

Optical Coating Specification

G5 Infrared Specification # 58 101

HEAR on Silicon 3.0 – 5.0 μ m

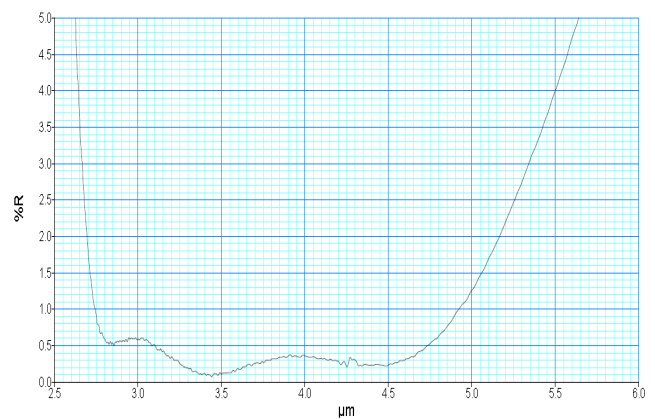
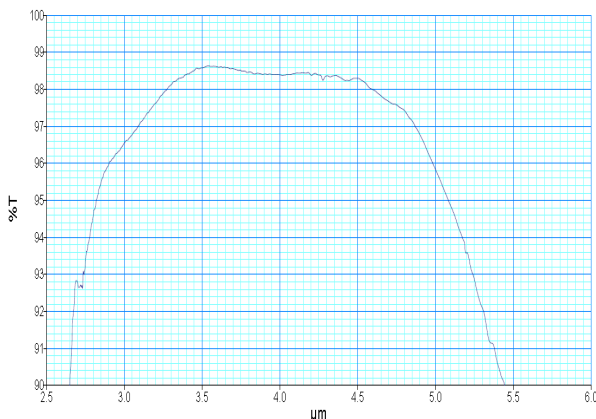
AOI 0-20 degree

For 1mm thick Si witness piece coated both sides with G5 # 58 101

Transmission 3.2 - 5.0 μ m > 98.0% Average

Reflection 3.0 - 5.0 μ m < 0.4% Average
1.0% Maximum

Environmental Adhesion: Per Mil-C-48497A para 4.5.3.1
Abrasion: Per Mil-C-48497A para 4.5.5.1
Humidity: Per Mil-C-48497A para 4.5.3.2 24 hours
Solubility/Clean ability: Per Mil-C-48497A para 4.5.4.2
Salt Spray: Per Mil-C-675C para 4.5.9 24 hours
Temperature cycle: Per Mil-C-48497A para 4.5.4.1



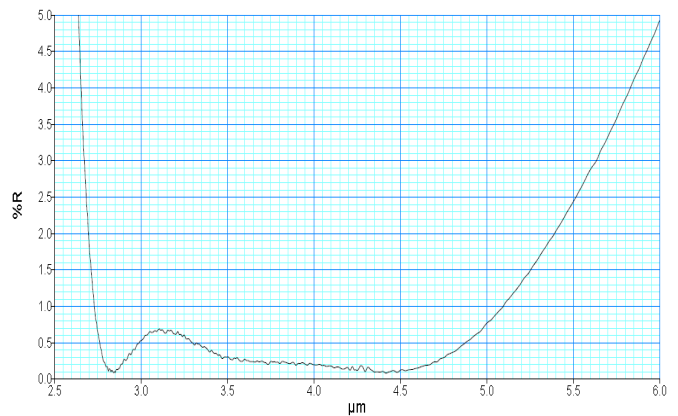
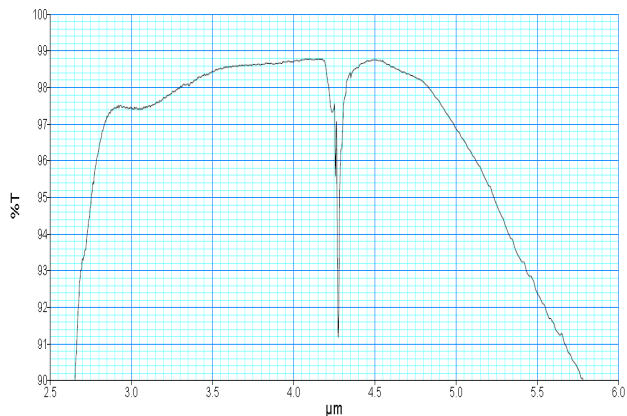
Note: Thorium Free

