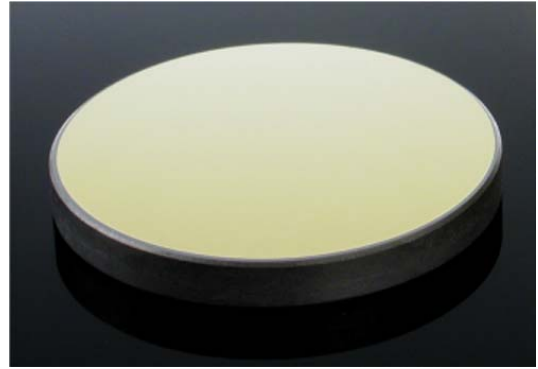


# Metallic Coated Mirrors

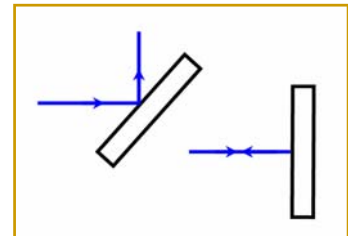


Gold or silver coated mirrors make excellent broadband infra-red reflectors. They are insensitive to polarization and angle of incidence.

Bare gold or silver has a reflectance in excess of 99% throughout the IR spectrum but they are soft and easily scratched. The metallic films can be protected with a thin layer of silicon dioxide with only a slight degradation of reflectance. Alternatively an enhanced reflectance multi-layer dielectric coating may be applied. For use with a helium-neon alignment beam a dual wave silver coating may be used.

Silicon is used as the substrate material in order to provide a stable flat surface, which will dissipate any residual transmitted energy.

Typical diameters offered are: 6.35, 12.7, 15.2, 19.1, 25.4, 27.9, 38.1, 50.8 and 63.5 mm.



Thickness varies from 2.0 to 6.0 mm as appropriate to maintain the flatness specification.

Typical reflectances (@10.6 $\mu$ m) are:

AOI	0°	45°	45°
Polarization		s-pol	p-pol
Bare Gold	99.0%	99.4%	98.5%
Protected Gold	89.9%	99.3%	98.4%
Enhanced Gold	99.5%	99.7%	99.2%
Protected Silver	99.1%	99.4%	98.8%
Enhanced Silver	99.6%	99.7%	99.2%
Super Silver	99.7%	99.8%	98.8%
Dual Silver @633nm	99.5%	99.7%	99.2%
		85.0%	85.0%

Typical Specifications	
Substrate Material:	Silicon
Surface flatness:	$\lambda/20$ @ 10.6 $\mu$ m
Surface quality:	40/20
Parallelism:	< 3 arcmin
Diameter:	+0.0 / -0.2 mm
Thickness:	+ 0.25 mm
Clear aperture:	> 85% of diameter
Reflectance:	see table

**To request a quote or to order, please specify:**

Quantity — Diameter — Metal (Au or Ag) — Protection (none, protected, enhanced, super, dual)

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