

## 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 ⓘ

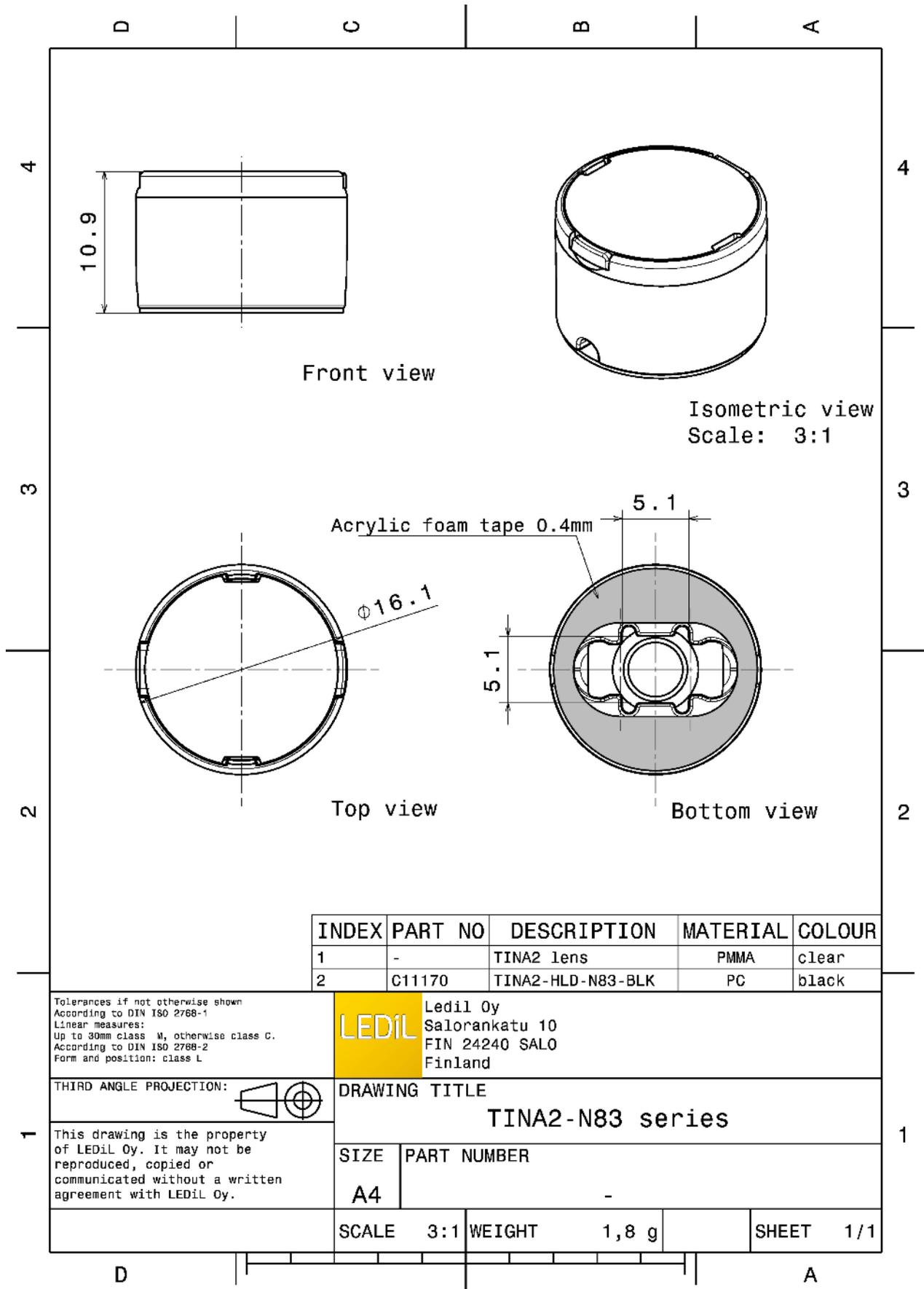


### MATERIALS:

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					

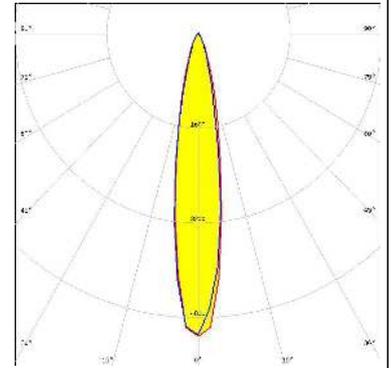


See also our general installation guide: [www.ledil.com/installation\\_guide](http://www.ledil.com/installation_guide)

