



## Datasheet Plastic Collimator Lens CAY046

These data concern a full plastic bi-aspherical lens. It is specified for use as a collimator in combination with a diode laser. It can be mounted by use of glue or spring-loaded. Mechanical lock-mounting is not advisable because of possible distortions.

Parameters	Wavelength		Unit
	670 nm	785 nm	
<b>Design conditions</b>			
N.A.	0.40		--
Clear Aperture CA	3.7		mm
Designed with laser cover glass (BK7) on source side:			
Distance from source	0.55		mm
Glass thickness	0.25		mm
<b>Optical parameters</b>			
Focal Length	4.60	4.64	mm
Back Focal Length <i>BFL</i> (with BK7 coverglass)	3.18	3.20	mm
Free Working Distance <i>FWD</i>	3.08	3.10	mm
<i>RMS</i> mean	on axis		30
<i>RMS</i> max. ( $\pm 3\sigma$ )	on axis		40
<i>RMS</i> mean	on axis		30
<i>RMS</i> max. ( $\pm 3\sigma$ )	on axis		40
Optical Tolerance	0.1		mm
Field Radius	0.1		mm
<b>Mechanical parameters</b>			
Mounting hole diameter $D_{mh}$	$\varnothing 7.40 (+ 0.03)$		mm
Other parameters: see drawing			
<b>Environmental stability</b>			
Storage Temperature	-25 to 70		°C
Operating Temperature	5 to 65		°C

### Visual inspection specification

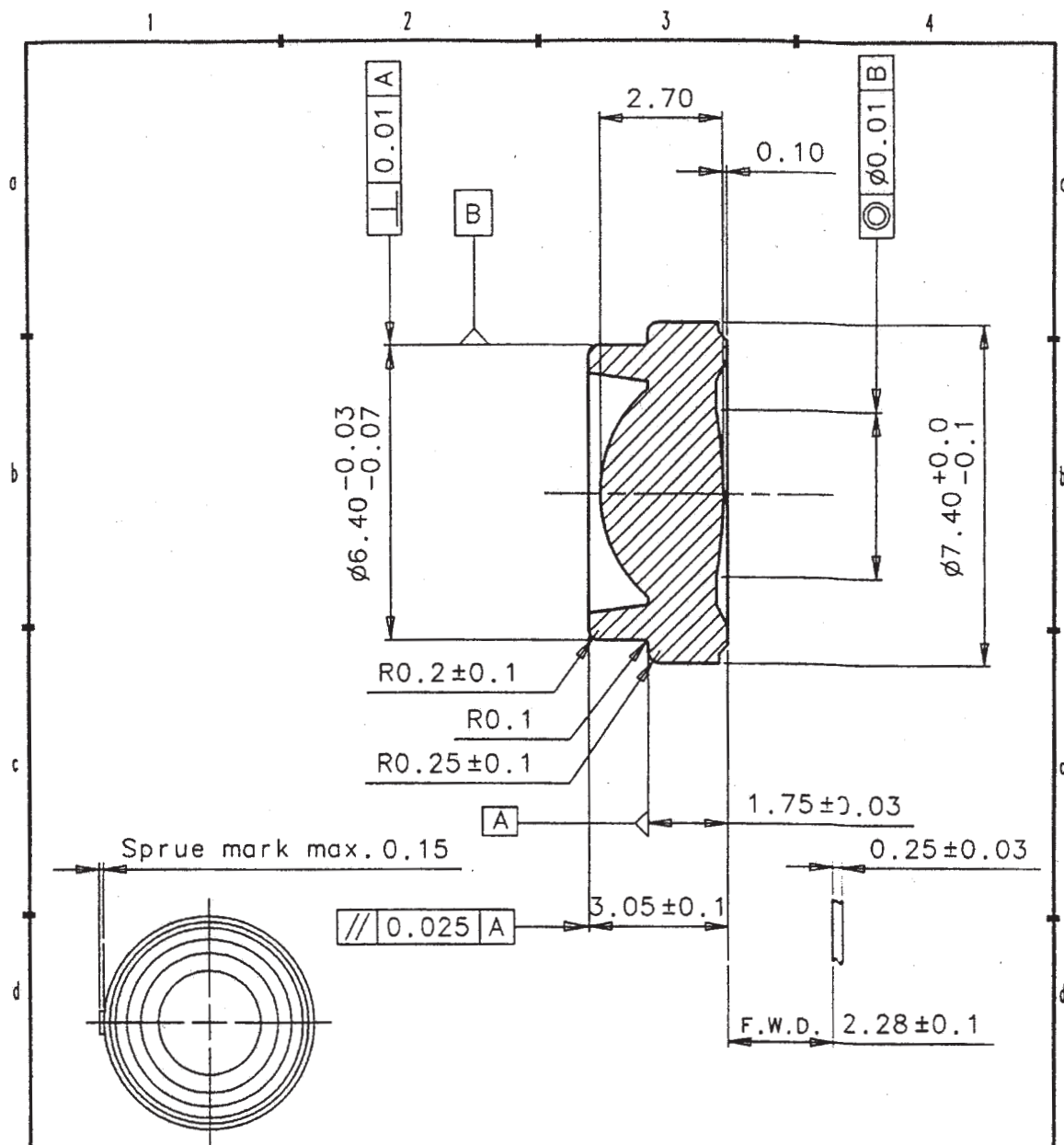
Surface 1 (over CA =  $\varnothing 3.7$  mm)  
Surface 2 (over CA =  $\varnothing 3.7$  mm)

Acc. ISO 10110/7-5/1 x 0.16  
Acc. ISO 10110/7-5/1 x 0.16

### General Data:

Transmission [%]: 90  
Lens Material: Acrylic

Specifications subject to change without notice.  
Zemax cataloguefile available.



SCALE 5:1

		TOLERANCES UNLESS OTHERWISE STATED TOLERANTIES TENZIJ ANDERS VERMELD					
DIMENSION MAAT		ANGLE HOEK		ITEM POST		ASSEMBLY NO. SAMENSTELLINGSNR.	
GENERAL ROUGHNESS ALGEMENE RUWHEID		UNIT EENH.		MATERIAL MATERIAAL		PATTERN NO./MODELNR.	
SCALE SCHAAL		PROJ. EUROPE		TREATMENT BEHANDELING		ORDER NO./ORDERNR.	
CLASS NO.		Collimating lens		5722 650 3416		QUANT. AANTAL	
CAY046N670		1		1 95-11-01		1 97-10-28	
NAAM NAME		SUPERS. VERV.		4		590-4	
R.d.Schipper		DAT. 95-03-10		Property of Eigendom van		10	
CHECK CONTR.		N.V. PHILIPS' GLOEILAMPENFABRIEKEN		EINDHOVEN - NEDERLAND		A4	