

Fiber Tip Optic Retroreflector

>95% reflection



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Applications

- Fiber Interferometer
- Fiberoptic Sensor
- Fiber Instruments

Features

- Low Insertion Loss
- High Power
- High Reliability
- Low Cost
- Environmental Stability

The FTIR series Fiber-Optic Tip Retroreflector is engineered to return incident light back through the fiber with maximum efficiency. It is fabricated using ultra-precision surface polishing to achieve perfect end-face parallelism, combined with a >99% dielectric high-reflectivity coating for superior return loss performance. The device is designed for demanding environments, including high-temperature operation, and supports single-mode (SM), polarization-maintaining (PM), or multimode (MM) fibers. With exceptional optical quality and no moving parts, the retroreflector delivers stable long-term performance and supports high optical power handling up to 5 W.

Specifications

Parameter		Min	Typical	Max	Unit
Central Wavelength (λ_c)		630		2200	nm
Typical Spectral Width ($\Delta\lambda$)		± 30		± 50	nm
Typical Insertion Loss (λ_c , 23°C, no connector)		0.35		1	dB
Polarization Extinction Ratio (PM Fiber)		22		30	dB
Reflection Percentage		96		99	%
PDL (λ_c , 23°C)		≤ 0.10			dB
Operating Temperature	Regular	-5		70	°C
	Rugged	-40		250	°C
Storage Temperature		-40		+85	°C
Optical Power Handling		0.2		5	W

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Dimensions (mm)

*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

Ordering Information

Prefix	Type	Wavelength	Reflection	Package	Fiber Type	Fiber Cover	Fiber Length	Connector ^[1]
FTIR-	Regular = 1 Rugged = 2 Special = 0	1064nm = 1 1310nm = 3 1550nm = 5 1800nm = 2 850nm = 8 780nm = 7 980nm = 9 650nm = 6 460nm = 4 Special = 0	98% = 98 10% = 10 20% = 20 99% = 99 Special = 00	Non = 1 Ø2mm stainless tube = 1 Special = 0	Choose from table	900µm Tube = 3 Bare Fiber = 1 Special = 0	0.25m = 1 0.5m = 2 1.0m = 3 Special = 0	None = 1 FC/PC = 2 FC/APC = 3 SC/PC = 4 SC/APC = 5 ST/PC = 6 LC/PC = 7 LC/UPC = U Special = 0

[1]. Regular fiber connector has PER ~22dB. Connector with PER >27 dB is available using special process

Fiber Type Selection Table:

01	SMF-28	34	PM1550	71	MM 50/125µm
02	SMF-28e	35	PM1950	72	MM 62.5µm
03	Corning XB	36	PM1310	73	105/125µm
04	SM450	37	PM400	74	FG105LCA
05	SM1950	38	PM480	75	FG50LGA
06	SM600	39	PM630	76	STP 50/125
07	Hi780	40	PM850	80	Polyimide SM28
08	SM800	41	PM980	81	Polyimide PM1550
09	SM980	42	PM780	82	Polyimide 50/125
10	Hi1060	43	PM350	83	Polyimide 105/125