### OPTICAL RESULTS (MEASURED):

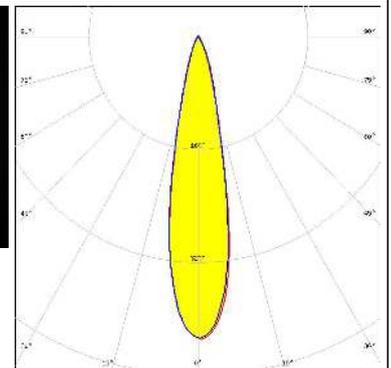
#### CREE LED

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

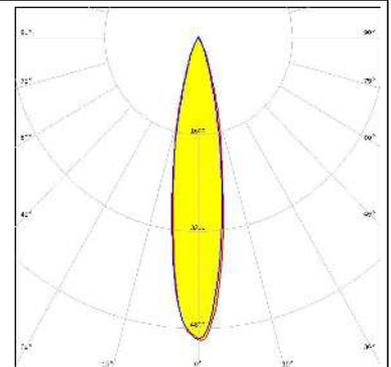


#### NICHIA

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

#### NICHIA

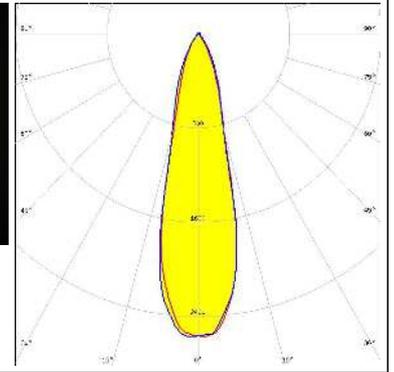
LED NS6x83  
 FWHM / FWTM 19.0° / 42.0°  
 Efficiency 93 %  
 Peak intensity 5 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:



### 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:



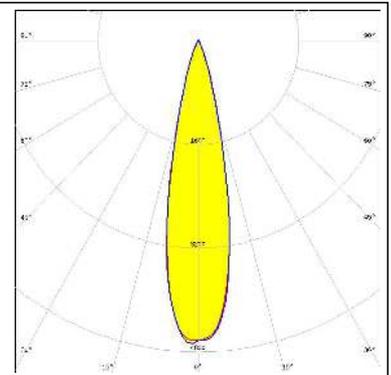
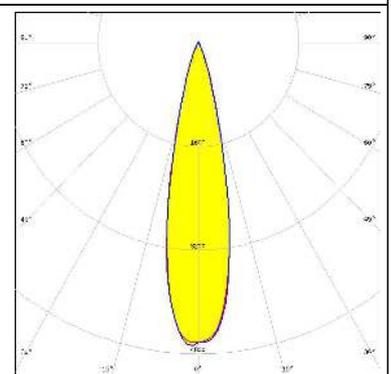
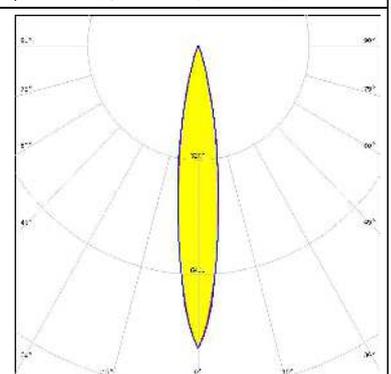
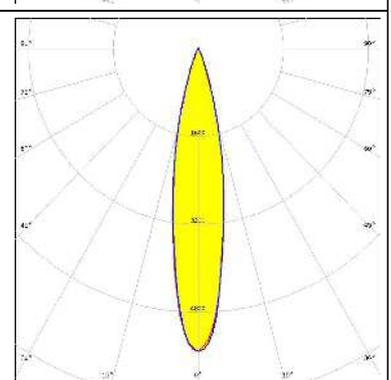
### OPTICAL RESULTS (SIMULATED):

<p><b>CREE</b> → <b>LED</b></p> <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><b>CREE</b> → <b>LED</b></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><b>CREE</b> → <b>LED</b></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><b>CREE</b> → <b>LED</b></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>	