Optical Coating Specification

G5 Infrared Specification # 58 102

HEAR on Germanium 3.0 – 5.0 μ m

AOI	0-20 degree
Transmission	For 1mm thick Ge witness piece coated both sides with G5 # 58 102 3.2 - 5.0 μ m > 98.0% Average
Reflection	3.0 - 5.0 μ m < 0.4% Average 1.0% Maximum
Environmental	Adhesion: Per Mil-C-48497A para 4.5.3.1 Abrasion: Per Mil-C-48497A para 4.5.5.1 Humidity: Per Mil-C-48497A para 4.5.3.2 24 hours Solubility/Clean ability: Per Mil-C-48497A para 4.5.4.2 Salt Spray: Per Mil-C-675C para 4.5.9 24 hours Temperature cycle: Per Mil-C-48497A para 4.5.4.1



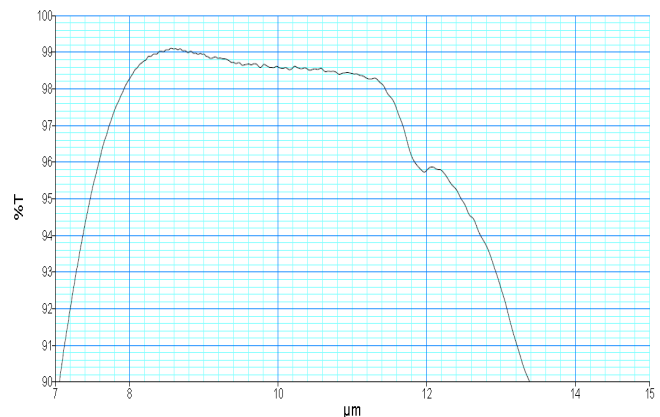
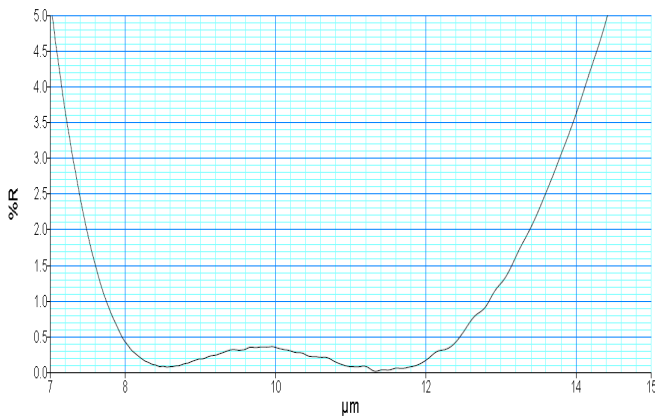
Note: Thorium Free

Optical Coating Specification

G5 Infrared Specification # 58 201

HEAR on Germanium 8.0 – 12.0 μm

AOI	0-20 degree
Transmission	For 1mm thick Ge witness piece coated both sides with G5 # 58 201 8.0 – 12.0 μm > 98.2% Average 8.0 – 11.5 μm > 98.5% Average
Reflection	8.0 – 12.0 μm < 0.3% Average 1.0% Maximum
Environmental	Adhesion: Per Mil-C-48497A para 4.5.3.1 Abrasion: Per Mil-C-48497A para 4.5.3.3 Humidity: Per Mil-C-48497A para 4.5.3.2 24 hours Solubility/Clean ability: Per Mil-C-48497A para 4.5.4.2 Water solubility: Per Mil-C-48497A para 4.5.5.3 Temperature cycle: Per Mil-C-48497A para 4.5.4.1



