

**Ordering number C12985\_CRYSTAL-MINE**

Family	Crystal	FWHM	5 degrees
Type	Lens	Efficiency	85 %
LED	XP-E	cd/lm	38.500
Color	Clear	Gerber File	Available
Diameter	46.8 mm		
Height	27.4 mm		
Style	Round		
Optic Material	PMMA		
Holder Material	-		
Fastening	-		
Status	Promotion		

Product designed especially for Mining applications. Lens produ

**Ordering number C12916\_CRYSTAL-RS**

Family	Crystal	FWHM	6 degrees
Type	Lens	Efficiency	87 %
LED	XP-E	cd/lm	35.200
Color	Clear	Gerber File	Available
Diameter	46.8 mm		
Height	27.4 mm		
Style	Round		
Optic Material	PMMA		
Holder Material	-		
Fastening	-		
Status	Promotion		

**NOTE: The typical divergence will be changed by different color, chip size and chip position tolerance. The typical total divergence is the full angle measured where the luminous intensity is half of the peak value.**



## PRODUCT DATASHEET

### Crystal series

last update 12/4/2013

#### GENERAL INFORMATION

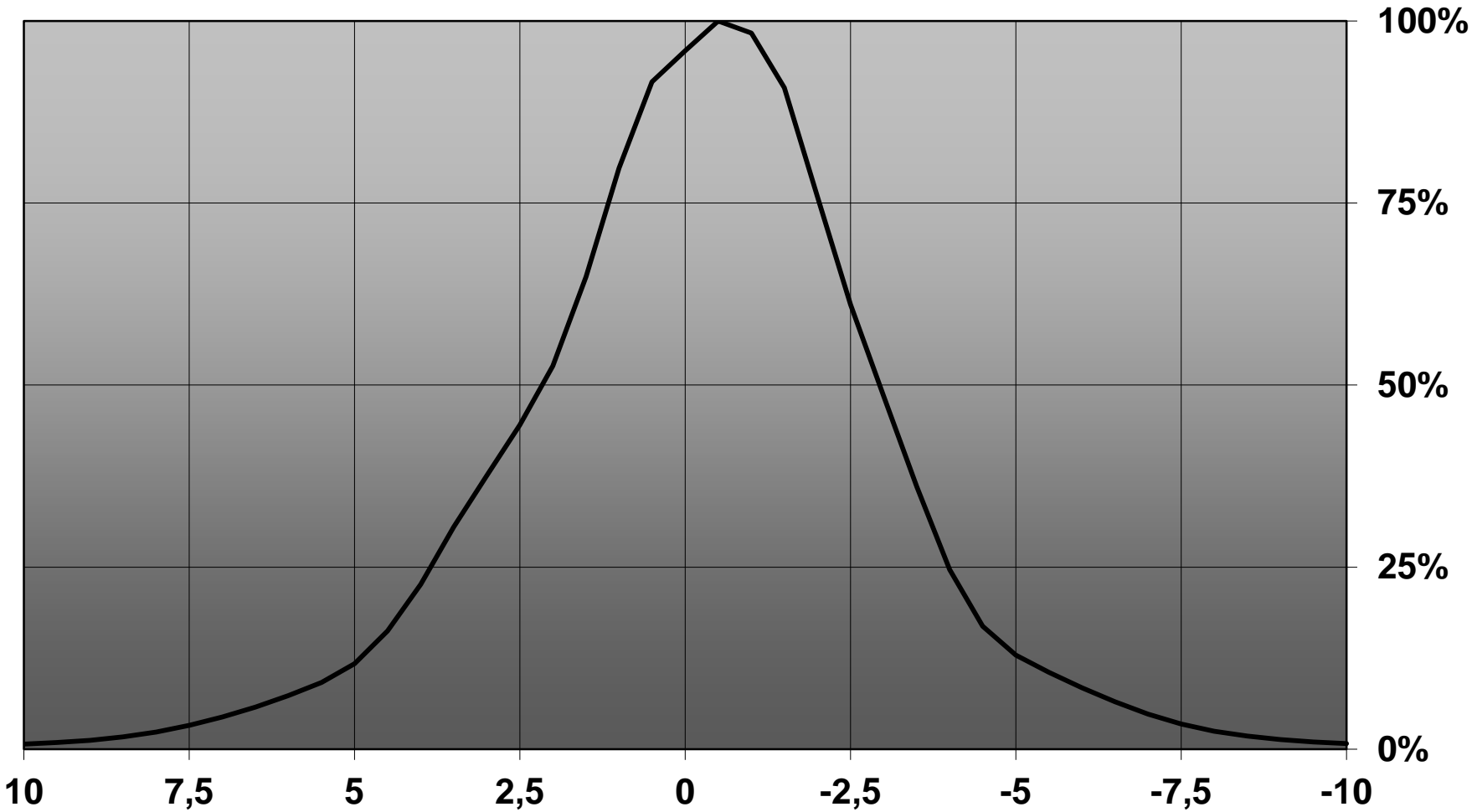
- Product series especially designed & optimized for XP-E series of LEDs.
- Special care taken to make light distribution as uniform as possible.
- Lens material optical grade PMMA with high UV and temperature resistance. Allows use of high current and temperature conditions.

