

## TINA-WW

~60° wide beam. Assembly with holder, installation tape and location pins.

### SPECIFICATION:

Dimensions	Ø 16.1 mm
Height	9.5 mm
Fastening	pin, tape
ROHS compliant	yes ⓘ

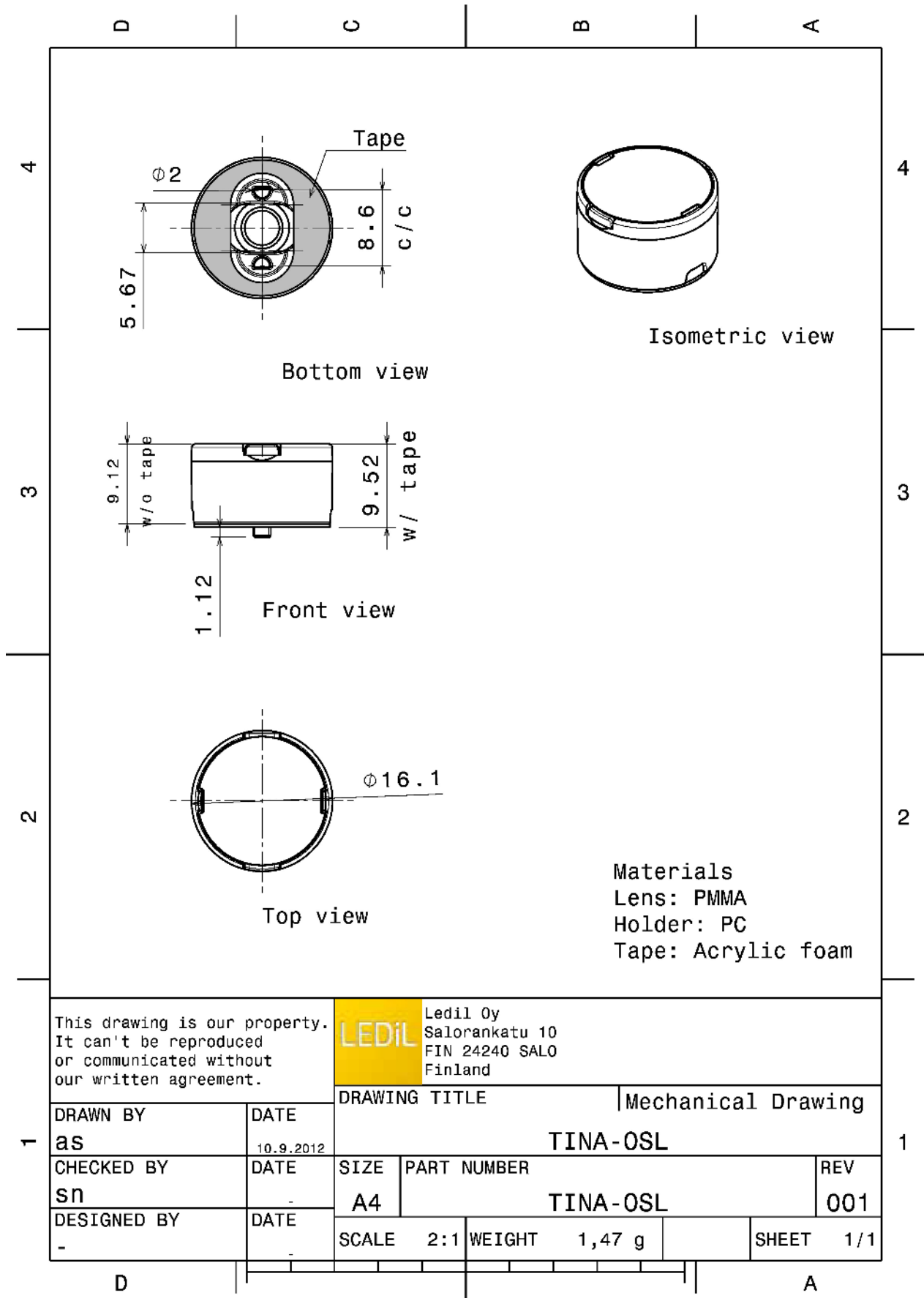


### MATERIALS:

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

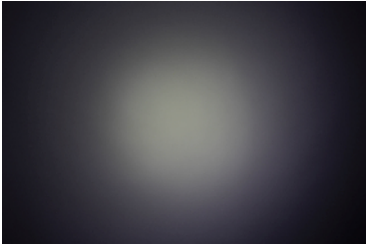
