

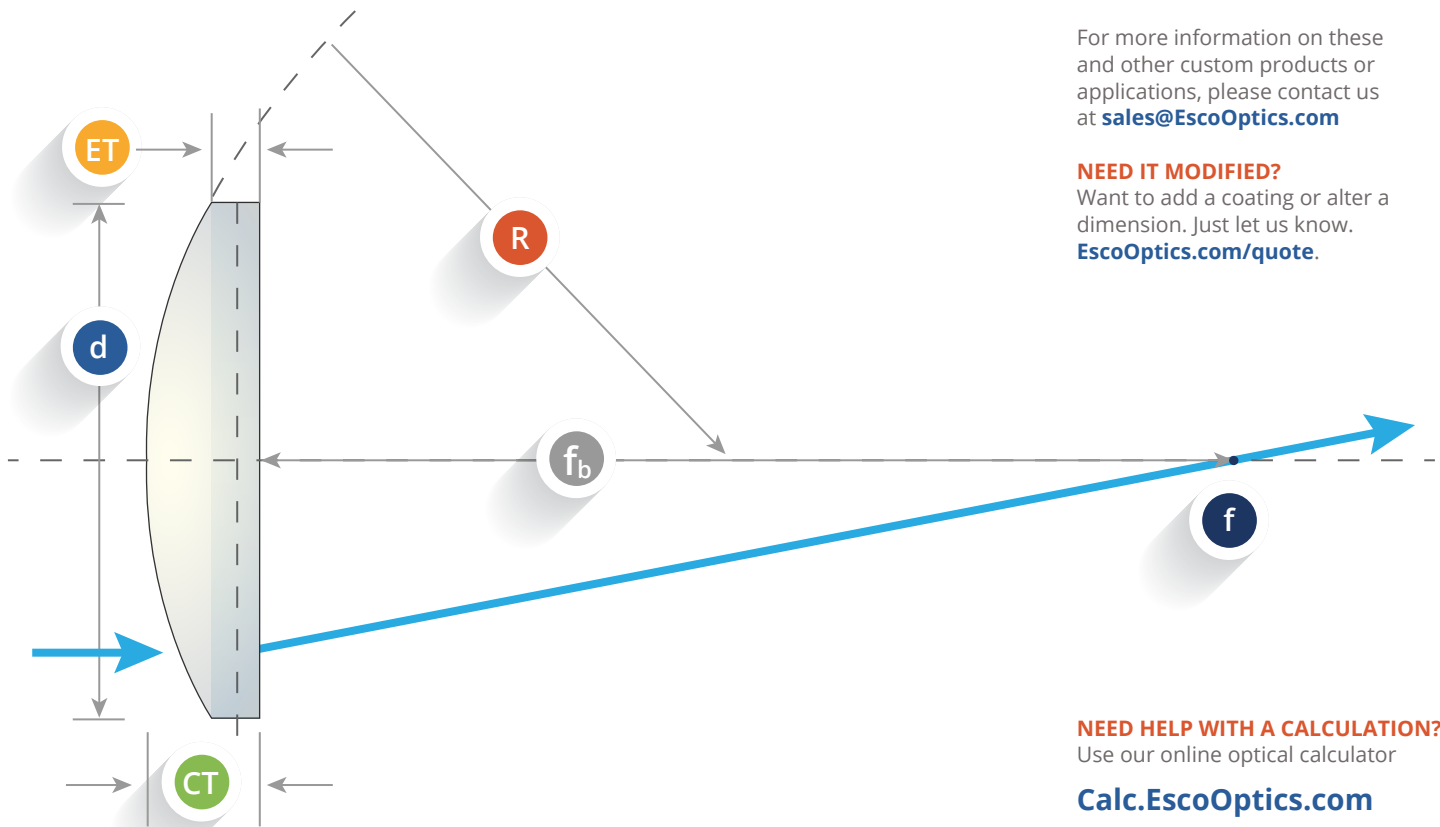


PLANO-CONVEX LENS

We manufacture Plano-Convex lenses that are pitch polished to provide good surface quality and excellent low-cost imaging performance with a variety of light sources.

Plano-Convex lenses are positive focal length elements with one spherical surface and one flat surface. They are designed for infinite conjugate (parallel light) use or simple imaging in non-critical applications.

Plano-Convex lenses are ideal all-purpose focusing elements. For finite conjugate imaging with limited off-axis aberrations, Bi-Convex lenses are often better suited. For broadband situations where chromatic aberrations would be a problem, or when spherical aberrations must be reduced to a minimum, achromats should be considered. For improved performance involving laser light, bestform lenses should be considered as well.



N-BK7 Optical Glass

S1 UV Grade Fused Silica

G1 Commercial Grade Fused Quartz

Custom Plano-Convex Lenses

In addition to our standard lines of lenses, we also manufacture a variety of custom elements including plano-concave lenses—negative focal length components with one concave surface.

