

Zero Order Waveplates

14WPZO**NEW**

A wave plate works by shifting the phase of the incident light wave between two perpendicular polarization components. A quarter-wave plate creates a quarter wavelength phase shift and can change linearly polarized light to circular polarized and vice versa. Whereas a half-wave plate creates a half wavelength phase shift and rotates the polarization direction of linear polarized light.

Standa offers variety of mounted zero order air-spaced waveplates of different clear aperture size and designed for different wavelengths. Waveplates of other types and dimensions are also available upon request.

SPECIFICATIONS

Material	quartz
Surface quality	20-10 s/d
Wavefront distortion	$< \lambda/8 @ 633 \text{ nm}$
Retardation tolerance	$\lambda/500$
Parallelism	$< 1 \text{ arc second}$
Dimension tolerance	$+0.0, -0.1$
Clear aperture	15 mm or 20 mm
Mount diameter	$25 \pm 0.5 \text{ mm}$
AR coating	$R < 0.2\%$ at stated wavelength
Available wavelengths	266, 355, 488, 532, 633, 780, 800, 1064 nm

Examples of resulting codes for ordering:

14WPZO.4-800-15

Waveplate / Clear aperture
type / Wavelength

Waveplate

2 - half waveplate
4 - quarter waveplate

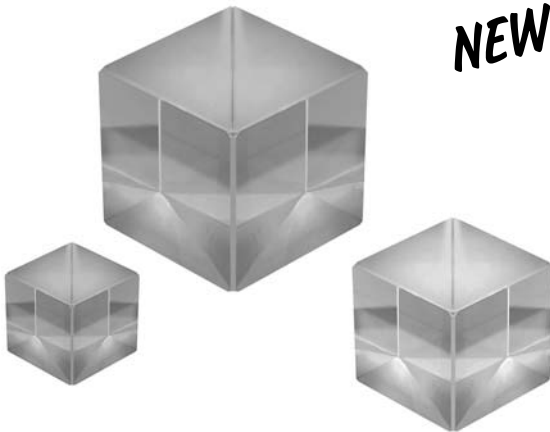
Available standard wavelength

266, 355, 488, 532, 633, 780, 800, 1064 nm

Clear aperture

15 mm
20 mm

Polarizing beamsplitter cubes

14PBC**NEW**

Polarizing beamsplitter cube splits randomly polarized incident beam of light into two orthogonal, linearly polarized components. S-polarized light is reflected at a 90° angle while P-polarized light is transmitted. Each beamsplitter consists of a pair of precision high tolerance right angle prisms cemented together with a dielectric coating on the hypotenuse of one of prisms.

Standa offers variety of polarizing beamsplitter cubes of different dimensions and designed for different wavelengths. Polarizing beamsplitter cubes with broadband coatings and of different dimensions are available upon request.

SPECIFICATIONS

Material	BK7, FS
Surface quality	60-40 s/d
Flatness	$\lambda/4 @ 632.8 \text{ nm per } 25 \text{ mm}$
Extinction ratio	$> 100:1$
Beam deviation	$< 3 \text{ arc minutes}$
Dimension tolerance	$\pm 0.2 \text{ mm}$
Principal transmittance	$T_p > 95\%$ and $T_s < 1\%$
Principal reflectance	$R_p > 99\%$ and $R_s < 5\%$
AR coating	$R < 0.25\%$ at stated wavelength, both faces
Available wavelengths	266, 355, 488, 532, 633, 780, 800, 1064 nm

Examples of resulting codes for ordering:

14PBC-800-15

Wavelength / Cube side dimensions

Available standard wavelength

266, 355, 488, 532, 633, 780, 800, 1064 nm

Available standard dimensions

10x10x10 mm
12.7x12.7x12.7 mm
15x15x15 mm
20x20x20 mm



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Protected Aluminum/Gold/Silver Mirrors

14AM • 14GM • 14SM

- Aluminum, gold and silver coated mirrors
- Effective for applications requiring high reflectance over a very broad spectral range
- Protective coating extends mirror life
- Different sizes
- Any angle of incidence and polarization

