

## LISA2-M-PIN

~20° medium beam. 6.8 mm high variant with location pin installation.

### SPECIFICATION:

Dimensions	Ø 9.9 mm
Height	6.8 mm
Fastening	glue, pin
ROHS compliant	yes ⓘ

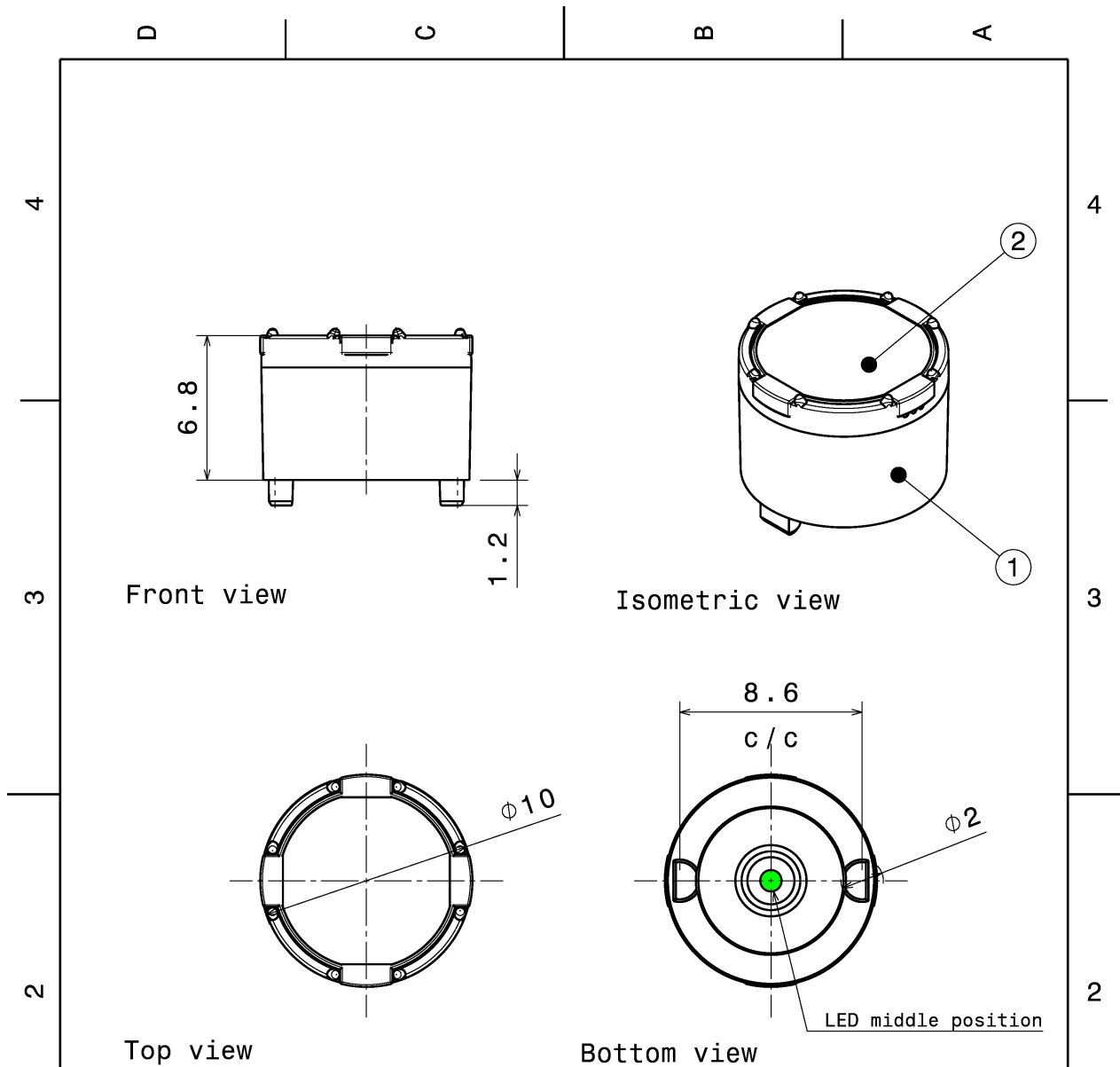
### MATERIALS:

