

CorActive Mid-Infrared Optical Fiber

Mid-Infrared Transmission Optical Fiber



CorActive delivers a full range of Infrared Transmission (IRT) optical fibers to address the beam delivery requirements for wavelengths in the mid-Infrared spectrum from 2.0 to 9.0 μm . CorActive's family of Infrared Transmission Fiber products have been designed specifically to provide ultra low loss optical transmission in the mid-Infrared spectrum. The high optical quality and low loss characteristics of CorActive's IRT optical fibers will enable performance enhancements of many existing applications that have relied on free space optics, low quality fiber or other beam delivery methods.

A proprietary optical fiber manufacturing method ensures that fiber impurities and optical defects are removed prior to fiber drawing. This ensures the lowest loss and highest quality optical transmission of mid-IR wavelengths in the 2.0 to 9.0 μm range.

- **Ultra Low Loss**
- **High Power Capacity**
- **High Nonlinearity**
- **Designed for Military Applications by the U.S. Naval Research Laboratory**
- **Bend/Polarization Insensitive**
- **Robust Mechanical Properties**
- **Rare Earth Doping Available**

CorActive IRT Product Features and Benefits

IRT Product Feature

- Superior Beam Quality
- Proprietary Manufacturing Process
- High Power Capacity
- Consistent Reproducibility
- Broad Product Family

Customer Benefit

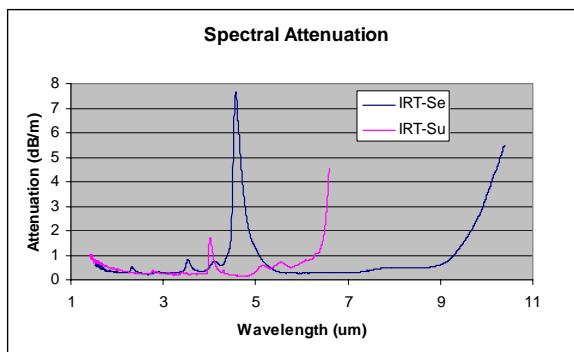
- World leading fiber quality enables new fiber based mid-IR applications
- Ensures highest optical quality by eliminating impurities and defects
- Enables high power beam delivery of mid-IR wavelengths
- Reduces manufacturing costs and increases production yield
- Ensures the most effective fiber choice for your application

IRT Fiber Applications

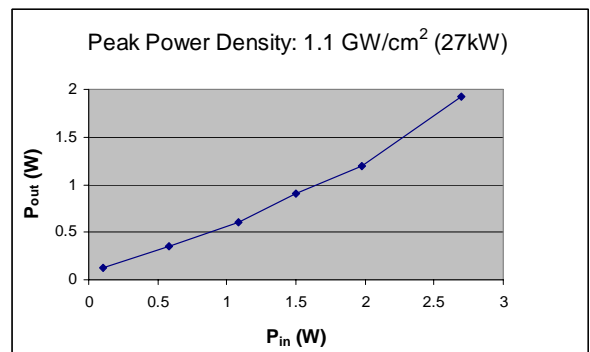
CorActive's IRT optical fiber has been designed for high performance and demanding applications such as:

- Infrared Counter Measure (IRCM)
- IR Imaging Fiber Bundle (FLIR)
- Er:YAG Laser Beam Delivery (3.0 μm)
- IR Spectroscopy

Leading Low Loss IR Fiber



Superior High Power Handling

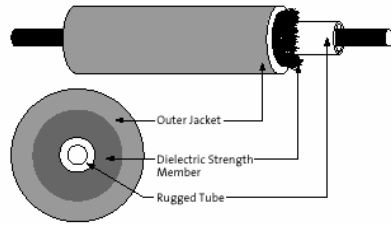




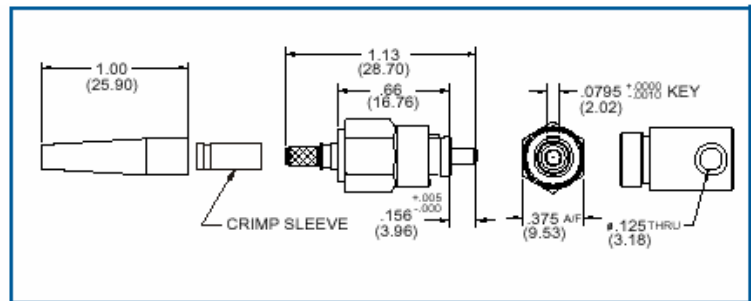
IR Transmission Fiber	IRT-SU	IRT-SE
Core/Clad Structure Materials	Sulphide	Selenide
Optical Properties		
Transmission Wavelength Range (µm)	2-5	2-9
Core Refractive Index	2.4	2.7
Numerical Aperture (nominal)	0.26	0.30
Nominal Attenuation (dB/m)	<0.2	<0.5
Physical & Geometric Properties		
Core Diameter (µm)	4-700 ± 3%	
Cladding Diameter (µm)	80-800 ± 3%	
Cladding Non-circularity (%)	<2	
Core/Clad Concentricity Error (µm)	<5	
Protective Coating Composition	Dual Coat Acrylate	
Environmental Properties		
Chemical Insensitivity	Insoluble in water, concentrated hydrochloric acid, non-oxidizing acids, gasoline, toluol, alcohol and acetone	

Advanced Cable Manufacturing Process

In our continuing effort to bring our customers the best service possible, CorActive utilizes a proprietary cable manufacturing process, which ensures optimal Anti-Reflective coating application.



IRT Cable Sheathing



FC High Reliability Connector

CorActive's Unique Advantages

- Focused 100% on specialty optical fiber design and manufacture to ensure high quality products
- Full line specialty optical fiber supplier – IRT, DCOF, EDF, Photosensitive and Attenuating optical fibers available
- Strategic supplier relationship opportunities – CorActive does not compete in our customers' end markets
- Appropriately scaled production facilities and an excellent financial position

CorActive is a well financed independent developer and manufacturer of advanced Specialty Optical Fiber (SOF) products for OEM customers. CorActive uniquely offers a full line of standard SOF products, including double clad, infrared transmission, erbium doped, ultra violet sensitive and attenuating optical fiber, plus custom fiber development services for specific applications. At CorActive we pride ourselves in providing technologically advanced specialty optical fiber products that uniquely enable our customers to offer superior products and services.