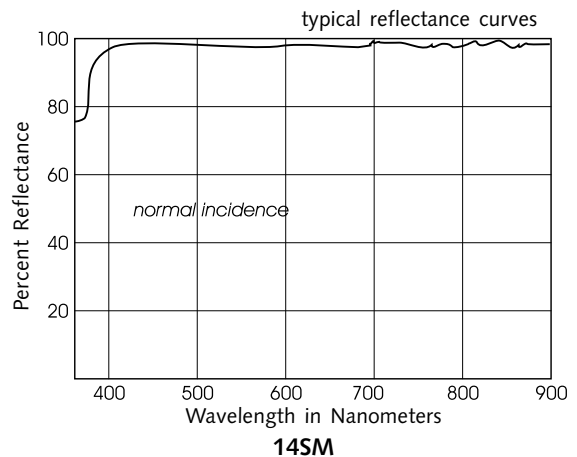
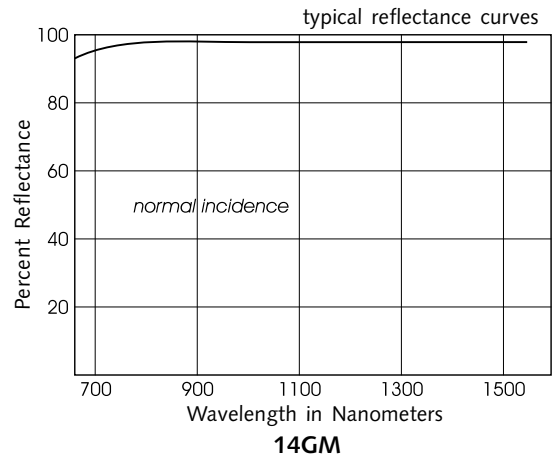
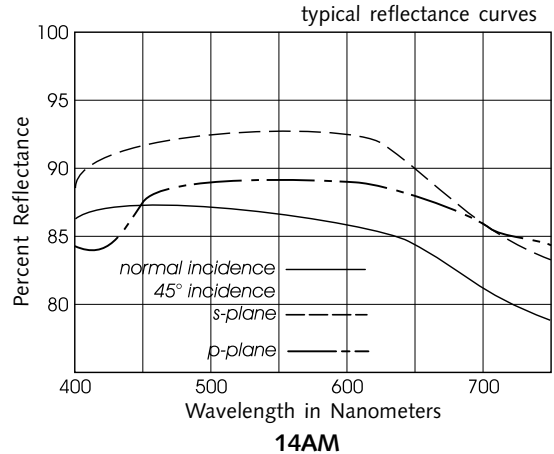


NEW

Standa offers round protected **aluminum (14AM)**, **gold (14GM)** and **silver (14SM)** coated mirrors of different sizes. Rectangular shape mirrors are also available upon request. **Aluminum coated mirrors** are low cost solution for applications requiring high reflectance in **VIS-IR range**, **gold coated mirrors** are most effective for applications requiring high reflectance in **near IR and IR range**, **silver coated mirrors** – in **VIS range**. A protective layer of dielectric material protects aluminum, gold or silver coating of the mirror and extends mirror life.

We do not recommend to use metallic mirrors in polarization sensitive applications, as metallic coatings modify the polarization state of incident beam.

Standa provides various optical mounts and positioners, for instance popular **5BM131**, **5MBM24** or it's motorized version – **8MBM24** for offered mirrors.



Examples of resulting codes for ordering:

14AM-05

Mirror type Mirror dimensions

Mirror type	Mirror dimensions
AM - aluminum mirror	05 - Ø12.7 mm
GM - gold mirror	1 - Ø25.4 mm
SM - silver mirror	2 - Ø50.8 mm
	3 - Ø76.2 mm
	4 - 101.6 mm

SPECIFICATIONS	14AM	14GM	14SM
Material		BK7	
S1 surface flatness		L/10@633 nm	
S1 surface quality		20/10 scr&dig	
S2 surface quality		commercial polish	
Diameter tolerance		mirror size dependent	
Thickness tolerance		mirror size dependent	
R _{avg}	>86%	98%	93%
Wavelength range	0.2-10 μm	0.6-10 μm	0.4-10 μm
Damage threshold (estimated)	10mJ/cm ² @1064nm, 10ns	0.3J/cm ² @1064nm, 10ns	0.5J/cm ² @1064nm, 10ns

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