For more information on these and other custom products or applications, please contact us at sales@EscoOptics.com

NEED IT MODIFIED?

Want to add a coating or alter a dimension. Just let us know. EscoOptics.com/quote.

NEED HELP WITH A CALCULATION?

Use our online optical calculator

Calc.EscoOptics.com

Focal Length Tolerance
Diameter Tolerance
Thickness Tolerance
Design Wavelength

+/- 3%
+/- 0.125 mm
+/- 0.5 mm
546 nm

Centration
Surface Quality
Edges

<3'
60-40 scratch-dig
Fine ground and beveled

All dimensions in mm unless otherwise specified



PLANO-CONVEX LENS

S1-UV Grade Fused Silica	P/N	f_{nom}	Diameter	f/#	CT	ET	EFL ₂₅₀	BFL ₂₅₀
	A105010	25.4	12.7	2.0	3.3	1.5	23.9	21.7
	A105015	38.1	12.7	3.0	2.7	1.5	35.1	33.3
	A110015	38.1	25.4	1.5	6.9	1.5	35.1	30.4
	A105020	50.8	12.7	4.0	2.4	1.5	46.7	45.1
	A110020	50.8	25.4	2.0	5.3	1.5	46.7	43.2
	A115020	50.8	38.1	1.3	11.8	2.0	46.7	38.8
	A105030	76.2	12.7	6.0	2.1	1.5	70.1	68.7
	A110030	76.2	25.4	3.0	3.9	1.5	70.1	67.5
	A115030	76.2	38.1	2.0	7.6	2.0	70.1	65.0
	A120030	76.2	50.8	1.5	12.9	2.0	70.1	61.5
	A105040	101.6	12.7	8.0	1.9	1.5	93.5	92.2
	A110040	101.6	25.4	4.0	3.3	1.5	93.5	91.3
	A115040	101.6	38.1	2.7	6.1	2.0	93.5	89.4
	A120040	101.6	50.8	2.0	9.5	2.0	93.5	87.1
	A110050	127.0	25.4	5.0	2.9	1.5	116.8	114.9
	A115050	127.0	38.1	3.3	5.2	2.0	116.8	113.4
	A120050	127.0	50.8	2.5	7.8	2.0	116.8	111.6
	A110060	152.4	25.4	6.0	2.7	1.5	140.2	138.4
	A115060	152.4	38.1	4.0	4.6	2.0	140.2	137.1
A120060	152.4	50.8	3.0	6.8	2.0	140.2	135.7	
A110070	177.8	25.4	7.0	2.5	1.5	163.6	161.9	
A115070	177.8	38.1	4.7	4.2	2.0	163.6	160.7	
A120070	177.8	50.8	3.5	6.0	2.0	163.6	159.5	
A110080	203.2	25.4	8.0	2.4	1.5	186.9	185.4	
A115080	203.2	38.1	5.3	4.0	2.0	186.9	184.3	
A120080	203.2	50.8	4.0	5.5	2.0	186.9	183.3	
A110100	254.0	25.4	10.0	2.2	1.5	233.7	232.2	
A115100	254.0	38.1	6.7	3.6	2.0	233.7	231.3	
A120100	254.0	50.8	5.0	4.8	2.0	233.7	230.5	
A110120	304.8	25.4	12.0	2.1	1.5	280.4	279.0	
A115120	304.8	38.1	8.0	3.3	2.0	280.4	278.2	
A120120	304.8	50.8	6.0	4.3	2.0	280.4	277.5	

Catalog S1-UV Fused Grade: Corning 7980 or Heraeus Suprasil® 3001

Material Code	Type	Striae per MIL-G-174A	Index Variation $\Delta n(x10^{-6})$
S1-UVA	Fused Silica	A	6
S1-UVB	Fused Silica	A	10
A1	Fused Quartz or Fused Silica	B	10
G1	Fused Quartz or Fused Silica	C-D	20
I2-IR	Fused Quartz	A	4
N-BK7/S-BSL7	Optical Glass	A	10



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*Corning 7980/Heraeus Suprasil 313





