

## CRYSTAL-MINE

~4.9° spot beam especially designed for mining headlamps

### SPECIFICATION:

Dimensions	Ø 46.8 mm
Height	27.4 mm
Fastening	snaps
ROHS compliant	yes ⓘ

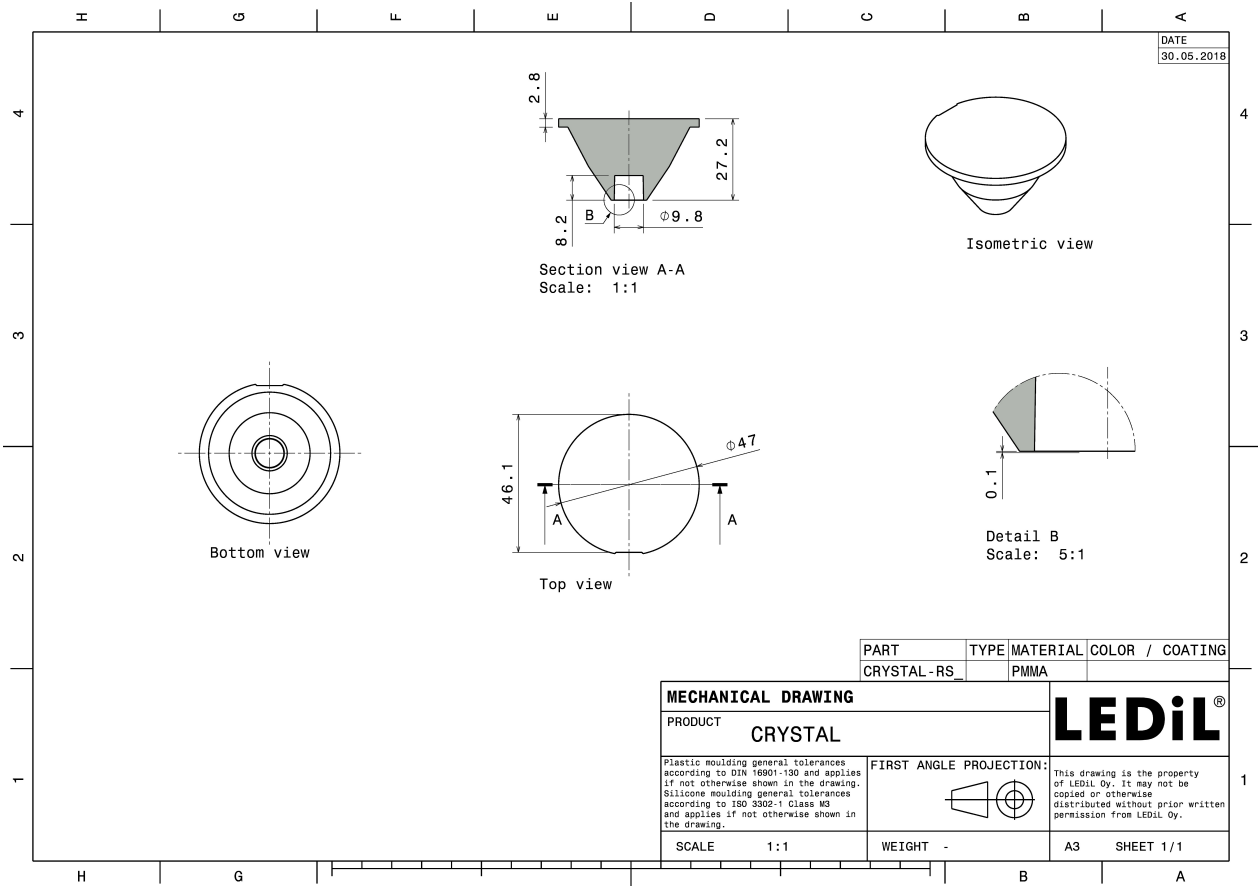
### MATERIALS:

Component	Type	Material	Colour	Finish
CRYSTAL-MINE	Single lens	PMMA	clear	

### ORDERING INFORMATION:


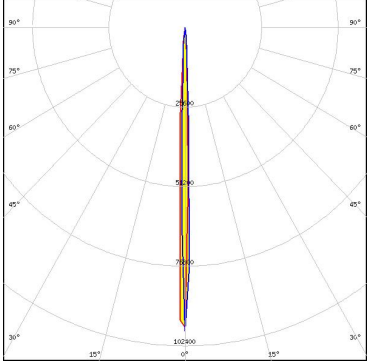
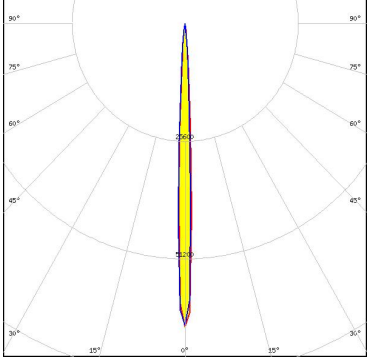

