

## CO 4047 Ge 8-12µm

Hard Carbon multi-Layer antireflection coating  
for Germanium  
8 - 12 µm

### DESCRIPTION

This coating is designed for outer surface (O.S.) applications where severe environmental conditions are likely to be encountered.

Durability is equal to that of the single layer Hard Carbon coating (CO 4004), but this variant offers the added advantages of lower reflectance and higher transmittance. The lower reflectance is useful in reducing potential narcissus effects.

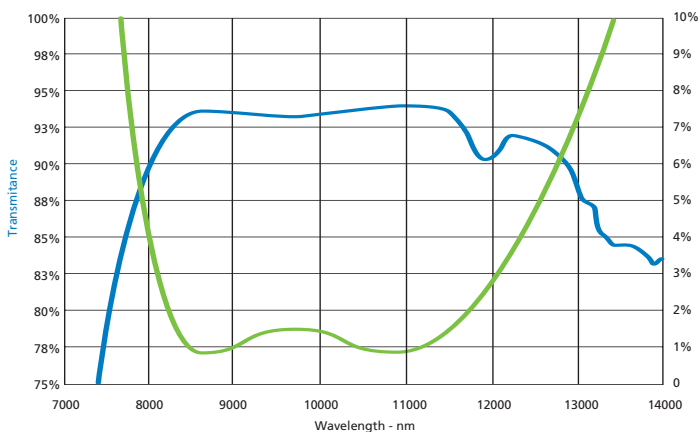
### SPECTRAL PERFORMANCE

Transmission values are for a 1 mm thick Germanium substrate, which has been coated on one surface with CO 4047 and on the second surface with CO 4009 (High Efficiency Coating).  
TRANSMISSION  $\geq$  93% (average) from 8.0 - 11.5 µm (vs 90% for CO 4004).

Reflectance values are from a single Germanium surface coated with CO 4047.  
REFLECTION  $\leq$  1.25% (average) from 8.0 - 11.5 µm (vs 3% for CO 4004).

### 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	MIL-C-48497	para 4.5.3.2
ABRASION	TS1888 (O.S.)	para 5.4.3
SALT FOG For 24 hours	MIL-STD-810C	para 509.1