Note: Thorium Free



Optical Coating Specification

G5 Infrared Specification # 58 202

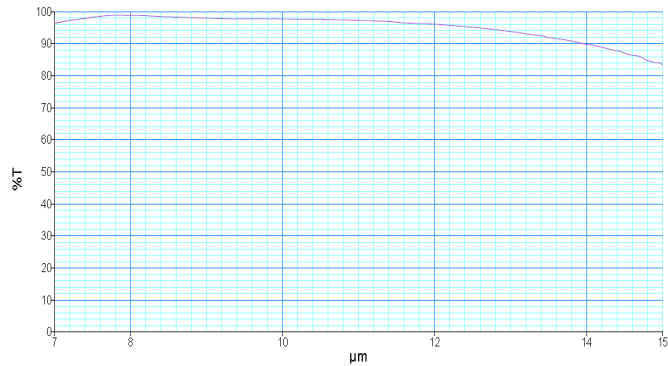
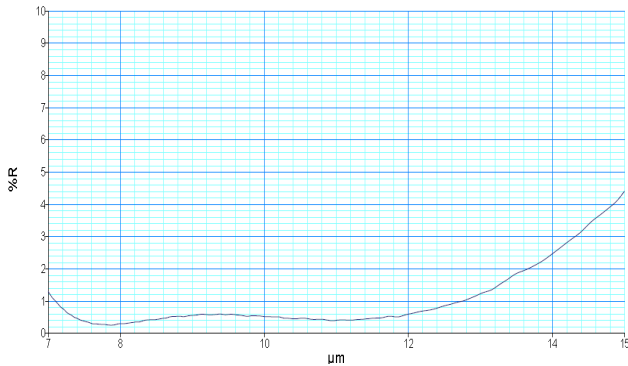
HEAR on ZnSe 8.0 – 12.0 μ m

AOI 0-20 degree

Transmission For 1mm thick ZnSe witness piece coated both sides with G5 # 58-202
8.0 – 12.0 μ m > 97.5% Average
8.0 – 11.5 μ m > 97.8% Average

Reflection 8.0 – 12.0 μ m < 0.5% Average
1.0% Maximum

Environmental
Adhesion: Per Mil-C-48497A para 4.5.3.1
Abrasion: Per Mil-C-48497A para 4.5.3.3
Humidity: Per Mil-C-48497A para 4.5.3.2 24 hours
Solubility/Clean ability: Per Mil-C-48497A para 4.5.4.2
Water solubility: Per Mil-C-48497A para 4.5.5.3
Temperature cycle: Per Mil-C-48497A para 4.5.4.1



Note: Thorium Free



Optical Coating Specification

G5 Infrared Specification # 58 401

DLC on Germanium 3.0 – 5.0 μ m

AOI 0-20 degree

Transmission For 1mm thick Ge witness piece coated with G5 # 58 102 on side 2
(Coated lenses/windows are measured for final acceptance)

3.0 – 5.0 μ m > 94% Average

Environmental

Adhesion: Per Mil-C-48497A para 4.5.3.1

Abrasion: Per Mil-C-48497A para 4.5.5.1

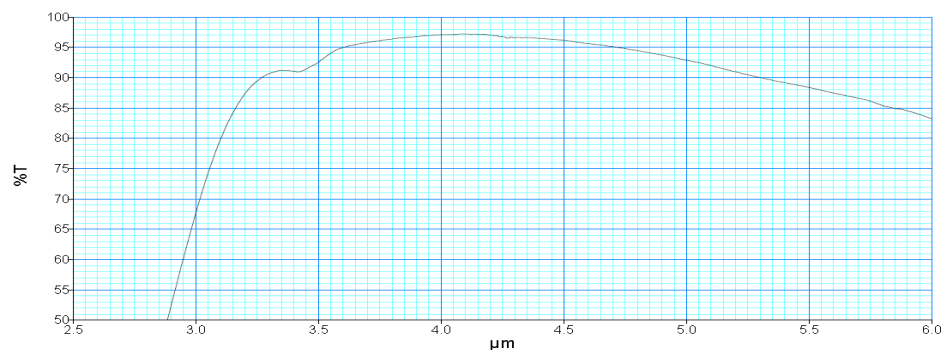
Humidity: Per Mil-C-48497A para 4.5.3.2 24 hours

Solubility: Per Mil-C-48497A para 4.5.5.2

Salt spray: Per Mil-C-675C Para 4.5.9 for a period of 24 hours

Temperature cycle: Per Mil-C-48497A para 4.5.4.1

Windscreen: Coating shall survive 5000 revolutions of a wiper blade in a sand slurry under 40g load.



