CO 2207 ZnS 3-5

High efficiency antireflection coating
for Zinc Sulphide
3 - 5 µm

DESCRIPTION

This coating is designed for internal surface (I.S.) applications and offers maximum transmission combined with low reflection
Typically used in thermal imaging systems.
This coating does not contain any radioactive materials.

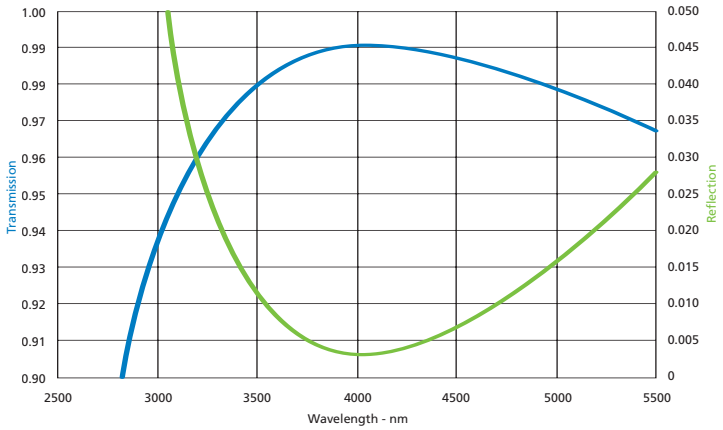
SPECTRAL PERFORMANCE

Transmission values are for a 2 mm thick Zinc Sulphide substrate which has been coated on both surfaces with CO 2207.
TRANSMISSION > 98% (average) from 3.2 - 5 µm

Reflection values are for a single Zinc Sulphide surface coated with CO 2207.
REFLECTION < 0.5% (average) from 3.2 - 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	para 4.5.3.1
	TS1888	para 5.1
HUMIDITY	MIL-C-48497	para 4.5.3.2
	TS1888	para 5.2.1.2
ABRASION	MIL-C-48497	para 4.5.3.3
	TS1888	para 5.4.1

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CO 3404 Si 3-5

Hard Carbon antireflection coating
for Silicon
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 airbourne or naval FLIR systems,
exposed window surfaces where windscreen wiper or chemical attack is to be endured.

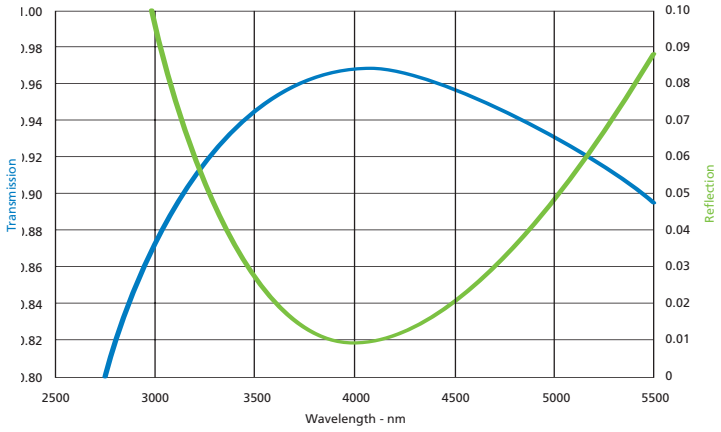
SPECTRAL PERFORMANCE

Transmission values are for a 1 mm thick Silicon substrate which has been coated on one surface with CO 3404 and on the second surface with CO 3429 (High Efficiency coating).
TRANSMISSION > 92% (average) from 3 - 5 µm
TRANSMISSION > 96% (at peak wavelength) within the 3 - 5 µm band

Reflection values are for a single Silicon surface coated with CO 3404.
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

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CO 3429 Si 3-5

High efficiency radioactive free antireflection coating for Silicon 3 - 5 µm

DESCRIPTION

This coating is designed for internal surface (I.S.) applications and offers maximum transmission combined with low reflection.
Typically used in thermal imaging systems.
The coating does not contain any radioactive materials.

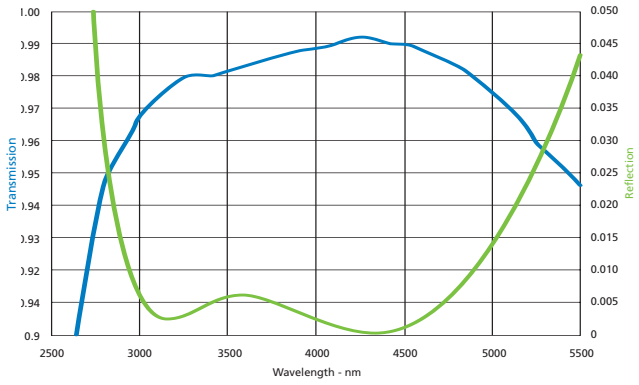
SPECTRAL PERFORMANCE

Transmission values are for a 1 mm thick Silicon substrate which has been coated on both surfaces with CO 3429.
TRANSMISSION > 98% (average) from 3 - 5 µm

Reflection values are for a single Silicon surface coated with CO 3429.
REFLECTION < 0.5% (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	para 4.5.3.1
	TS1888	para 5.1
HUMIDITY	MIL-C-48497	para 4.5.3.2
	TS1888	para 5.2.1.2
ABRASION	MIL-C-48497	para 4.5.3.3
	TS1888	para 5.4.1

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CO 3435 STAR Si 3-5

High durability antireflection coating
for Silicon
3 - 5 µm

DESCRIPTION

This coating is designed for use on the external surface of lenses and windows that are exposed to harsh (in particular, marine) environments, in those cases where the residual reflectance and lower transmittance of hard carbon (CO 3404) is undesirable.
In addition the coating can be designed to match the response curve of particular detectors in order to minimise narcissus.