Please find more information about used material from below:

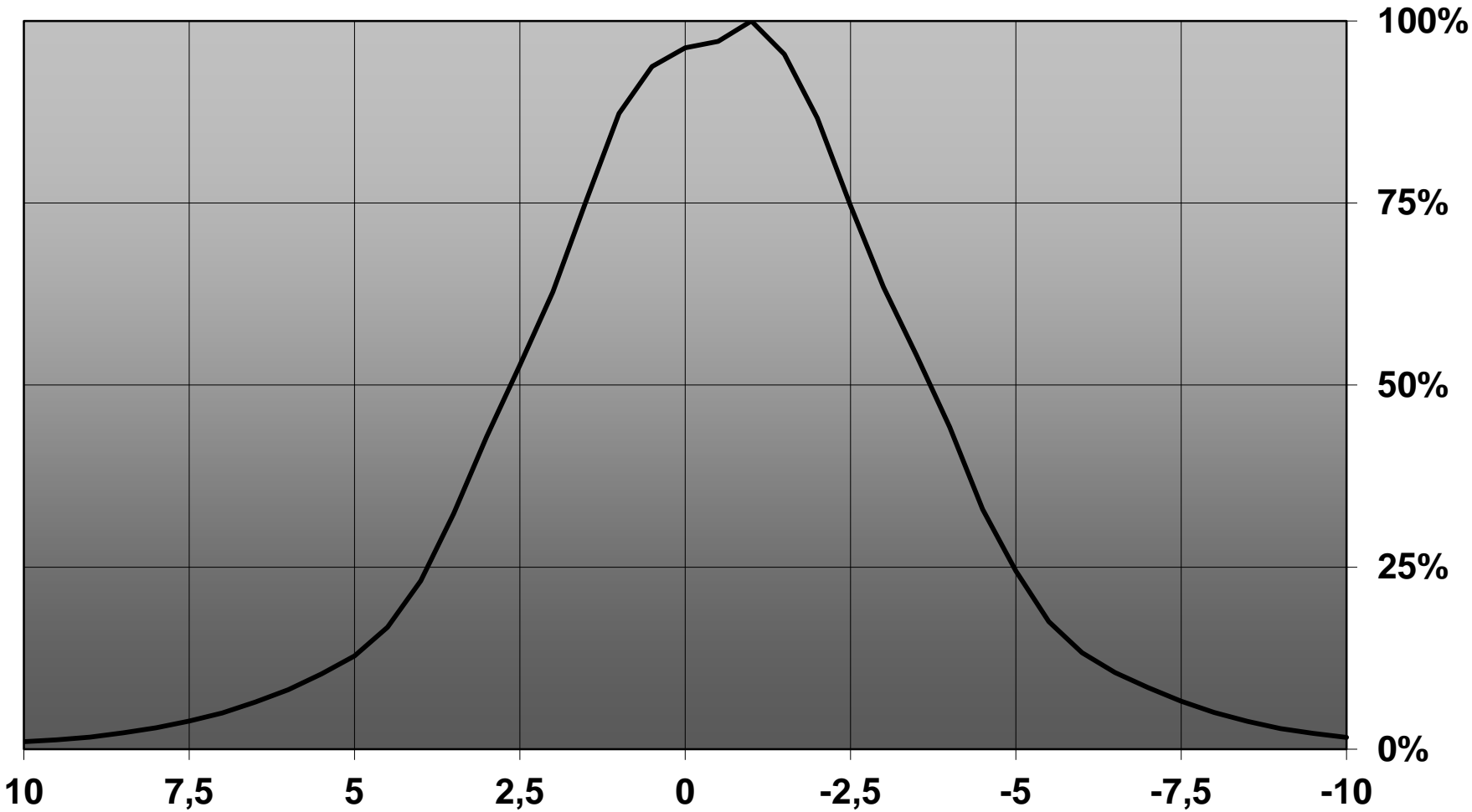
[http://ledil.fi/sites/default/files/Documents/Technical/Material/PMMA%20N%20UL94\\_Yellow%20Card.pdf](http://ledil.fi/sites/default/files/Documents/Technical/Material/PMMA%20N%20UL94_Yellow%20Card.pdf)

