

## TINA2-RS

~14° spot beam optimized for Osram Golden Dragon+. Assembly with holder and installation tape.

### SPECIFICATION:

Dimensions	Ø 16.1 mm
Height	10.1 mm
Fastening	tape
ROHS compliant	yes ⓘ

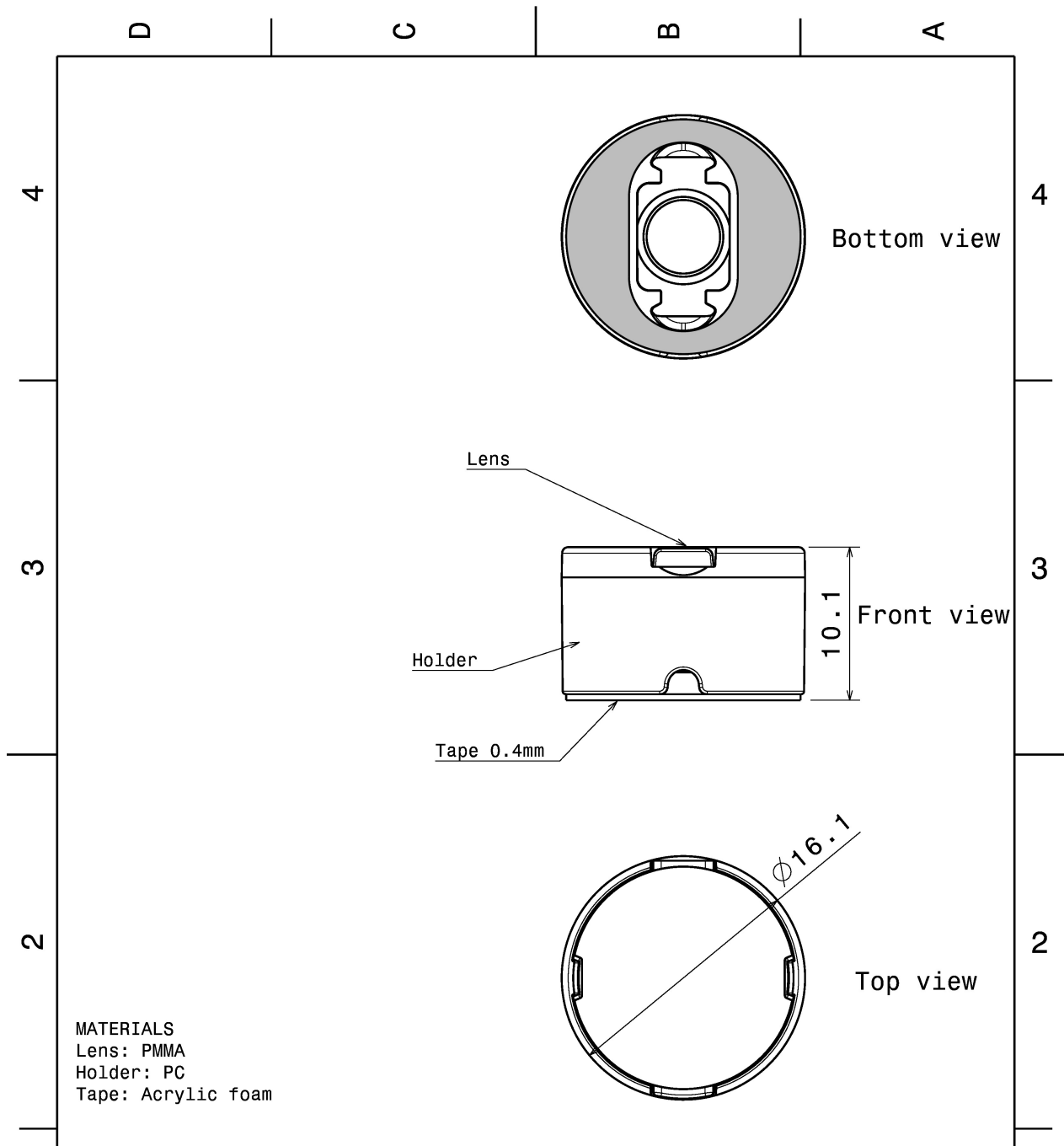


### MATERIALS:

Component	Type	Material	Colour	Finish
TINA2-O-PLUS-RS	Single lens	PMMA	clear	
TINA2-O-PLUS-HLD-WHT	Holder	PC	white	
TINA-TAPE3	Tape	Acrylic foam	black	