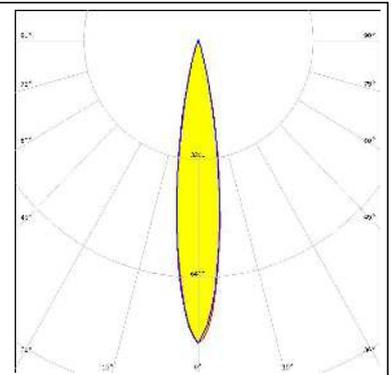
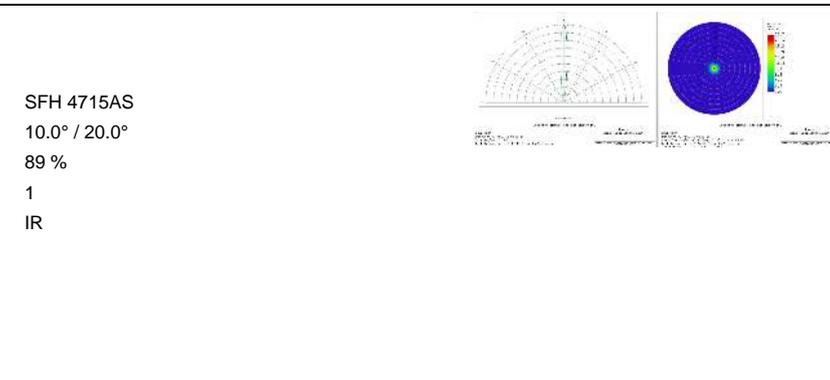
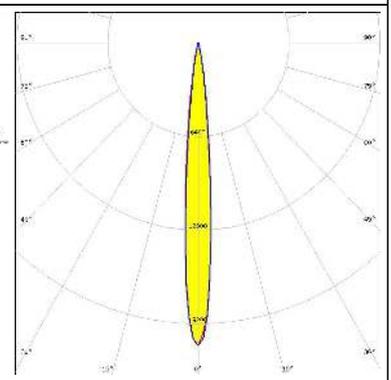
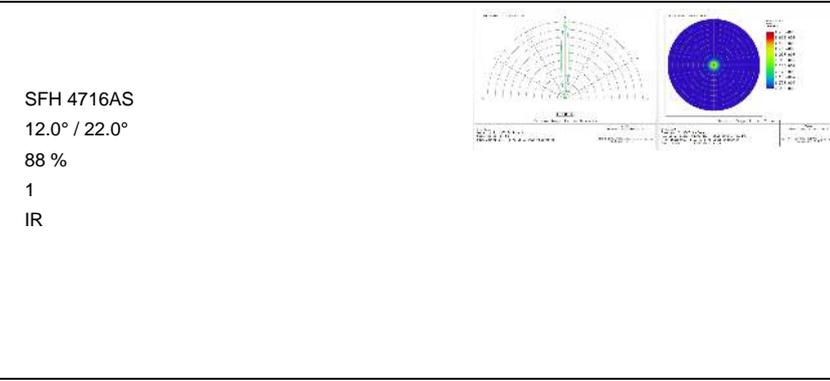
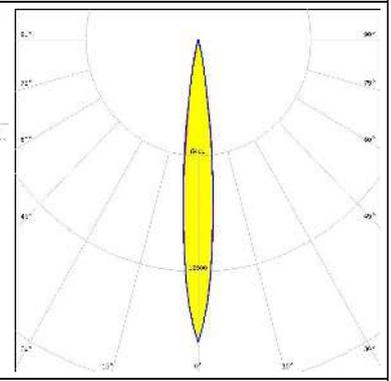
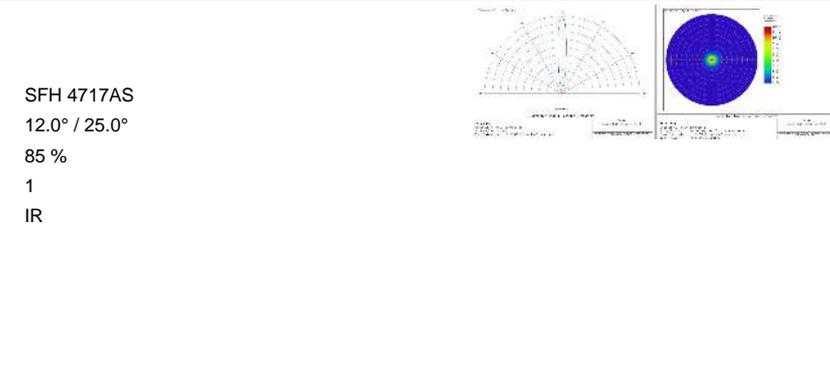
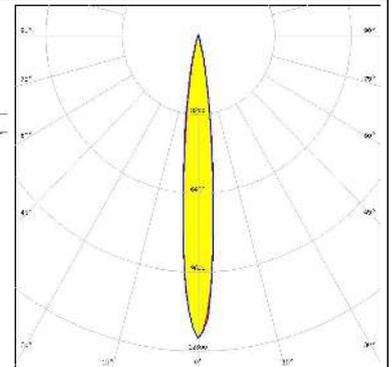
### OPTICAL RESULTS (SIMULATED):

<p><b>CREE</b> LED</p> <p>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:</p>	
<p><b>LUMILEDS</b></p> <p>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:</p>	
<p><b>LUMILEDS</b></p> <p>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:</p>	
<p><b>LUMINUS</b></p> <p>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:</p>	