Component	Type	Material	Colour	Finish
LISA2-M	Single lens	PMMA	clear	
LISA2-HLD-PIN	Holder	PC	black	

### ORDERING INFORMATION:

Component	Type	Qty in box	MOQ	MPQ	Box weight (kg)
FP13028_LISA2-M-PIN	Single lens	2000		100	1.4
» Box size:					





INDEX	PART NO	DESCRIPTION	MATERIAL	COLOUR
1	F10989	LISA2-HLD-PIN	PC	black
2	-	LISA2_lens	PMMA	

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  
**Lisa2-PIN-XP assembly**


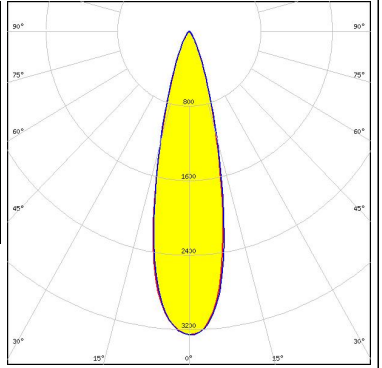
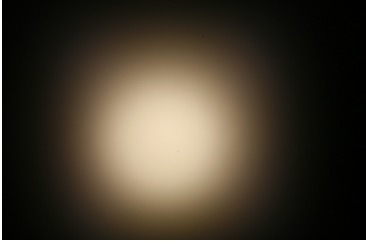
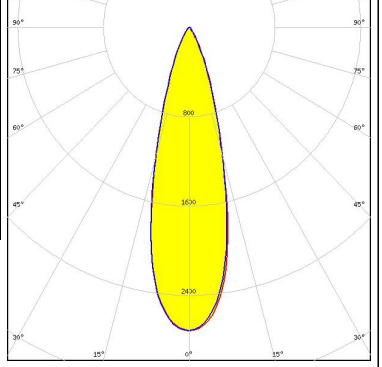
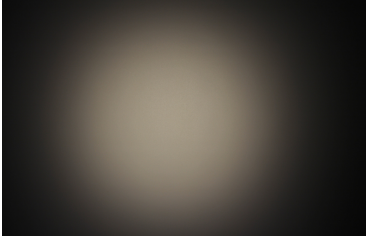
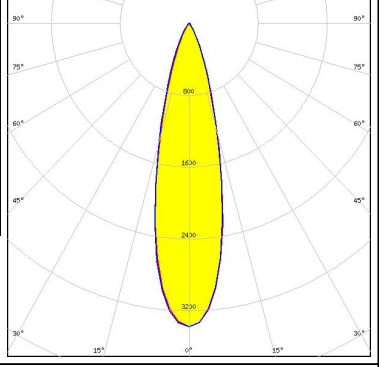

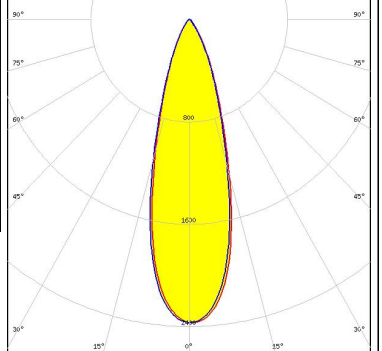
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SIZE	PART NUMBER
A4	-

SCALE	4:1	WEIGHT	0,5 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):

