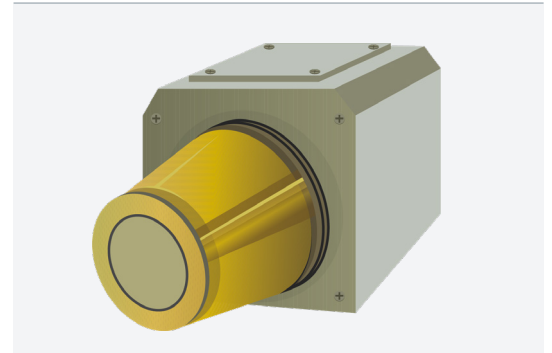


Hermetic Window Housing Assemblies

Window Housing Assemblies for Cooled Infrared Detectors

Materion Balzers Optics can supply infrared windows hermetically soldered into metal housings. These window housing assemblies are suitable for soldering or welding onto the customer's cooled infrared detector. Materion can manufacture the infrared window with AR or filter coatings, metallize the window for solder assembly, and then solder the window into metal housing. The integrity of the solder joint is rigorously measured by X-ray, helium leak checking and environmental testing.



Benefits

- Low void solder joint
- Highly reliable hermetic seal
- X-ray and helium leak testing
- High transmittance window in SWIR, MWIR or LWIR

Applications

Hermetic window housing assemblies are required for cooled infrared detectors in the SWIR, MWIR and LWIR. The window can be specified with a variety of coatings, including AR, longpass filter, or narrow band filter. Cooled IR detectors are used for high precision, high sensitivity measurements and imaging, such as temperature measurement, gas sensing and measurement, night vision and multispectral imaging.

Technical Data

Available Solders	Pb-containing or Pb-free Liquidus from 118 °C to 361 °C
Housing Metal	Alloy 42, Kovar, Invar depending on the window
Housing plating	Available upon request
Window	Sapphire, Si or Ge
Available Coatings	Antireflection, Long Pass, Narrow Band Filters
Window Dimensions	Ø 6 mm to Ø 75 mm
Helium leak rate	< 1E-9 std atm-cc/sec
Temperature cycle compatibility	-50 °C to + 90 °C