### OPTICAL RESULTS (SIMULATED):

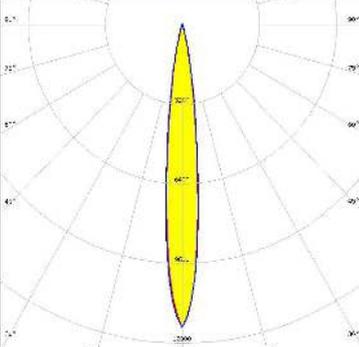
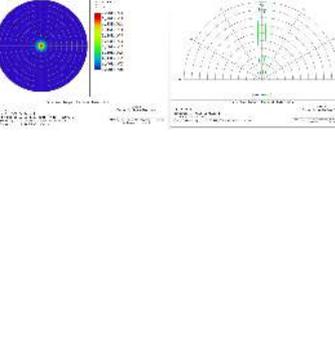
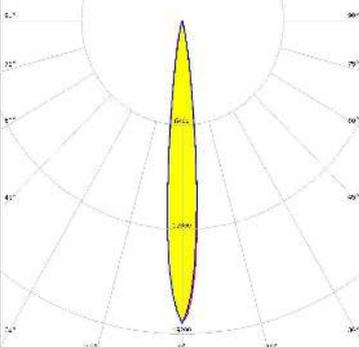
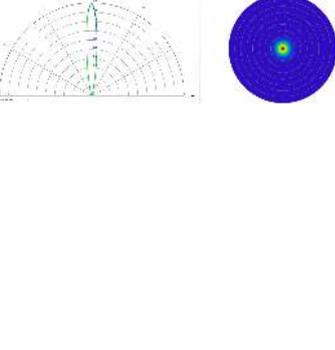
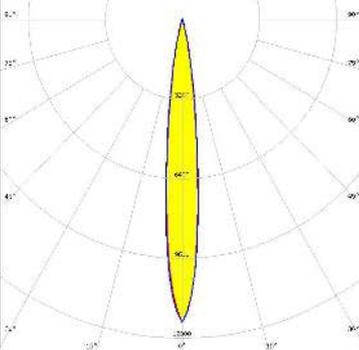
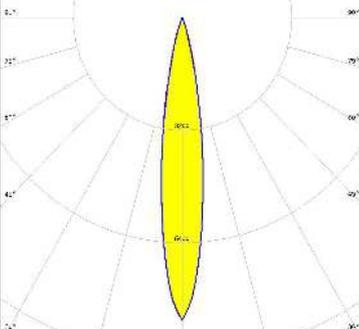
<p><b>NICHIA</b></p> <p>LED NV4WB35AM            FWHM / FWTM 22.0° / 40.0°            Efficiency 89 %            Peak intensity 4.7 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>	
<p><b>NICHIA</b></p> <p>LED NV4WB35AM            FWHM / FWTM 22.0° / 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><b>NICHIA</b></p> <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><b>OSRAM</b> Opto Semiconductors</p> <p>LED SFH 4715AS            FWHM / FWTM 10.0° / 20.0°            Efficiency 89 %            LEDs/each optic 1            Light colour IR            Required components:</p>		
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED SFH 4716AS            FWHM / FWTM 12.0° / 22.0°            Efficiency 88 %            LEDs/each optic 1            Light colour IR            Required components:</p>		
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED SFH 4717AS            FWHM / FWTM 12.0° / 25.0°            Efficiency 85 %            LEDs/each optic 1            Light colour IR            Required components:</p>		



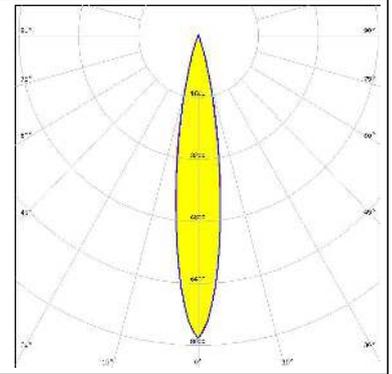
### OPTICAL RESULTS (SIMULATED):

<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED SFH 4725AS            FWHM / FWTM 10.0° / 20.0°            Efficiency 89 %            LEDs/each optic 1            Light colour IR            Required components:</p>	<p>Polar intensity graph</p> 	
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED SFH 4725S            FWHM / FWTM 12.0° / 20.0°            Efficiency 89 %            LEDs/each optic 1            Light colour IR            Required components:</p>		
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED SFH 4727AS            FWHM / FWTM 13.0° / 25.0°            Efficiency 85 %            LEDs/each optic 1            Light colour IR            Required components:</p>		
<p><b>SAMSUNG</b></p> <p>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:</p>		

### 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:

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

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

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

#### 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)