Note: Thorium Free

Optical Coating Specification

G5 Infrared Specification # 58 402

DLC on Germanium 8.0 – 11.5 μ m

AOI 0-20 degree

Transmission For 1mm thick Ge witness piece coated with G5 # 58 201 on side 2
(Coated lenses/windows are measured for final acceptance)

8.0 – 12.0 μ m > 89% Average

8.0 – 11.5 μ m > 91% Average

Environmental

Adhesion: Per Mil-C-48497A para 4.5.3.1

Abrasion: Per Mil-C-48497A para 4.5.5.1

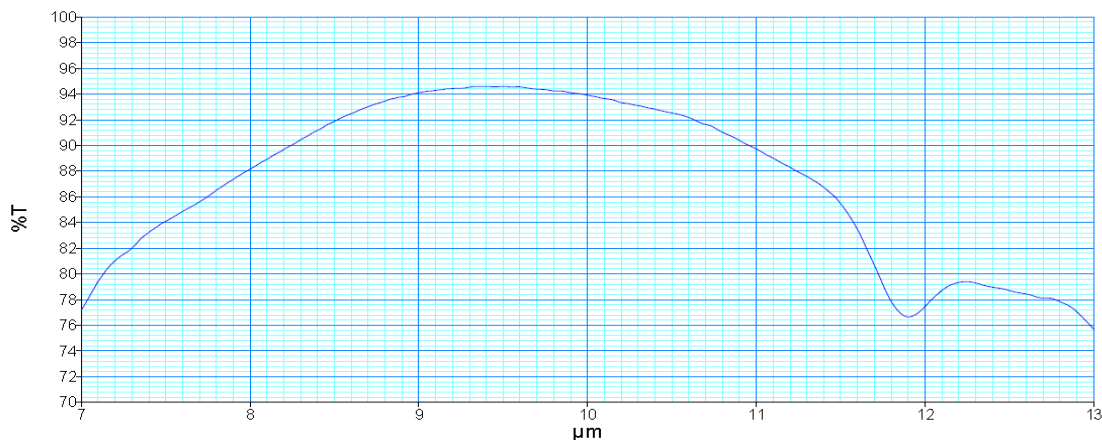
Humidity: Per Mil-C-48497A para 4.5.3.2 24 hours

Solubility: Per Mil-C-48497A para 4.5.5.2

Salt spray: Per Mil-C-675C Para 4.5.9 for a period of 24 hours

Temperature cycle: Per Mil-C-48497A para 4.5.4.1

Windscreen: Coating shall survive 5000 revolutions of a wiper blade in a sand slurry under 40g load.



Note: Thorium Free

Optical Coating Specification

G5 Infrared Specification # 58 403

DLC on Silicon 3.0 – 5.0 μ m

AOI 0-20 degree

Transmission For 1mm thick Si witness piece coated with G5 # 58 101 on side 2
(Coated lenses/windows are measured for final acceptance)

3.0 – 5.0 μ m > 93% Average

Environmental

Adhesion: Per Mil-C-48497A para 4.5.3.1

Abrasion: Per Mil-C-48497A para 4.5.5.1

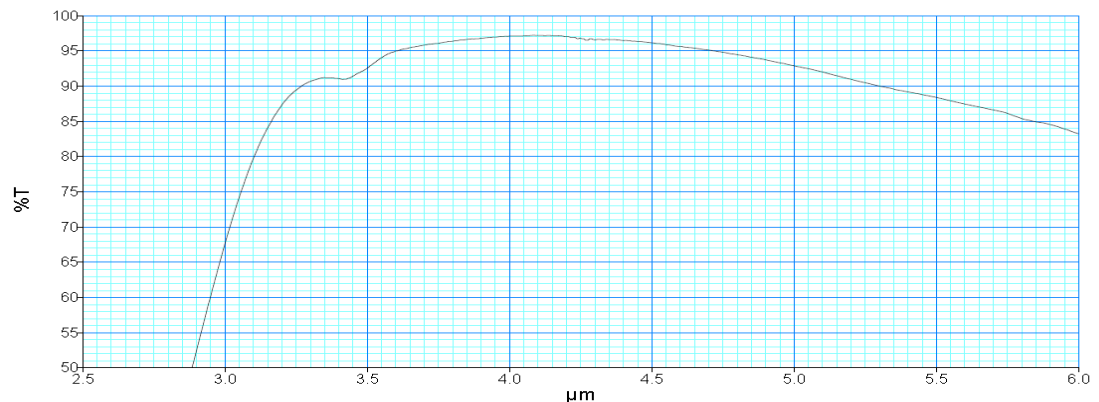
Humidity: Per Mil-C-48497A para 4.5.3.2 24 hours

Solubility: Per Mil-C-48497A para 4.5.5.2

Salt spray: Per Mil-C-675C Para 4.5.9 for a period of 24 hours

Temperature cycle: Per Mil-C-48497A para 4.5.4.1

Windscreen: Coating shall survive 5000 revolutions of a wiper blade in a sand slurry under 40g load.