### ORDERING INFORMATION:

Component		Qty in box	MOQ	MPQ	Box weight (kg)
CA11847_TINA2-RS	Single lens	4140	230	230	0.0
» Box size: 451 x 241 x 298 mm					



**MATERIALS**  
 Lens: PMMA  
 Holder: PC  
 Tape: Acrylic foam

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DRAWN BY m		DATE 29.04.2011	DRAWING TITLE <b>Datasheet Tina2-0-Plus Assy</b>			
CHECKED BY i k	DATE 29.04.2011	SIZE <b>A4</b>	DRAWING NUMBER		REV <b>2</b>	
DESIGNED BY <b>HH</b>	DATE 01.01.2011	SCALE <b>3:1</b>	WEIGHT (g)	-	SHEET <b>1/1</b>	

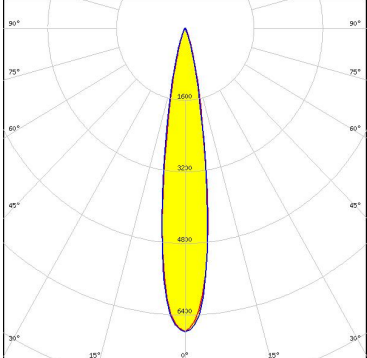
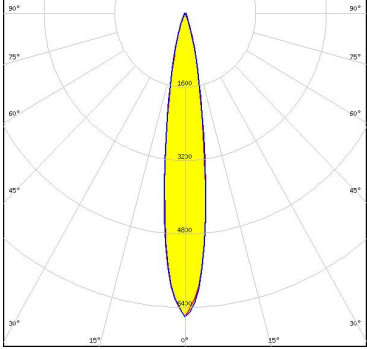
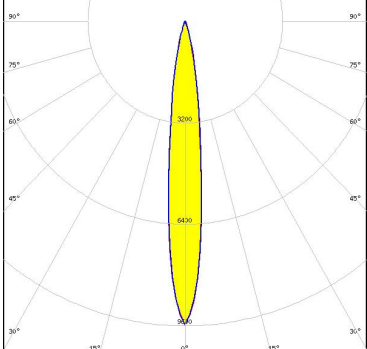
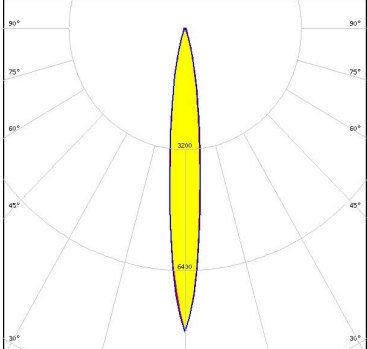
See also our general installation guide: [www.ledil.com/installation\\_guide](http://www.ledil.com/installation_guide)

## OPTICAL RESULTS (MEASURED):

**OSRAM**  
Opto Semiconductors

LED	Golden Dragon+
FWHM / FWTM	10.0° / 20.0°
Efficiency	93 %
Peak intensity	18 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-G2 HE            FWHM / FWTM: 17.0° / 34.0°            Efficiency: 88 %            Peak intensity: 6.8 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: 85 %            Peak intensity: 6.6 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: 12.0° / 30.0°            Efficiency: 89 %            Peak intensity: 9.6 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>CREE</b> → <b>LED</b></p> <p>LED: XT-E            FWHM / FWTM: 12.0° / 30.0°            Efficiency: 82 %            Peak intensity: 8 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	

