

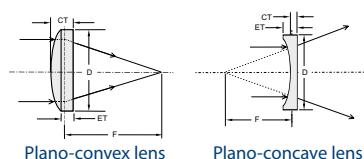
## THIN LENSES

### Features

- Very thin: edge thickness varies from 0.5~1.9 mm
- Centre thickness varies from 1~3 mm
- Plano-Convex or Plano-Concave type
- Uncoated,  
 AR coated @ 333-353 nm, AR coated @ 380-420 nm,  
 AR coated @ 500-530 nm, AR coated @ 515+1030 nm,  
 AR coated @ 760-840 nm, AR coated @ 1000-1060 nm,  
 BBAR @ 700-900 nm, UBBAR @ 350-900 nm

### Specifications

Material	UV FS
Surface quality	40-20 scratch & dig (MIL-PRF-13830B)
Clear aperture	90% of the diameter
Diameter tolerance	+0.00; -0.12 mm
Thickness tolerance	±0.2 mm
Surface irregularity	λ/8 @ 633 nm
Concentricity	3 arcmin
Paraxial focal length	±2% @ 800 nm



### THIN PLANO-CONCAVE LENSES, Ø12.7 mm

Uncoated lenses. Material – UVFS

Focal Length, mm @ 800 nm	Centre Thickness CT, mm	Edge Thickness ET, mm	Radius, mm	Catalogue number	Price, EUR
-20	1	3.5	-9.1	112-1104ET	60
-30	1	2.5	-13.6	112-1106ET	60
-40	1	2.1	-18.1	112-1108ET	60
-50	1	1.9	-22.7	112-1109ET	60
-60	1	1.7	-27.2	112-1110ET	60
-75	1	1.5	-34.0	112-1112ET	60
-80	1	1.5	-36.3	112-1113ET	60
-100	1	1.4	-45.3	112-1115ET	60
-125	1	1.3	-56.7	112-1117ET	60
-150	1	1.2	-68.0	112-1119ET	60

### THIN PLANO-CONCAVE LENSES, Ø25.4 mm

Uncoated lenses. Material – UVFS

Focal Length, mm @ 800 nm	Centre Thickness CT, mm	Edge Thickness ET, mm	Radius, mm	Catalogue number	Price, EUR
-50	1.5	5.4	-22.7	112-1205ET	80
-75	1.5	4.0	-34.0	112-1209ET	80
-100	1.5	3.3	-45.4	112-1211ET	80
-125	1.5	3.0	-56.7	112-1215ET	80
-150	1.5	2.7	-68.0	112-1217ET	80
-200	1.5	2.4	-90.7	112-1219ET	80
-250	1.5	2.3	-113.3	112-1221ET	80
-300	1.5	2.1	-136.0	112-1223ET	80
-500	1.5	1.9	-226.7	112-1233ET	80

### THIN PLANO-CONVEX LENSES, Ø12.7 mm

Uncoated lenses. Material – UVFS

Focal Length, mm @ 800 nm	Centre Thickness CT, mm	Edge Thickness ET, mm	Radius, mm	Catalogue number	Price, EUR
30	2.5	1.0	13.6	110-1106ET	60
40	1.8	0.7	18.1	110-1108ET	60
50	1.9	1.0	22.7	110-1109ET	60
75	1.8	1.2	34.0	110-1111ET	60
100	1.5	0.9	45.3	110-1115ET	60
125	1.4	1.0	56.7	110-1117ET	60
150	1.5	1.2	68.0	110-1119ET	60
175	1.2	1.0	79.3	110-1121ET	60
200	1.2	1.0	90.7	110-1123ET	60
250	1.1	1.0	113.3	110-1126ET	60
300	1.1	1.0	136.0	110-1129ET	60
400	1.1	1.0	181.3	110-1133ET	60
450	1.1	1.0	204.0	110-1135ET	60
500	1.1	1.0	226.7	110-1137ET	60

### THIN PLANO-CONVEX LENSES, Ø25.4 mm

Uncoated lenses. Material – UVFS

Focal Length, mm @ 800 nm	Centre Thickness CT, mm	Edge Thickness ET, mm	Radius, mm	Catalogue number	Price, EUR
50	4.9	1.0	22.7	110-1205ET	80
75	3	0.5	34.0	110-1209ET	80
80	3	0.7	36.3	110-1210ET	80
100	2.5	0.7	45.3	110-1211ET	80
125	2	0.6	56.7	110-1216ET	80
150	2	0.8	68.0	110-1217ET	80
200	2	1.1	90.7	110-1219ET	80
250	2	1.3	113.3	110-1221ET	80
300	2	1.4	136.0	110-1223ET	80
350	2	1.5	158.7	110-1225ET	80
400	2	1.6	181.3	110-1227ET	80
450	2	1.6	204.0	110-1231ET	80
500	2	1.6	226.7	110-1233ET	80
1000	1.5	1.3	453.3	110-1245ET	80
1500	1.4	1.3	680.0	110-1255ET	80
2000	1.4	1.3	906.6	110-1265ET	80
3000	1.4	1.3	1360.1	110-1267ET	80