Note: for bands within the 3-5 μ region the average transmission will be >96%
G5 Infrared will specify the guaranteed average transmission and coating P/N

Note: Thorium Free

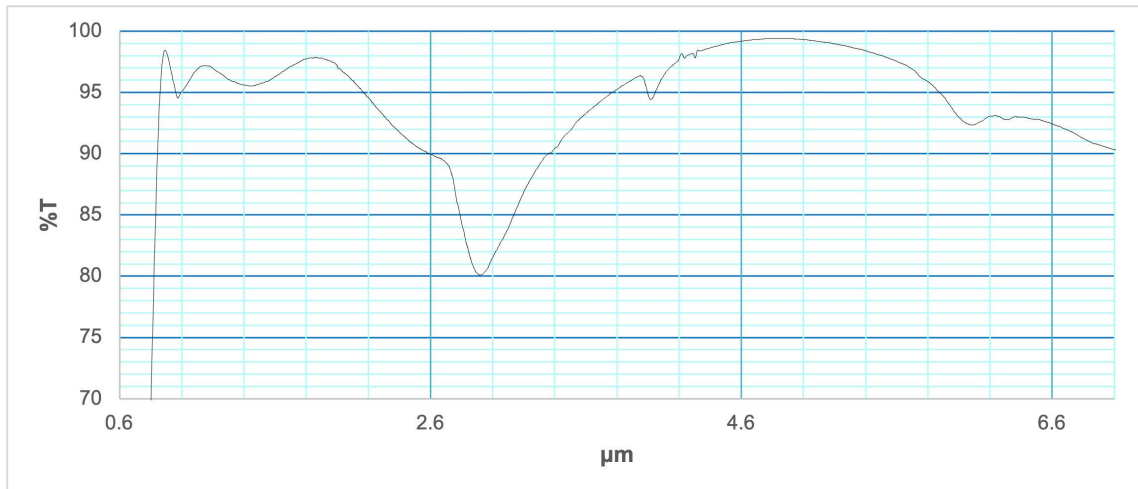
Optical Coating Specification

Dual Band AR on IRG-27 0.8-2.2 and 4.4-5.4 μm

AOI	0-20 degree
Transmission	For 1mm thick IRG-27 witness piece coated both sides G5# 60 101 4.4-5.4 μm > 99.0% Average 0.8-2.2 μm > 95.5% Average
Environmental	Adhesion: Per Mil-C-48497A para 4.5.3.1 Abrasion: Per Mil-C-48497A para 4.5.5.1 Humidity: Per Mil-C-48497A para 4.5.3.2 24 hours Solubility/Clean ability: Per Mil-C-48497A para 4.5.4.2

IRG-27 NIR/MWIR Dual-Band AR

0.8-2.2 μm : 95.9%, 4.4-5.4 μm : 99.1%



Note: Thorium Free



DIALON TM

Optical Coating Specification

G5 Infrared Specification # 60 102

F-DLC on Silicon 3.0 – 5.0 μ m
Exterior Protective Coating

AOI 0-20 degree

Transmission For 1mm thick Si witness piece coated with G5 # 60 102
(Coated lenses/windows are measured for final acceptance)

3.0 – 5.0 μ m > 93% Average

Environmental Adhesion: Per Mil-C-48497A para 4.5.3.1
Abrasion: Per Mil-C-48497A para 4.5.5.1
Humidity: Per Mil-C-48497A para 4.5.3.2 24 hours
Solubility: Per Mil-C-48497A para 4.5.5.2
Salt spray: Per Mil-C-675C Para 4.5.9 for a period of 24 hours
Temperature cycle: Per Mil-C-48497A para 4.5.4.1
Windscreen: Coating shall survive 5000 revolutions of a wiper blade in a sand slurry under 40g load.

Notable Properties Self Cleaning - Superhydrophobic surfaces have excellent self-cleaning properties. The non-wettable surface causes water to bead up and roll off the surface, trapping and removing contaminants. Eliminating the need for a WIPER in most applications.
Increased durability in Wet Wear applications - Due to the decreased wettability, one can expect F-DLC coatings to have better performance in wet abrasion tests such as wiper blade/sand slurry.

Note: Thorium Free