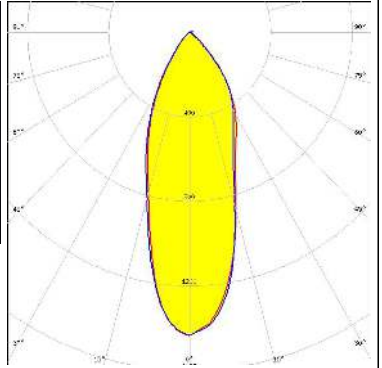
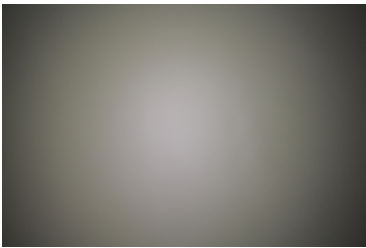
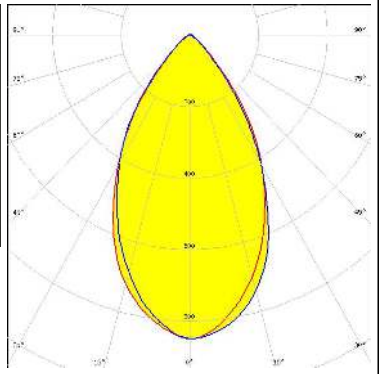

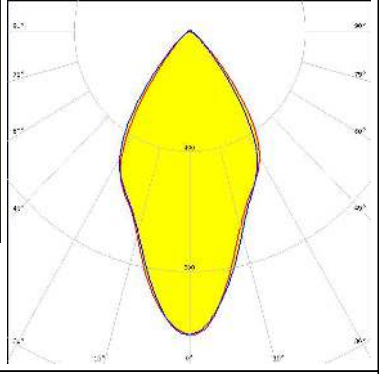


### ORDERING INFORMATION:

Component		Qty in box	MOQ	MPQ	Box weight (kg)
FA11027_TINA-WW	Single lens	2016	288	144	4.0
» Box size:					