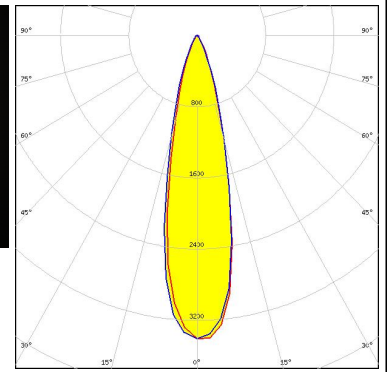
<p><b>CREE</b> LED</p> <p>LED XT-E            FWHM / FWTM 26.0° / 49.0°            Efficiency 89 %            Peak intensity 3.3 cd/m            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON T            FWHM / FWTM 28.0° / 54.0°            Efficiency 87 %            Peak intensity 2.7 cd/m            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON TX            FWHM / FWTM 26.0° / 51.0°            Efficiency 88 %            Peak intensity 3.4 cd/m            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>NICHIA</b></p> <p>LED NVSxx19B/NVSxx19C            FWHM / FWTM 30.0° / 58.0°            Efficiency 86 %            Peak intensity 2.4 cd/m            LEDs/each optic 1            Light colour White            Required components:</p>		

#### OPTICAL RESULTS (MEASURED):

#### OSRAM

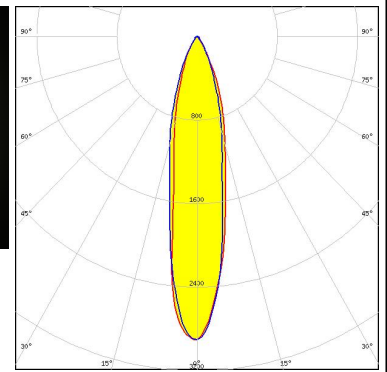
Opto Semiconductors

LED OSLON Square EC  
 FWHM / FWTM 26.0° / 49.0°  
 Efficiency 84 %  
 Peak intensity 3.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



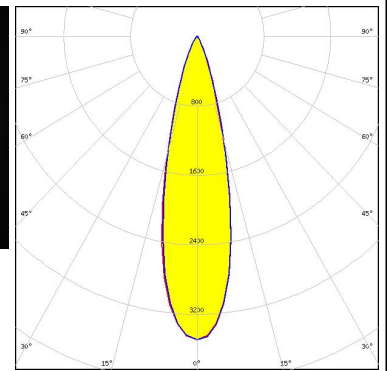
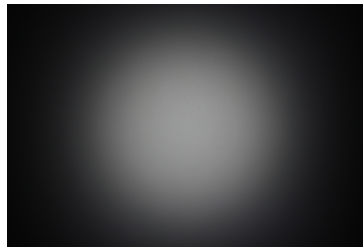
#### SAMSUNG

LED LH181B  
 FWHM / FWTM 20.0° / 53.0°  
 Efficiency 78 %  
 Peak intensity 2.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

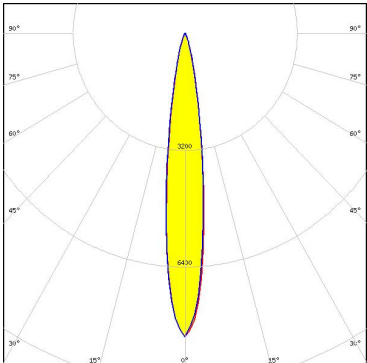
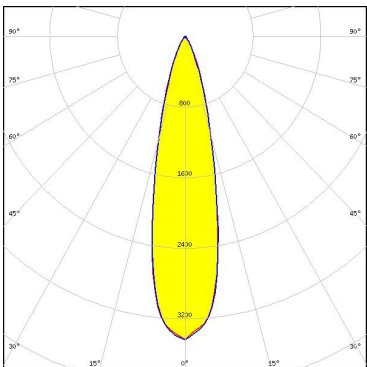
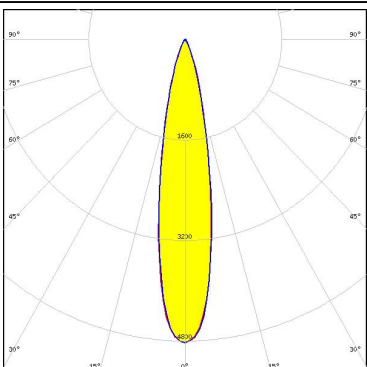
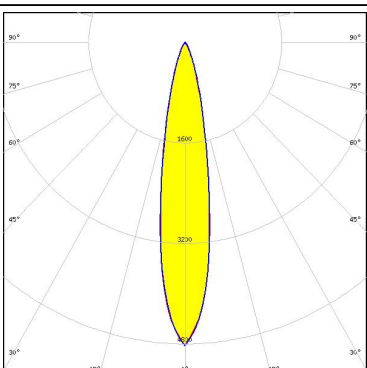