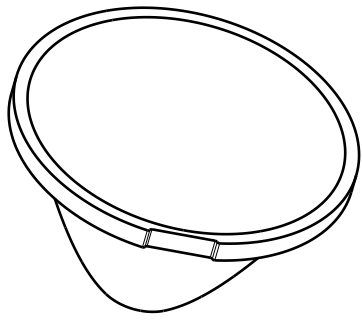
<http://ledil.fi/sites/default/files/Documents/Technical/Material/PMMA%20N%20PLEXIGLAS-Datasheet.pdf>

Relative intensity of C12985\_CRYSTAL-MINE-(XPE)

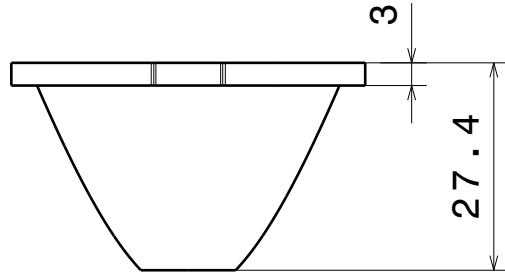


Relative intensity of C12916\_Crystal-RS-(XPE)

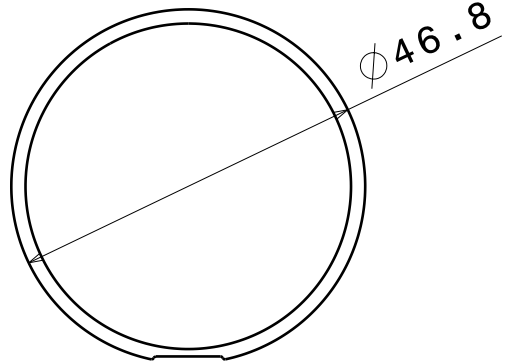




Isometric view



Front view



Top view

Material: PMMA 8N

Tolerances for dimensions:  
 0-20mm tolerance value  $\pm 0.1\text{mm}$   
 21-45mm tolerance value  $\pm 0.2\text{mm}$   
 46-90mm tolerance value  $\pm 0.3\text{mm}$   
 91-100mm tolerance value  $\pm 0.4\text{mm}$   
 101-mm tolerance value  $\pm 0.5\text{mm}$

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 Finland

DRAWING TITLE Mechanical drawing

DRAWN BY  
 mav

DATE  
 12.06.2012

CRYSTAL-MINE

CHECKED BY  
 sn

DATE  
 12.06.2012

SIZE PART NUMBER  
 A4

REV  
 002

DESIGNED BY  
 hh/mav

DATE  
 01.06.2012

SCALE 1:1 WEIGHT - SHEET 1/1