

## TINA2-RS

~14° spot beam optimized for Nichia NCSxx19.  
Assembly with holder, installation tape and  
location pins.

### TECHNICAL SPECIFICATIONS:

Dimensions	Ø 16.1 mm
Height	9.3 mm
Fastening	tape, pin
ROHS compliant	yes ⓘ

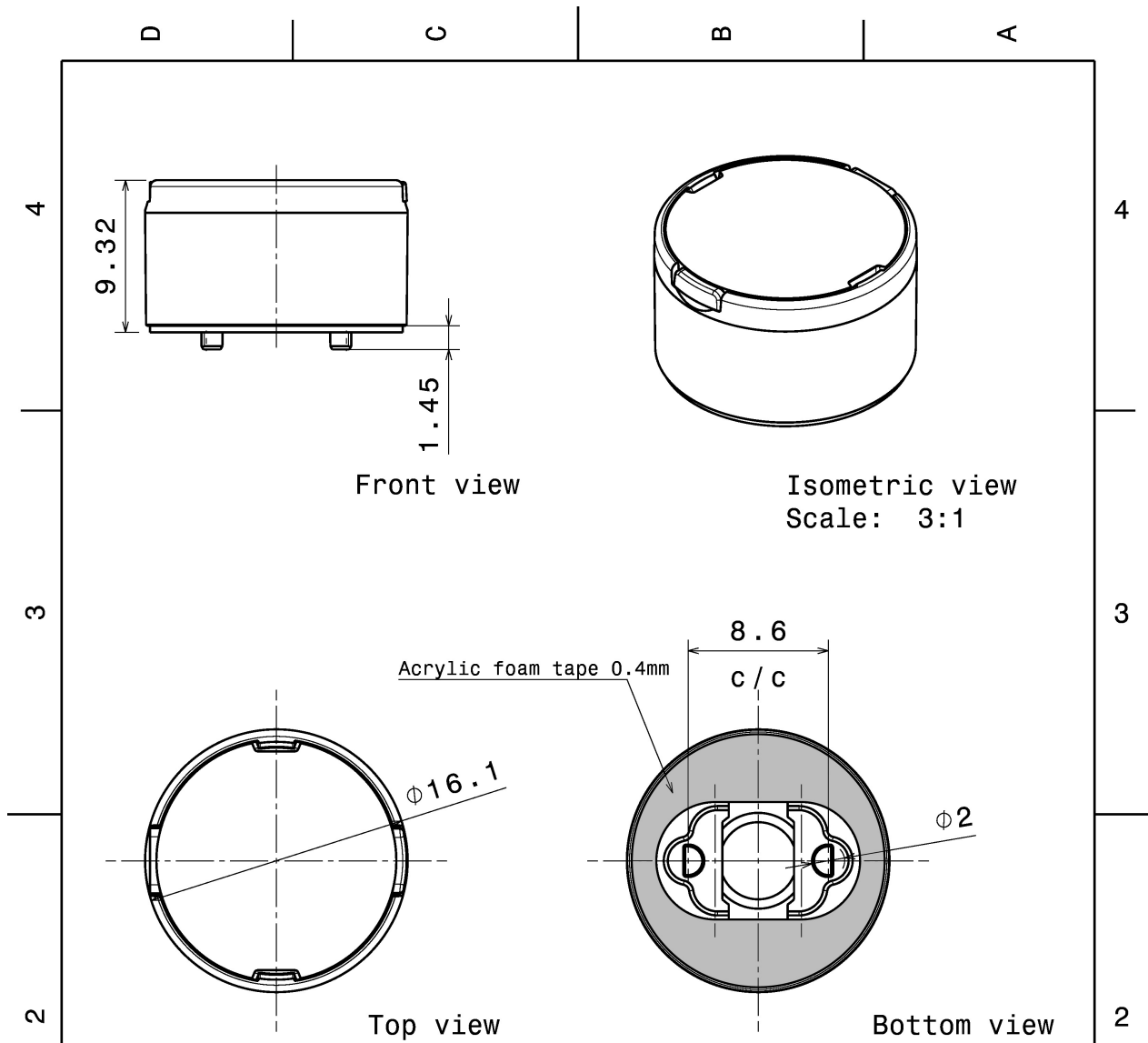


### MATERIAL SPECIFICATIONS:

Component	Type	Material	Colour	Finish
TINA2-RS	Single lens	PMMA	clear	
TINA2-HLD-NCS19-BLK	Holder	PC	black	
TINA-TAPE3	Tape	Acrylic foam	black	