Component	Qty in box	MOQ	MPQ	Box weight (kg)
F12985_CRYSTAL-MINE » Box size: 480 x 280 x 300 mm	288	64	32	7.1



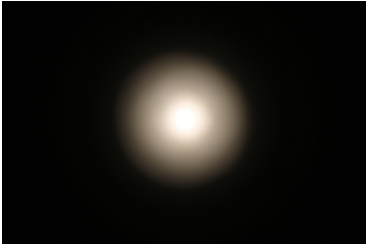

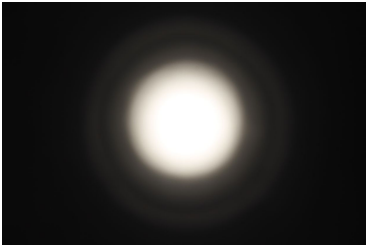
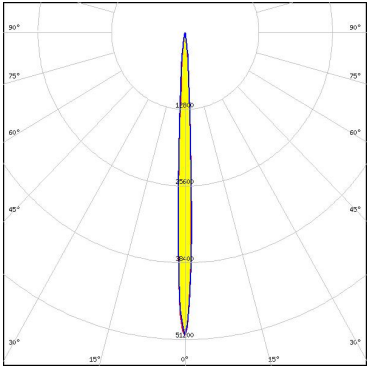



See also our general installation guide: [www.ledil.com/installation\\_guide](http://www.ledil.com/installation_guide)

#### OPTICAL RESULTS (MEASURED):

<p><b>CREE</b> LEDs</p> <p>LED XM-L2            FWHM / FWTM 6.9° / 15.0°            Efficiency 90 %            Peak intensity 35 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>	
<p><b>CREE</b> LEDs</p> <p>LED XP-E            FWHM / FWTM 3.0° / 7.9°            Efficiency 92 %            Peak intensity 96 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>	
<p><b>CREE</b> LEDs</p> <p>LED XP-G            FWHM / FWTM 4.7° / 10.5°            Efficiency 90 %            Peak intensity 66.9 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>	
<p><b>CREE</b> LEDs</p> <p>LED XP-G2            FWHM / FWTM 4.6° / 12.0°            Efficiency 90 %            Peak intensity 65.2 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>	

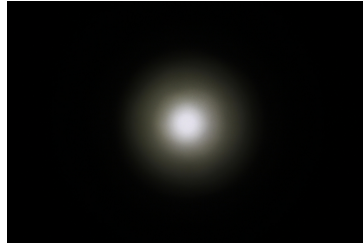
#### OPTICAL RESULTS (MEASURED):

<p><b>LUMILEDS</b></p> <p>LED LUXEON A</p> <p>FWHM / FWTM 4.9° / 13.0°</p> <p>Efficiency 89 %</p> <p>Peak intensity 58.2 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 T</p> <p>FWHM / FWTM 4.9° / 13.0°</p> <p>Efficiency 89 %</p> <p>Peak intensity 55.1 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 TX</p> <p>FWHM / FWTM 5.0° / 12.6°</p> <p>Efficiency 94 %</p> <p>Peak intensity 50.6 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 NCSxx19B</p> <p>FWHM / FWTM 3.6° / 12.0°</p> <p>Efficiency 90 %</p> <p>Peak intensity 73.3 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	

## OPTICAL RESULTS (MEASURED):

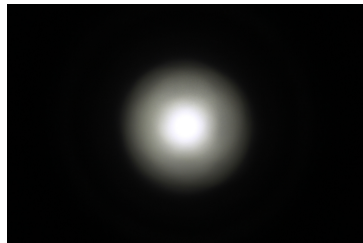
### SAMSUNG

LED LH351B  
FWHM / FWTM 5.1° / 13.0°  
Efficiency 90 %  
Peak intensity 51.8 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



### SAMSUNG

LED LH351Z  
FWHM / FWTM 4.2° / 10.0°  
Efficiency 90 %  
Peak intensity 71.4 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



#### OPTICAL RESULTS (SIMULATED):



LED	LUXEON CZ
FWHM / FWTM	4.0° / 10.0°
Efficiency	95 %
Peak intensity	98.1 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	

