

CO 4010 Ge 3-5

Hard Carbon antireflection coating
for Germanium
3 - 5 μm

DESCRIPTION

This coating is designed for outer surface (O.S.) applications where severe environmental conditions are likely to be encountered. Optimised for the nominal 3 - 5 μm waveband, transmission is peaked at a specific wavelength within this band, normally specified by the end user.

The coating will operate undamaged under conditions such as:
exposed optical surfaces of hand-held or vehicle mounted thermal imaging systems,
exposed optical surfaces of airborne or naval FLIR systems,
exposed window surfaces where windscreen wiper or chemical attack is to be endured.

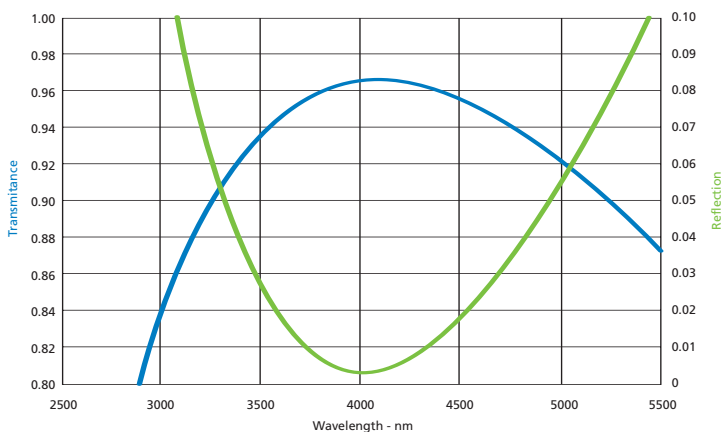
SPECTRAL PERFORMANCE

Transmission values are for a 1mm thick Germanium substrate which has been coated on one surface with CO 4010 and on the second surface with CO 4029 (High Efficiency coating).
TRANSMISSION > 92% (average) from 3 - 5 μm
TRANSMISSION > 96% (at peak wavelength) within 3 - 5 μm

Reflection values are for a single Germanium surface coated with CO 4010.
REFLECTION < 3.0% (average) from 3 - 5 μm

ENVIRONMENTAL PERFORMANCE

The coating will withstand the following environmental tests which will be carried out on a representative witness piece coated in the same batch.



ADHESION	MIL-C-48497 TS1888	para 4.5.3.1 para 5.1
HUMIDITY 7 days	MIL-C-48497 TS1888	para 4.5.3.2 para 5.2.1.2
ABRASION windscreen wiper	TS1888 (O.S.)	para 5.4.3
SALT FOG For 24 hours	MIL-STD-810C	para 509.1