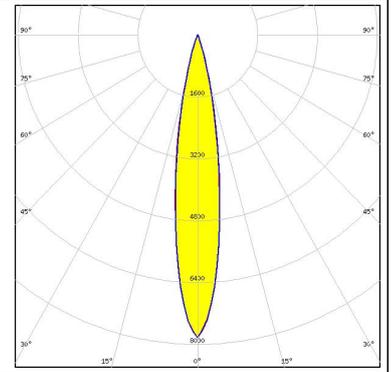
### OPTICAL RESULTS (SIMULATED):

<b>OSRAM</b> Opto Semiconductors	LED SFH 4725AS FWHM / FWTM 10.0° / 20.0° Efficiency 89 % LEDs/each optic 1 Light colour IR Required components:	Polar intensity graph 	
<b>OSRAM</b> Opto Semiconductors	LED SFH 4725S FWHM / FWTM 12.0° / 20.0° Efficiency 89 % LEDs/each optic 1 Light colour IR Required components:		
<b>OSRAM</b> Opto Semiconductors	LED SFH 4727AS FWHM / FWTM 13.0° / 25.0° Efficiency 85 % LEDs/each optic 1 Light colour IR Required components:		
<b>SAMSUNG</b>	LED LH351B FWHM / FWTM 16.0° / 32.0° Efficiency 90 % Peak intensity 8.6 cd/lm LEDs/each optic 1 Light colour White Required components:		

### OPTICAL RESULTS (SIMULATED):

#### SAMSUNG

LED	LH351C
FWHM / FWTM	18.0° / 33.0°
Efficiency	92 %
Peak intensity	7.8 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:

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#### LEDiL Oy

Joensuunkatu 13  
FI-24240 SALO  
Finland

#### LEDiL Inc.

228 West Page Street  
Suite D  
Sycamore IL 60178  
USA

#### Ledil Optics Technology (Shenzhen) Co., Ltd.

# 405 , Block B  
Casic Motor Building  
Shenzhen 518057  
P.R.CHINA

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