



Photonchina supplies a wide variety of mirrors, ranging from laser line mirrors, harmonic separator mirrors, high reflection (HR) mirrors, partial reflection mirrors and metallic coated mirrors. Wide selection of rectangular, round, elliptical, or custom shape mirrors with flat, spherical concave or convex and cylindrical surfaces can all be produced.

HR laser line Mirrors (HR Mirrors)

HR laser line mirrors (HR) provide optimized performance at certain wavelength and certain angle of incidence (AOI). Mirror consists of substrate and multilayer coating stacks which help to achieve very high reflectivity at specific laser line wavelength at any designed angle of incidence. Laser line HR coatings are used for external beam manipulation applications where even slight losses may be intolerable. Coatings are provided by electron beam evaporation with/without ion assistance coating technique.

Photonchina HR mirrors features

- Provide an optimised performance at certain wavelength and certain angle of incidence (AOI)
- Coatings are provided by ion beam sputtering (IBS) or electron beam evaporation with/without ion assistance coating techniques
- HR laser line coatings (HR) highly reflect wavelength range of <10% of the central wavelength (CWL). For instance, HR @ 800 nm will reflect wavelength range of 760-840 nm
- Various dimensions are available on request
- Mass production capabilities: 5000 pieces per month
- Custom coatings are available for any wavelength in a range of 0.19 - 20 μm

Capabilities

Attribute	Standard	Premium
Substrate material	BK7, Fused Silica	
Diameter tolerance	+0.0, -0.2mm	+0.0, -0.1mm
Clear aperture	>90%	
Surface quality	60-40 scratch and dig	20-10 scratch and dig
Surface irregularity	$\lambda/4$ per 25mm@632.8nm	$\lambda/8$ per 25mm@632.8nm
Parallelism for plano-flat of mirror	<1 arc minute	
Coating	HR on S1: R>99.5% for random polarization, Uncoated on S2	Upon request

HR Broad Band Mirrors (BBHR Mirrors)

HR broad band mirrors (BBHR) provide high reflectance for a broad spectrum. These multilayer coatings offers high reflectivity for broad spectrum. Therefore, it is the ideal for a wide range of multi-wavelength laser or white light applications.

Coatings are provided by Ion Beam Sputtering (IBS) or Electron beam evaporation with/without Ion assistance coating techniques.

HR dielectric coatings are available in the range of 0.19 - 20 μm ..

Capabilities

Attribute	Standard	Premium
Substrate material	BK7, Fused Silica	
Diameter tolerance	+0.0, -0.2mm	+0.0, -0.1mm
Clear aperture	>90%	

Surface quality	60-40 scratch and dig	20-10 scratch and dig
Surface irregularity	$\lambda/4$ per 25mm@632.8nm	$\lambda/8$ per 25mm@632.8nm
Parallelism for plano-flat of mirror	<1 arc minute	
Coating	HR on S1: R>99.0% for random polarization, Uncoated on S2	Upon request

Ultra-Broadband Dielectric Mirrors(UBD Mirrors)

Ultra-Broadband Dielectric Mirrors high reflect in the range 350 - 1100 nm, AOI - (0°-50°).

Ultra-Broadband Dielectric Mirrors high reflect in the range 350 - 1100 nm and provide high average reflection in very wide range of angles of incidence (0°-50°). As maximum GDD reaches about 350 fs², mirrors do not cause considerable pulse broadening for 1 ps and shorter pulses. These features make ultra-broadband mirrors a good choice to replace three or more conventional laser line mirrors, especially designed for Nd:YAG and its harmonics.

Capabilities

Attribute	Standard
Substrate material	BK7, Fused Silica
Diameter tolerance	+0.0, -0.2mm
Clear aperture	>85%
Surface quality	60-40 scratch and dig
Surface irregularity	$\lambda/4$ per 25mm@632.8nm
Parallelism for plano-flat of mirror	<1 arc minute
Coating	R>99.0%

Metallic Coated Mirrors(MC Mirrors)

Metallic mirrors and partial reflectors

Photonchina has long been offering gold, silver, aluminum, chrome and copper metallic high reflection and partial reflection coated mirrors for customers home and abroad.

Photonchina metallic coated mirrors features:

- Protected Gold provides excellent, broadband infrared high reflectance
- Protected Silver provides higher reflectance than aluminum throughout the visible and near IR
- Protected Aluminum is economical solution for VIS applications
- UV enhanced Aluminum provides good reflectance over a wide range and are mainly used in UV applications.

Capabilities

Attribute	Standard
Substrate material	BK7, Fused Silica
Diameter tolerance	+0.0, -0.1mm
Clear aperture	>90%
Surface quality	40-20 scratch and dig
Surface irregularity	$\lambda/4$ per 25mm@632.8nm
Parallelism for plano-flat of mirror	<1 arc minute
Coating	R>96.0%, Protected Gold R>96.0%, Protected Silver R>85.0%, Protected Aluminum