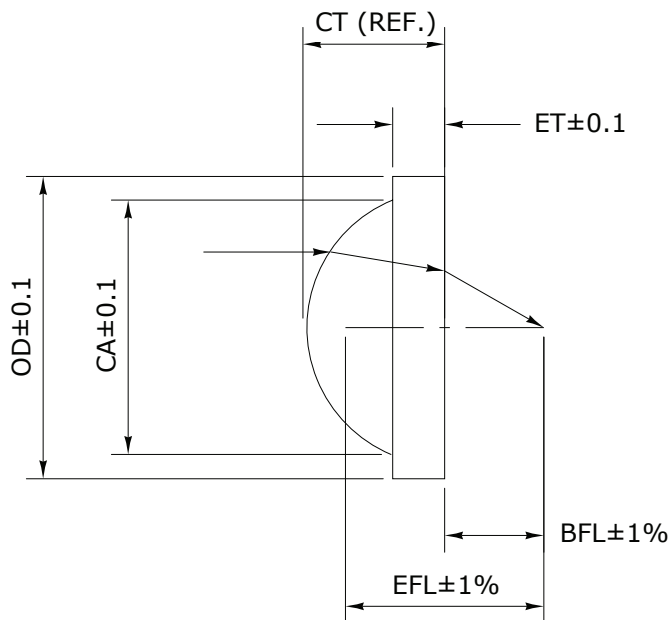


POLYMER ASPHERES

Fresnel Technologies, Inc. offers a line of polymer aspheric lenses that, because they are designed to fit standard 1/2" and 1" lens mounts, are well suited to speed prototyping and development. The lenses are designed for use at conjugates of infinity and the focal length, and with a relatively narrow field of view.

- Uncoated or with broadband visible or near infrared antireflection (AR) stock coatings
- Specific wavelength coatings available
- Designed to fit a variety of stock lens mounts
- Available clear aperture may vary according to chosen mount



Mounting dimensions for PCX lenses:

OD: Outer diameter

CA: Clear aperture

CT: Center thickness

ET: Edge thickness

EFL: Effective focal length

BFL: Back focal length

1/2" (12.7 mm) OD lenses all have a CA of 0.450" (11.4 mm). 1" (25.4 mm) OD lenses all have a CA of 0.940" (23.9 mm). Lenses are made from acrylic (PMMA), with index $n = 1.49$ and Abbe number $V_D = 61.4$, and exhibit low birefringence. Typical surface figure tolerance is P-V < 3 μm , mostly power. Typical surface finish is RMS < 5 nm. Centering is held to < 50 μm .



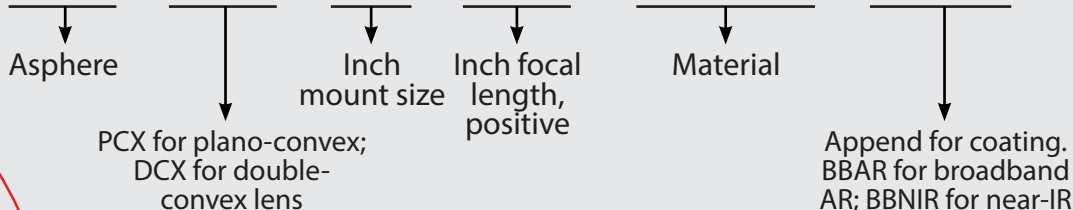
Ready-To-Ship Polymer Aspheric Lenses

Part Number	Focal Length		f/#	Thickness	
	Effective	Back		Center	Edge
ASP-DCX-0.5-0.25P-PMMA	0.25" (6.4mm)	0.16" (4.0mm)	0.5	0.269" (6.83mm)	0.079" (2.0mm)
ASP-DCX-0.5-0.375P-PMMA	0.375" (9.5mm)	0.25" (6.4mm)	0.75	0.240" (6.10mm)	0.079" (2.0mm)
ASP-PCX-0.5-0.5P-PMMA	0.5" (12.7mm)	0.37" (9.4mm)	1	0.194" (4.92mm)	0.079" (2.0mm)
ASP-PCX-0.5-1.0P-PMMA	1.0" (25.4mm)	0.91" (23.2mm)	2	0.131" (3.34mm)	0.079" (2.0mm)
ASP-PCX-0.5-2.0P-PMMA	2.0" (50.8mm)	1.93" (49.0mm)	4	0.105" (2.66mm)	0.079" (2.0mm)
ASP-PCX-0.5-3.0P-PMMA	3.0" (76.2mm)	2.94" (74.6mm)	6	0.096" (2.44mm)	0.079" (2.0mm)
ASP-PCX-0.5-4.0P-PMMA	4.0" (102mm)	3.94" (100.1mm)	8	0.092" (2.33mm)	0.079" (2.0mm)
ASP-PCX-0.5-5.0P-PMMA	5.0" (127mm)	4.94" (125.5mm)	10	0.089" (2.26mm)	0.079" (2.0mm)
ASP-DCX-1.0-0.5P-PMMA	0.5" (12.7mm)	0.316" (8.0mm)	0.5	0.538" (13.67mm)	0.157" (4.0mm)
ASP-DCX-1.0-0.75P-PMMA	0.75" (19.1mm)	0.50" (12.7mm)	0.75	0.481" (12.22mm)	0.157" (4.0mm)
ASP-PCX-1.0-1.0P-PMMA	1.0" (25.4mm)	0.72" (18.4mm)	1	0.413" (10.48mm)	0.157" (4.0mm)
ASP-PCX-1.0-2.0P-PMMA	2.0" (50.8mm)	1.82" (46.2mm)	2	0.274" (6.95mm)	0.157" (4.0mm)
ASP-PCX-1.0-4.0P-PMMA	4.0" (102mm)	3.86" (98.0mm)	4	0.215" (5.45mm)	0.157" (4.0mm)
ASP-PCX-1.0-6.0P-PMMA	6.0" (152mm)	5.87" (149.1mm)	6	0.195" (4.96mm)	0.157" (4.0mm)
ASP-PCX-1.0-8.0P-PMMA	8.0" (203mm)	7.88" (200.1mm)	8	0.186" (4.72mm)	0.157" (4.0mm)
ASP-PCX-1.0-10.0P-PMMA	10.0" (254mm)	9.88" (251.0mm)	10	0.180" (4.58mm)	0.157" (4.0mm)

Updated October 2024

Naming Key Example:

ASP - PCX - 0.5 - 0.5P - PMMA - BAAR



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