



Cap/Window User Instructions and Guidelines



Infrared Materials manufactures cap/window assemblies using a proprietary adhesive sealing process.

1. Specifications for adhesive and seal

- Moisture absorption: 250 hours @ 32°C: 0.04%
- Operating temperature range: -55° to + 85°C
- Hermeticity: 100 hours; 90% RH; 90F: 1.0×10^{-8} cc/sec.
- Chemical resistance: Water, salt, hydraulic fluids, motor oil, alcohol, 10% nitric acid, 10% sulfuric acid, 10% ammonia solution, and most solvents
- Outgassing Properties: Adhesive does not contain solvents or thinners

2. Precautions

Please contact Infrared Materials prior to using solvents on or near cap/window seal. Ensure the surface to be joined with the cap flange is flat to ensure cap to window seal is not compromised by improper torque.

3. Cleaning Instructions

For sapphire windows: Alcohol and a cotton swab may be used to clean windows and caps. Clean the window with a 50/50 mixture of

Isopropyl alcohol and water. Either rinse the cap window assembly gently, or use light strokes with a cotton tipped applicator. Care must be taken to avoid pressing on the window as you may compromise the seal. Do not use acetone or halogenated solvents. Contact Infrared Materials prior to using solvents to clean the cap/window assemblies.

For other window materials: contact Infrared Materials for appropriate cleaning materials and procedure. Some windows contain coatings that may not be apparent to the naked eye. Be aware of the window material and possible coatings prior to the cleaning process.

4. Test and Inspection

Each assembly is inspected prior to shipping.

Air pockets in the adhesive may occur between the window and cap in the flat area between the cap aperture and inside edge of cap depending upon the surface area. This will not affect the function of the seal. Voids, cracks, and air pockets are not permissible in the critical seal area between the window edge and inside wall of the cap.

Each seal is guaranteed leak tight to 1.0×10^{-8} cc/sec He Gas unless otherwise specified on Sales Order.

5. Handling Instructions

Do not mar, nick, bend or otherwise disturb the lower rim of the cap/window assembly as this will prevent a proper weld or seal to the package.

NEVER use an ULTRASONIC CLEANER to clean cap/window assemblies.