### THIN PLANO-CONVEX LENSES, Ø50.8 mm

Uncoated lenses. Material – UVFS

Focal Length, mm @ 800 nm	Centre Thickness CT, mm	Edge Thickness ET, mm	Radius, mm	Catalogue number	Price, EUR
75	14	2.5	34.0	110-1505ET	180
100	10.3	2.5	45.3	110-1509ET	180
150	7.4	2.5	68.0	110-1511ET	180
200	6.1	2.5	90.7	110-1515ET	180
300	4.9	2.5	136.0	110-1519ET	180
400	4.3	2.5	181.3	110-1523ET	180
500	3.9	2.5	226.7	110-1527ET	180
1000	3.2	2.5	453.3	110-1545ET	180
1500	3	2.5	680.0	110-1550ET	180
2000	2.9	2.5	906.6	110-1555ET	180
3000	2.7	2.5	1360.0	110-1566ET	180
4000	2.7	2.5	1813.3	110-1568ET	180
5000	2.6	2.5	2266.6	110-1567ET	180
6000	2.6	2.5	2719.9	110-1570ET	180

## AVAILABLE STANDARD COATINGS FOR THIN LENSES

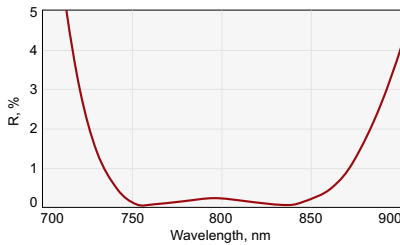
## Specifications

Technology	Electron beam multilayer dielectric
Adhesion and Durability	Per MIL-C-675A. Insoluble in lab solvents
Clear Aperture	Exceeds central 85% of diameter
Angle of Incidence	0°
Coated Surface Flatness	$\lambda/10$ at 633 nm over clear aperture

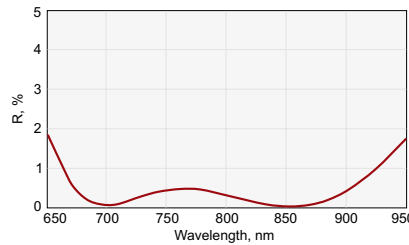
## Available Coatings

Wavelength	Reflection per surface	Laser Damage Threshold *	Coating suffix	Price per unit to be added, EUR/pc.
760 – 840 nm	R<0.5%	100 mJ/cm <sup>2</sup>	<b>AR800</b>	35
700 – 900 nm	R<0.5%	50 mJ/cm <sup>2</sup>	<b>ARB800</b>	60
350 – 900 nm	R<1.5%	50 mJ/cm <sup>2</sup>	<b>ARB625</b>	72
1000 – 1060 nm	R<0.3%	100 mJ/cm <sup>2</sup>	<b>AR1030</b>	35
500 – 530 nm	R<0.4%	100 mJ/cm <sup>2</sup>	<b>AR515</b>	35
380 – 420 nm	R<0.5%	100 mJ/cm <sup>2</sup>	<b>AR400</b>	35
333 – 353 nm	R<0.5%	100 mJ/cm <sup>2</sup>	<b>AR343</b>	35
515 + 1030 nm	R<0.5%	100 mJ/cm <sup>2</sup>	<b>ARD1030</b>	42

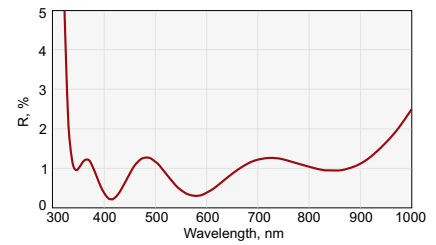
\* Measured at design wavelength, 50 fs, 50 Hz.



Reflectivity @ 760-840 nm



Reflectivity @ 700-900 nm



Reflectivity @ 350-900 nm

## AVAILABLE IBS COATINGS FOR THIN LENSES

## Specifications

Technology	Ion Beam Sputtering (IBS)
Adhesion and Durability	Per MIL-C-675A. Insoluble in lab solvents
Clear Aperture	Exceeds central 85% of diameter
Angle of Incidence	0°
Coated Surface Flatness	$\lambda/10$ at 633 nm over clear aperture

## Available Coatings

Wavelength	Reflection per surface	Laser Damage Threshold *	Coating suffix	Price per unit to be added, EUR/pc.
760 – 840 nm	R<0.1%	100 mJ/cm <sup>2</sup>	<b>AR800HT</b>	105
700 – 900 nm	R<0.1%	100 mJ/cm <sup>2</sup>	<b>ARB800HT</b>	115
380 – 420 nm	R<0.2%	50 mJ/cm <sup>2</sup>	<b>AR400HT</b>	105
400 + 800 nm	R<0.2%	50 mJ/cm <sup>2</sup>	<b>ARD800HT</b>	115
1000 – 1060 nm	R<0.1%	100 mJ/cm <sup>2</sup>	<b>AR1030HT</b>	105
500 – 530 nm	R<0.1%	50 mJ/cm <sup>2</sup>	<b>AR515HT</b>	105
333 – 353 nm	R<0.2%	25 mJ/cm <sup>2</sup>	<b>AR343HT</b>	135
515 + 1030 nm	R<0.1%	50 mJ/cm <sup>2</sup>	<b>ARD1030HT</b>	115

\* Measured at design wavelength, 50 fs, 50 Hz.

## Ordering of Coated Thin Lenses

Please choose the coating and add its suffix to the lens code.

### Example:

UVFS Thin Plano-Convex Lens, focal length 75 mm, coated AR / AR @ 760-840 nm

Code: **110-1209ET** + **AR800**, Price: 80 + 35 EUR= 115 EUR/pc.

Lens code
Coating code
Lens price
Coating price