#### SAMSUNG

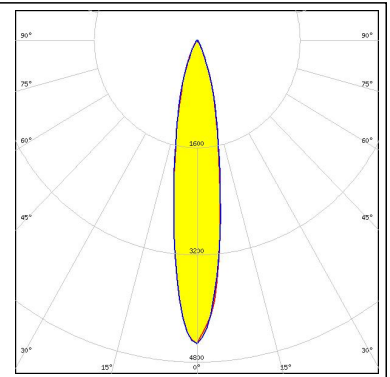
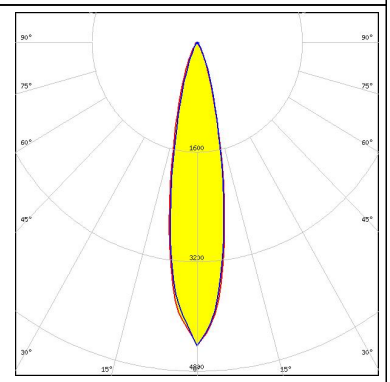
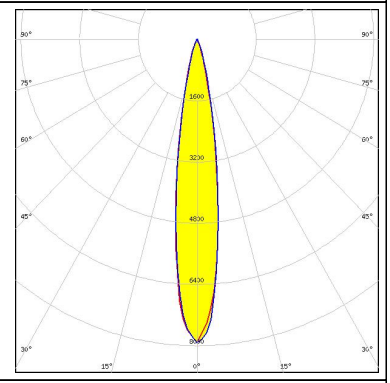
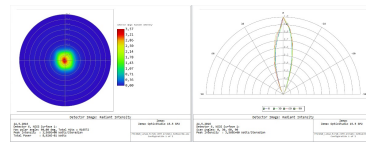
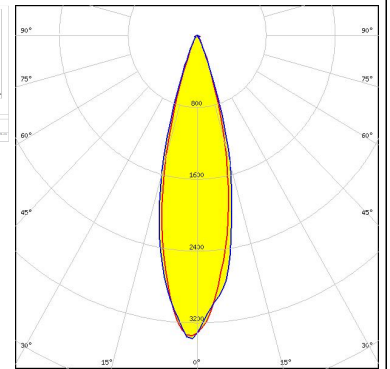
LED LH351Z  
 FWHM / FWTM 26.0° / 50.0°  
 Efficiency 87 %  
 Peak intensity 3.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