### OPTICAL RESULTS (SIMULATED):

<p><b>LUMILEDS</b></p> <p>LED LUXEON 3030 HE Plus</p> <p>FWHM / FWTM 14.0° / 34.0°</p> <p>Efficiency 87 %</p> <p>Peak intensity 7.4 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	
<p><b>LUMILEDS</b></p> <p>LED LUXEON 5050 Square LES</p> <p>FWHM / FWTM 22.0° / 52.0°</p> <p>Efficiency 85 %</p> <p>Peak intensity 2.8 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	
<p><b>LUMILEDS</b></p> <p>LED LUXEON CZ</p> <p>FWHM / FWTM 8.0° / 20.0°</p> <p>Efficiency 88 %</p> <p>Peak intensity 22.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour Red</p> <p>Required components:</p>	
<p><b>LUMILEDS</b></p> <p>LED LUXEON IR Domed 150</p> <p>FWHM / FWTM 10.0° / 27.0°</p> <p>Efficiency 81 %</p> <p>LEDs/each optic 1</p> <p>Light colour IR</p> <p>Required components:</p>	

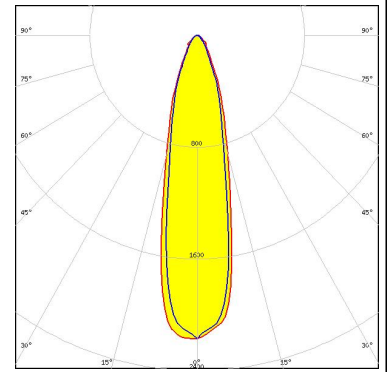
### OPTICAL RESULTS (SIMULATED):

<p><b>NICHIA</b></p> <p>LED: NV4WB35AM            FWHM / FWTM: 20.0° / 44.0°            Efficiency: 86 %            Peak intensity: 3.9 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: 89 %            Peak intensity: 7.8 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>NICHIA</b></p> <p>LED: NVSW519A            FWHM / FWTM: 20.0° / 38.0°            Efficiency: 85 %            Peak intensity: 5.2 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>NICHIA</b></p> <p>LED: NVSxx19B/NVSxx19C            FWHM / FWTM: 16.0° / 33.0°            Efficiency: 84 %            Peak intensity: 6.9 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	

### OPTICAL RESULTS (SIMULATED):

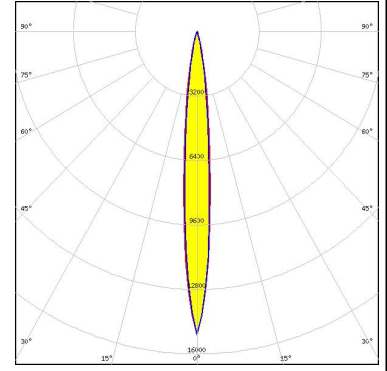
#### OSRAM Opto Semiconductors

LED Duris S8  
 FWHM / FWTM 25.0° / 59.0°  
 Efficiency 85 %  
 Peak intensity 2.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



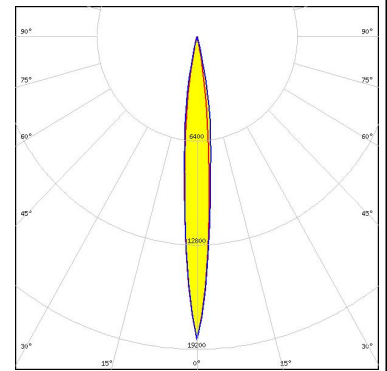
#### OSRAM Opto Semiconductors

LED KW CULPM1.TG  
 FWHM / FWTM 10.0° / 24.0°  
 Efficiency 89 %  
 Peak intensity 15.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



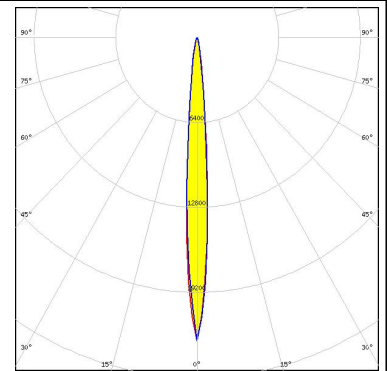
#### OSRAM Opto Semiconductors

LED PLPVEC2 850A  
 FWHM / FWTM 10.0° / 23.0°  
 Efficiency 93 %  
 LEDs/each optic 1  
 Light colour IR  
 Required components:



#### OSRAM Opto Semiconductors

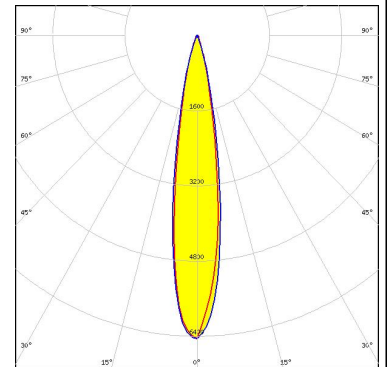
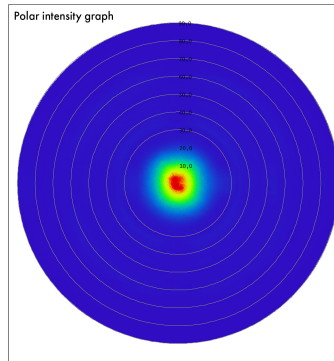
LED SFH 4232A  
 FWHM / FWTM 8.0° / 19.0°  
 Efficiency 94 %  
 LEDs/each optic 1  
 Light colour IR  
 Required components:



### OPTICAL RESULTS (SIMULATED):

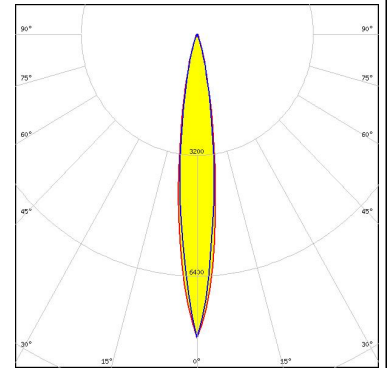
**OSRAM**  
Opto Semiconductors

LED SFH 4715AS  
FWHM / FWTM 17.0° / 35.0°  
Efficiency 88 %  
LEDs/each optic 1  
Light colour IR  
Required components:



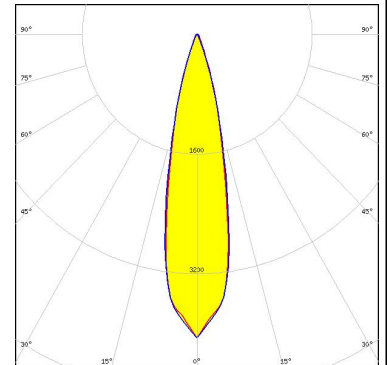
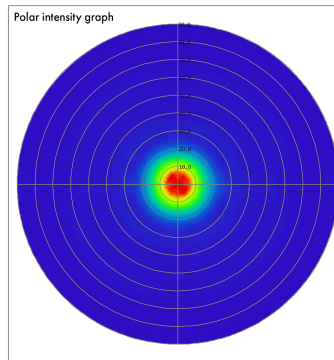
**OSRAM**  
Opto Semiconductors

LED SFH 4725S  
FWHM / FWTM 14.0° / 32.0°  
Efficiency 88 %  
LEDs/each optic 1  
Light colour IR  
Required components:



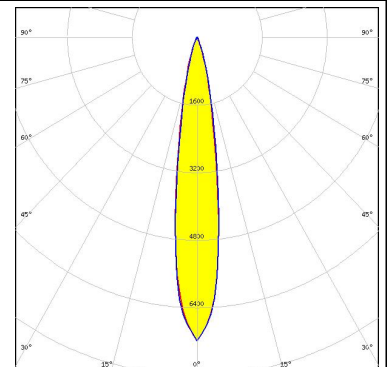
**OSRAM**  
Opto Semiconductors

LED SFH 4727AS  
FWHM / FWTM 23.0° / 42.0°  
Efficiency 86 %  
LEDs/each optic 1  
Light colour IR  
Required components:



**SAMSUNG**

LED LH351C  
FWHM / FWTM 16.0° / 34.0°  
Efficiency 91 %  
Peak intensity 7.2 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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