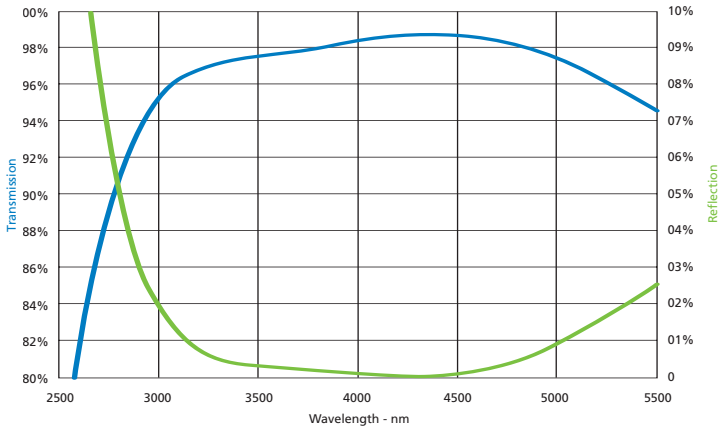
SPECTRAL PERFORMANCE

Transmission values are for a 1 mm thick Silicon substrate
which has been coated on one surface with CO 3435
and on the second surface with CO 3429 (High Efficiency Coating)
TRANSMISSION > 97.5% (average) from 3 - 5 µm, or > 98% (average) from 3.5 – 5 µm

Reflection values are for a single Silicon surface coated with CO 3435
REFLECTANCE < 0.5% (average) from 3 – 5 µm, or < 0.3% (average) from 3.5 – 5 µm

ENVIRONMENTAL PERFORMANCE

This 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 TS1888	para 4.5.3.2 para 5.2.1.2
SOLUBILITY	MIL-C-48497 TS1888	para 4.5.5.2 para 5.2.1.1
ABRASION	MIL-C-48497 TS1888	para 4.5.5.1 para 5.4.2
SALT FOG 10 days continuous	MIL-STD-810F	method 509.4

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CO 4010E Ge 3-5

Enhanced Hard Carbon antireflection coating
for Germanium
3 - 5 µm

DESCRIPTION

This enhanced form of the Hard Carbon coating is designed to satisfy the increased demands for durability required for external surface (O.S) applications. It is particularly suitable for naval applications

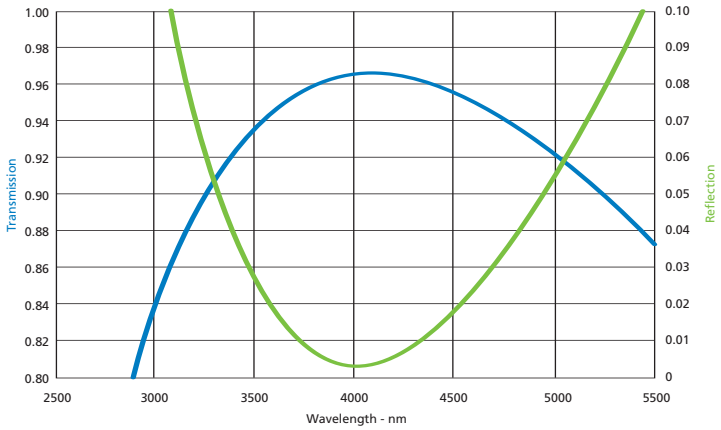
SPECTRAL PERFORMANCE

Transmission values are for a 1 mm 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 90 days	MIL-STD-810C	

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CO 4029 Ge 3-5

High efficiency radioactive free
antireflection coating for Germanium
3 - 5 µm

DESCRIPTION

This coating is designed for internal surface (I.S.) applications
and offers maximum transmission in the MWIR band.
Typically used in thermal imaging systems.
The coating does not contain any radioactive materials.

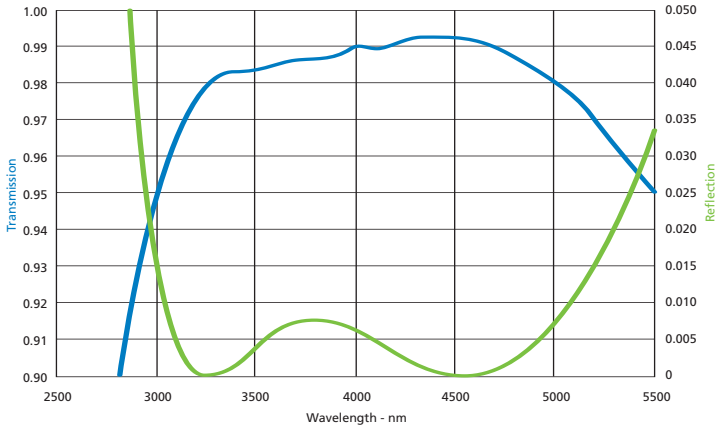
SPECTRAL PERFORMANCE

Transmission values are for a 1 mm thick Germanium substrate
which has been coated on both surfaces with CO 4029.
TRANSMISSION > 98% (average) from 3 - 5 µm

Reflection values are for a single Germanium surface coated with CO 4029.
REFLECTION < 0.5% (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	para 4.5.3.1
	TS1888	para 5.1
HUMIDITY	MIL-C-48497	para 4.5.3.2
	TS1888	para 5.2.1.2
ABRASION	MIL-C-48497	para 4.5.3.3
	TS1888	para 5.4.1

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