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

#### OPTICAL RESULTS (MEASURED):

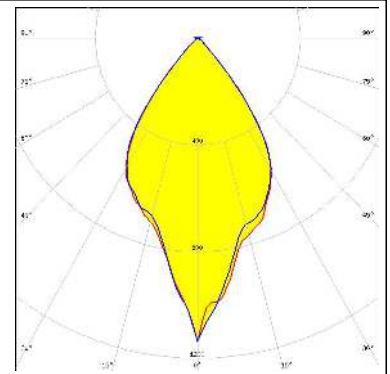
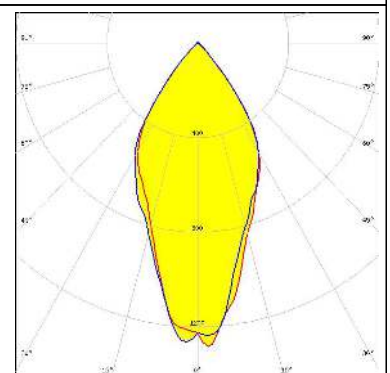
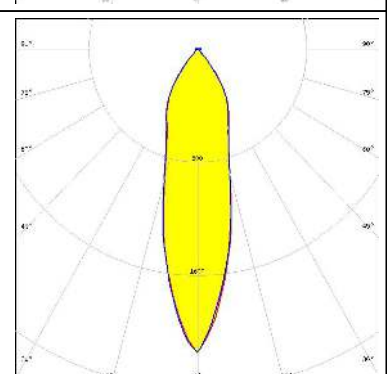
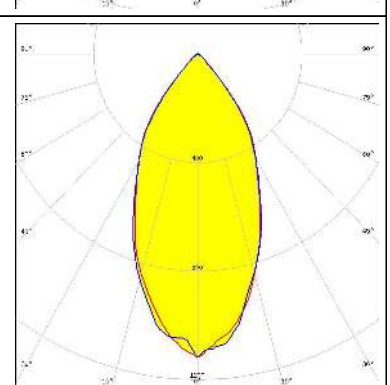
<p><b>LUMILEDS</b></p> <p>LED LUXEON C</p> <p>FWHM / FWTM 35.0° / 81.0°</p> <p>Efficiency 86 %</p> <p>Peak intensity 1.4 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>NICHIA</b></p> <p>LED NVSW3x9A</p> <p>FWHM / FWTM 59.0° / 92.0°</p> <p>Efficiency 84 %</p> <p>Peak intensity 0.9 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 OSLON SSL 80</p> <p>FWHM / FWTM 57.0° / 90.0°</p> <p>Efficiency 86 %</p> <p>Peak intensity 1 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 SFH 4715S</p> <p>FWHM / FWTM 36.0° / 80.0°</p> <p>Efficiency %</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		

## OPTICAL RESULTS (MEASURED):

**OSRAM**  
Opto Semiconductors

LED	SFH 4725S
FWHM / FWTM	35.0° / 82.0°
Efficiency	%
LEDs/each optic	1
Light colour	White
Required components:	

### OPTICAL RESULTS (SIMULATED):

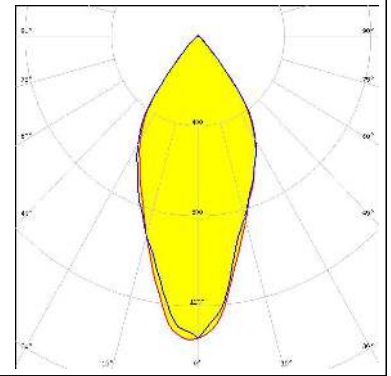
<p><b>CREE</b> LED</p> <p>LED: XQ-E HI            FWHM / FWTM: 60.0° / 86.0°            Efficiency: 94 %            Peak intensity: 1.1 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>LUMILEDS</b></p> <p>LED: LUXEON Z ES            FWHM / FWTM: 48.0° / 84.0°            Efficiency: 95 %            Peak intensity: 1.3 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>NICHIA</b></p> <p>LED: NCSxE17A            FWHM / FWTM: 27.0° / 76.0°            Efficiency: 90 %            Peak intensity: 2.1 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>NICHIA</b></p> <p>LED: NVSxx19B/NVSxx19C            FWHM / FWTM: 50.0°            Efficiency: 89 %            Peak intensity: 1.1 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	

### OPTICAL RESULTS (SIMULATED):

#### OSRAM

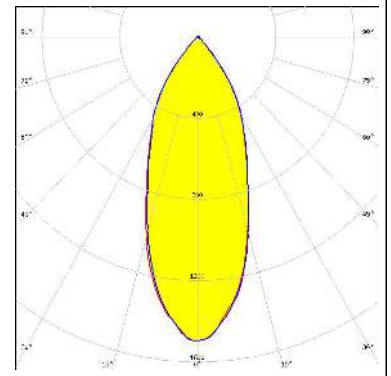
Opto Semiconductors

LED SYNIOS S2222  
FWHM / FWTM 46.0 + 47.0° / 84.0°  
Efficiency 98 %  
Peak intensity 1.4 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



#### SAMSUNG

LED LH181B  
FWHM / FWTM 40.1° / 81.3°  
Efficiency 94 %  
Peak intensity 1.5 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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