PLANO-CONVEX LENS

G1 Optical Grade Fused Quartz	P/N	f _{nom}	Diameter	f/#	CT	ET	EFL ₃₀₀	BFL ₃₀₀
	A405010	25.4	12.7	2.0	3.3	1.5	24.5	22.3
	A405015	38.1	12.7	3.0	2.7	1.5	35.9	34.1
	A410015	38.1	25.4	1.5	6.9	1.5	35.9	31.2
	A405020	50.8	12.7	4.0	2.4	1.5	47.9	46.2
	A410020	50.8	25.4	2.0	5.3	1.5	47.9	44.4
	A415020	50.8	38.1	1.3	11.8	2.0	47.9	39.9
	A405030	76.2	12.7	6.0	2.1	1.5	71.8	70.4
	A410030	76.2	25.4	3.0	3.9	1.5	71.8	69.2
	A415030	76.2	38.1	2.0	7.6	2.0	71.8	66.7
	A420030	76.2	50.8	1.5	12.9	2.0	71.8	63.2
	A405040	101.6	12.7	8.0	1.9	1.5	95.8	94.5
	A410040	101.6	25.4	4.0	3.3	1.5	95.8	93.6
	A415040	101.6	38.1	2.7	6.1	2.0	95.8	91.7
	A420040	101.6	50.8	2.0	9.5	2.0	95.8	89.4
	A410050	127.0	25.4	5.0	2.9	1.5	119.7	117.8
	A415050	127.0	38.1	3.3	5.2	2.0	119.7	116.2
	A420050	127.0	50.8	2.5	7.8	2.0	119.7	114.5
	A410060	152.4	25.4	6.0	2.7	1.5	143.7	141.9
	A415060	152.4	38.1	4.0	4.6	2.0	143.7	140.5
A420060	152.4	50.8	3.0	6.8	2.0	143.7	139.1	
A410070	177.8	25.4	7.0	2.5	1.5	167.6	165.9	
A415070	177.8	38.1	4.7	4.2	2.0	167.6	164.7	
A420070	177.8	50.8	3.5	6.0	2.0	167.6	163.5	
A410080	203.2	25.4	8.0	2.4	1.5	191.5	190.0	
A415080	203.2	38.1	5.3	4.0	2.0	191.5	188.9	
A420080	203.2	50.8	4.0	5.5	2.0	191.5	187.8	
A410100	254.0	25.4	10.0	2.2	1.5	239.4	238.0	
A415100	254.0	38.1	6.7	3.6	2.0	239.4	237.0	
A420100	254.0	50.8	5.0	4.8	2.0	239.4	236.2	
A410120	304.8	25.4	12.0	2.1	1.5	287.3	285.9	
A415120	304.8	38.1	8.0	3.3	2.0	287.3	285.1	
A420120	304.8	50.8	6.0	4.3	2.0	287.3	284.4	





PLANO-CONVEX LENS

N-BK-7/S-BSL7 Optical Glass	P/N	f_{nom}	Diameter	f/#	CT	ET	EFL ₅₄₆	BFL ₅₄₆
	A605010	25.4	12.7	2.0	3.1	1.5	26.0	24.0
	A605015	38.1	12.7	3.0	2.6	1.5	38.1	36.4
	A610015	38.1	25.4	1.5	6.1	1.5	38.1	34.1
	A605020	50.8	12.7	4.0	2.3	1.5	50.8	49.3
	A610020	50.8	25.4	2.0	4.8	1.5	50.8	47.7
	A615020	50.8	38.1	1.3	10.2	2.0	50.8	44.1
	A605030	76.2	12.7	6.0	2.0	1.5	76.2	74.9
	A610030	76.2	25.4	3.0	3.6	1.5	76.2	73.8
	A615030	76.2	38.1	2.0	6.9	2.0	76.2	71.6
	A620030	76.2	50.8	1.5	11.3	2.0	76.2	68.8
	A605040	101.6	12.7	8.0	1.9	1.5	101.6	100.4
	A610040	101.6	25.4	4.0	3.1	1.5	101.6	99.6
	A615040	101.6	38.1	2.7	5.6	2.0	101.6	97.9
	A620040	101.6	50.8	2.0	8.5	2.0	101.6	96.0
	A610050	127.0	25.4	5.0	2.7	1.5	127.0	125.2
	A615050	127.0	38.1	3.3	4.8	2.0	127.0	123.8
	A620050	127.0	50.8	2.5	7.1	2.0	127.0	122.3
	A610060	152.4	25.4	6.0	2.5	1.5	152.4	150.7
	A615060	152.4	38.1	4.0	4.3	2.0	152.4	149.5
A620060	152.4	50.8	3.0	6.2	2.0	152.4	148.3	
A610070	177.8	25.4	7.0	2.4	1.5	177.8	176.2	
A615070	177.8	38.1	4.7	4.0	2.0	177.8	175.2	
A620070	177.8	50.8	3.5	5.6	2.0	177.8	174.1	
A610080	203.2	25.4	8.0	2.3	1.5	203.2	201.7	
A615080	203.2	38.1	5.3	3.7	2.0	203.2	200.7	
A620080	203.2	50.8	4.0	5.1	2.0	203.2	199.8	
A610100	254.0	25.4	10.0	2.5	1.5	254.0	252.6	
A615100	254.0	38.1	6.7	3.4	2.0	254.0	251.8	
A620100	254.0	50.8	5.0	4.5	2.0	254.0	251.0	
A610120	304.8	25.4	12.0	2.0	1.5	304.8	303.5	
A615120	304.8	38.1	8.0	3.2	2.0	304.8	302.7	
A620120	304.8	50.8	6.0	4.1	2.0	304.8	302.1	