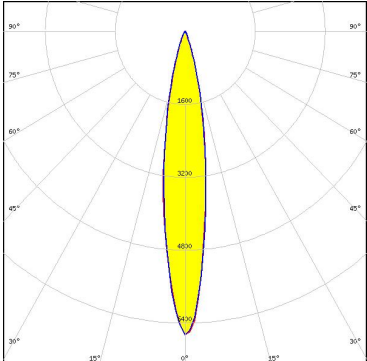
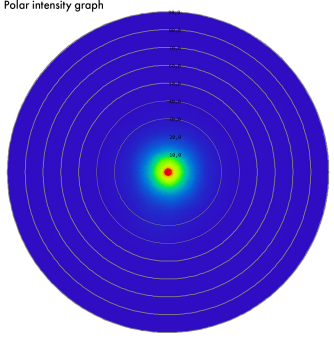
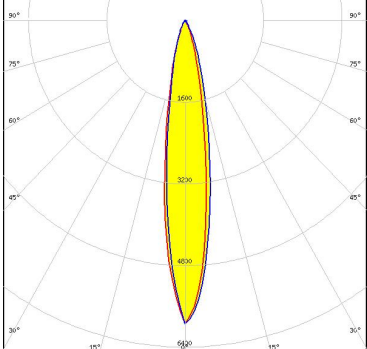
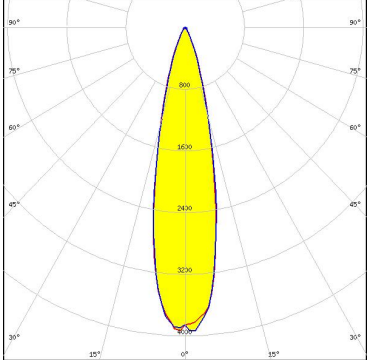
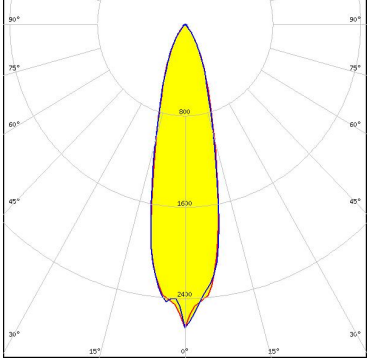
#### OPTICAL RESULTS (SIMULATED):

<p><b>LUMILEDS</b></p> <p>LED: LUXEON IR Compact            FWHM / FWTM: 15.0° / 31.0°            Efficiency: 85 %            LEDs/each optic: 1            Light colour: IR            Required components:</p>	
<p><b>LUMILEDS</b></p> <p>LED: LUXEON Rebel ES            FWHM / FWTM: 24.0° / 49.0°            Efficiency: 90 %            Peak intensity: 3.4 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>LUMINUS</b></p> <p>LED: SST-20            FWHM / FWTM: 20.0° / 42.0°            Efficiency: 89 %            Peak intensity: 4.8 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>NICHIA</b></p> <p>LED: NCSxx19B            FWHM / FWTM: 19.0° / 42.0°            Efficiency: 85 %            Peak intensity: 4.8 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	

### OPTICAL RESULTS (SIMULATED):

<p><b>NICHIA</b></p> <p>LED: NVSxE21A            FWHM / FWTM: 18.0° / 44.0°            Efficiency: 85 %            Peak intensity: 4.5 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>		
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED: OSOLON Square CSSRM2/CSSRM3            FWHM / FWTM: 21.0° / 44.0°            Efficiency: 91 %            Peak intensity: 4.4 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>		
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED: OSOLON SSL 150            FWHM / FWTM: 16.0° / 33.0°            Efficiency: 91 %            Peak intensity: 7.9 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: 26.0° / 45.0°            Efficiency: 89 %            LEDs/each optic: 1            Light colour: White            Required components:</p>		

#### OPTICAL RESULTS (SIMULATED):

<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED SFH 4716AS FWHM / FWTM 16.0° / 36.0° Efficiency 89 % LEDs/each optic 1 Light colour White Required components:</p>	
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED SFH 4770S FWHM / FWTM 12.0° / 30.0° Efficiency 90 % LEDs/each optic 1 Light colour IR Required components:</p>	<p>Polar intensity graph</p>  
<p><b>SEOUL SEMICONDUCTOR</b></p> <p>LED Z5M1/Z5M2 FWHM / FWTM 23.0° / 45.0° Efficiency 91 % Peak intensity 4 cd/lm LEDs/each optic 1 Light colour White Required components:</p>	
<p><b>SEOUL SEMICONDUCTOR</b></p> <p>LED Z8Y22P FWHM / FWTM 25.0° / 56.0° Efficiency 84 % Peak intensity 2.7 cd/lm LEDs/each optic 1 Light colour White Required components:</p>	

### 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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