

HEAR Coatings

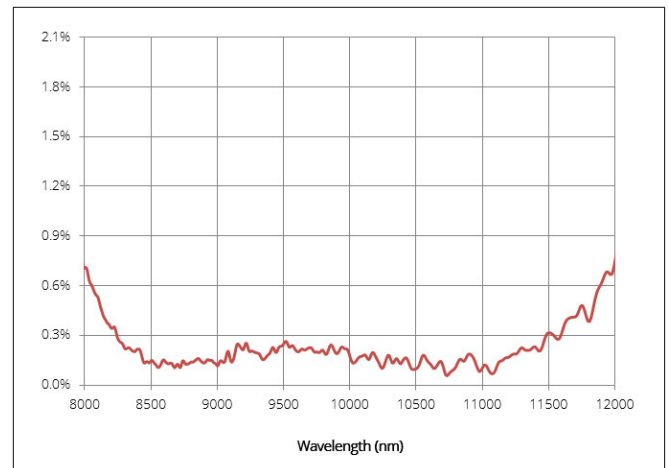
High Efficiency Anti-Reflective IR Coatings



SPECTRAL CHARACTERISTICS

Spectral Region	Spectral Range	Common Substrate Materials
SWIR	0.9 to 2.7 μ	<ul style="list-style-type: none">GlassesSapphireZinc SelenideZinc SulfideCalcium Fluoride
MWIR	3.0 to 5.0 μ	<ul style="list-style-type: none">SiliconGermaniumSapphireZinc SelenideZinc SulfideCalcium FluorideVarious Chalcogenides
LWIR	7.0 to 14.0 μ	<ul style="list-style-type: none">GermaniumZinc SelenideZinc SulfideVarious Chalcogenides
MWIR – LWIR (multi-spectral)	3.0 to 14.0 μ	<ul style="list-style-type: none">GermaniumZinc SelenideZinc Sulfide - MS

SPECTRAL PERFORMANCE on Ge (8-12 μ)



- Average Reflection $\leq 0.3\%$ per Surface
- Near Normal Angle of Incidence
- Transmission average $\geq 98.0\%$

COATING DURABILITY

- Adhesion: Tape Pull
- Moderate Abrasion
- Humidity: 24 Hours
- Temperature Cycle

STANDARD AND CUSTOM SOLUTIONS



DLC Coatings

Diamond-Like Carbon Coatings



VIRTUALLY **0** PINHOLES



SPECTRAL PERFORMANCE

- Spectral region: 8.0 to 11.5 μ (0° to 20° AOI)
- Transmission: \geq 90% avg.
- Spectral region: 8.0 to 12.0 μ (0° to 20° AOI)
- Transmission: \geq 88% avg.



QUALITY REQUIREMENTS

- Adhesion: Per MIL-M-13508C para 4.4.6 (fast full)
- Abrasion: Per MIL-C-675C para 4.5.10. (severe abrasion 40 strokes)
- Humidity: Per MIL-C-675C para 4.5.8. Min 24 hours
- Solubility: Per MIL-C-675C para 4.5.7. Immersion for period of 24 hours in water/salt
- Salt Spray: Per MIL-C-675C para 4.5.9. Salt spray-fog test for a continuous period of 24 hours
- Temperature Cycle: Per MIL-M-13508C para 4.4.4.
- Windscreen Wiper: No signs of removal when exposed to 5,000 revolutions sand/slurry mixture

