

Fiber Optic Dewar Couplers

Fiber optic coupling units are intended for the coupling of IR-fiber optical cables with SMA or FC/PC termination to MCT/ InSb detector installed inside LN-cooled Dewar with side window. The simplest lens coupler is a standard or customized construction fixed on the side window of LN-cooled Dewar.

Advanced version of the coupler is based on pre-aligned parabolic mirrors to eliminate chromatic aberrations and includes purging option to avoid atmospheric disturbance in spectral details of the object. Both simple- and advanced couplers are adjustable in 3 dimensions: X-Y for the mirror and Z - translation of the Dewar. See our Chalcogenide Fiber cables and Polycrystalline Fiber cables for different spectral range detectors and radiation sources.

Features:

- ✓ Efficient coupling of fiber cable to MCT/ InSb detector installed inside LN-cooled Dewar with side window
- ✓ Mirror optics enable work in broad spectral range
- ✓ Pre-aligned and adjustable to maximize coupling efficiency
- ✓ SMA or FC/PC (on request) adaptor for infrared fiber optical cable.
- ✓ Compatible with Chalcogenide and Polycrystalline IR-Fiber Cables



Applications:

- ✓ Process control
- ✓ Remote temperature sensing
- ✓ Remote imaging

Specification of Dewar Couplers

Coupler Type	Lens Coupler	Mirror Coupler
Optical Elements	ZnSe lens with 3-5 or 8-12µm AR-coating	Two parabolic mirrors
Dimensions	Diameter: 70 mm Length: 61 mm	157*148*101mm, space for Dewar and pre-amplifier included
Alignment Options	Angular translation stage $\pm 2.5^\circ$ in both orthogonal axes; Z-alignment ± 5 mm	X-Y alignment of the mirror inside the coupler, Z-alignment - translation of the Dewar.
Other Options	-	Purging is possible