### ORDERING INFORMATION:

Component		Qty in box	MOQ	MPQ	Box weight (kg)
CA11020_TINA2-RS	Single lens	4140		230	0.0
» Box size: 451 x 241 x 298 mm					



INDEX	PART NO	DESCRIPTION	MATERIAL	COLOUR
1	-	TINA2-lens	PMMA	clear
2	C11010	TINA2-HLD-NCS19-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  
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THIRD ANGLE PROJECTION:

DRAWING TITLE  
**TINA2-NCS19 series**

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SIZE	PART NUMBER
A4	-

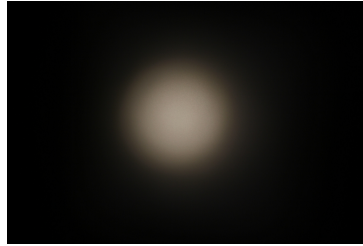
SCALE	3:1	WEIGHT	1 g	SHEET	1/1
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See also our general installation guide: [www.ledil.com/installation\\_guide](http://www.ledil.com/installation_guide)

### PHOTOMETRIC DATA (MEASURED):

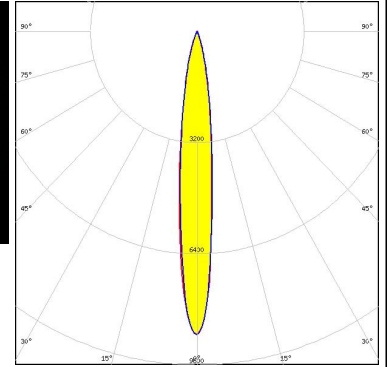


**LED** NCSxx19A  
**FWHM / FWTM** 13.0° / 26.0°  
**Efficiency** 93 %  
**Peak intensity** 10.7 cd/lm  
**LEDs/each optic** 1  
**Light colour** White  
**Required components:**



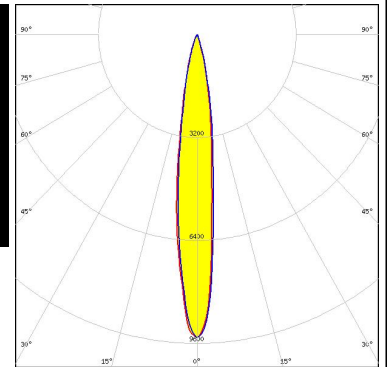
### SAMSUNG

**LED** LH181A  
**FWHM / FWTM** 13.0° / 31.0°  
**Efficiency** 82 %  
**Peak intensity** 8.7 cd/lm  
**LEDs/each optic** 1  
**Light colour** White  
**Required components:**



### SAMSUNG

**LED** LH181B  
**FWHM / FWTM** 14.0° / 31.0°  
**Efficiency** 89 %  
**Peak intensity** 9.4 cd/lm  
**LEDs/each optic** 1  
**Light colour** White  
**Required components:**



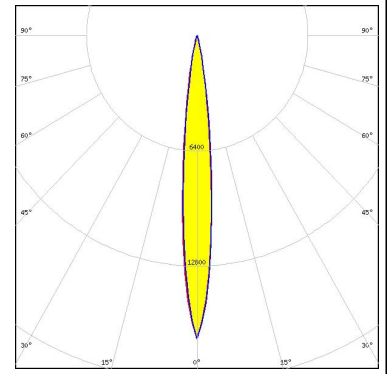
### PHOTOMETRIC DATA (SIMULATED):

<p><b>NICHIA</b></p> <p>LED: NCSxE17A            FWHM / FWTM: 10.0° / 21.0°            Efficiency: 92 %            Peak intensity: 20.5 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>NICHIA</b></p> <p>LED: NVSxE21A            FWHM / FWTM: 12.0° / 26.0°            Efficiency: 90 %            Peak intensity: 13.3 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>NICHIA</b></p> <p>LED: NVSxx19A            FWHM / FWTM: 20.0° / 37.0°            Efficiency: 88 %            Peak intensity: 5.6 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>OSRAM</b>  <small>Opto Semiconductors</small></p> <p>LED: KW CSLPM1.TG            FWHM / FWTM: 12.0° / 25.0°            Efficiency: 92 %            Peak intensity: 14.7 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	

### PHOTOMETRIC DATA (SIMULATED):

**OSRAM**  
Opto Semiconductors

LED	OSLON SSL 120
FWHM / FWTM	11.0° / 23.0°
Efficiency	92 %
Peak intensity	16.8 cd/lm
LEDs/each optic	1
Light colour	Hyper Red
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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