

Phase Retarding CO₂ Laser Mirrors



These phase-retarding mirrors are intended for use with CO₂ lasers.

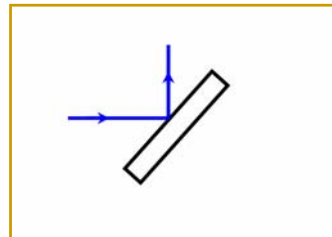
They use all-dielectric coatings on Silicon substrates. The coating precisely controls the relative phase between incoming and outgoing beams in order to control the state of polarization.

For a linearly polarized input beam, retardation of 45° produces a circularly polarized output with improved beam focusing. A retardation of 90° will rotate the plane of polarization by 90°. In order to maintain an existing state of polarization, 0° retardation should be chosen.

These mirrors are optimised for use at 10.6 μm wavelength and 45° angle of incidence.

They are designed to have at least 98.5% reflectance.

Standard diameters are 25.4, 27.9, 38.1 and 50.8 mm. Thickness varies from 3 to 5 mm as required to preserve the flatness specification.



Please contact us about any special coating requirements.

Typical Specifications	
Substrate Material:	Si
Surface flatness:	$\lambda/20$ @ 10.6 μm
Surface quality:	40/20
Parallelism:	< 3 arcmin
Diameter:	+0.0 / -0.2 mm
Thickness:	± 0.25 mm
Clear aperture:	> 85% of diameter
Reflectance:	R > 98.5%
AOI:	45 deg
Absorptance:	< 0.4%
Retardation:	± 6 deg

To request a quote or to order, please specify:

Quantity — Diameter — Retardation (0, 45 or 90 deg)

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For a quotation — please phone, fax or email us with details of your requirements.