

Photonics

Thermally Expanded Core Termination



Thermally expanded core termination is used to ease coupling between fiber and free space. Core thermal expansion allows coupling beams with higher mode field diameter and numerical aperture to the standard single mode fiber. The terminations are available as patchcords with connectors, patchcords with connector and ferrule (TEC side) or as pigtails with a ferrule on the TEC side.

APPLICATIONS

- ✓ Coupling light into fiber from free space
- ✓ Coupling light between two fibers with different NAs
- ✓ High power connectors
- ✓ Fiber Optic Sensors
- ✓ Fiber Laser

ADVANTAGES & FEATURES

- ✓ Wide spectral operation range
- ✓ Low insertion loss
- ✓ Mode field diameter can be adjusted to Customer's order
- ✓ Available as patchcords with connectors or pigtails
- ✓ Available with any type of fiber optic connectors

TECHNICAL SPECIFICATIONS:

Parameter	Value				
Wavelength range [nm] ¹	1550				
Mode field diameter [µm] ^{2,3}	15	20	25	30	35
IL [dB] ⁴	0.03	0.03	0.03	0.05	0.35
NA ⁵	0.09	0.06	0.05	0.04	0.04

1- other wavelengths available upon request
 2- measured @ 1550nm
 3- other MFD's available upon request
 4- excess loss due to TEC side; additional insertion loss for connector side 0.2dB
 5- calculated for specific MFD

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ORDERING INFORMATION:

Series	Quality	MFD	Connector type	TEC connector type	Fiber type	Fiber length	Cable type
TEC	G0	19 – 19 µm	FC	XX-Bare fiber	1 – G.652D	0 - 0.5 m	0 – pigtail
		195 – 19.5 µm	X – ferrule and bare fiber	YY-Bare ferrule	2 – G.657A	1 - 1 m	09 – 0.9 mm tube
		etc.			3 – G.657B	2 - 2 m	20 – 2.0 mm tube

Example: **TEC-G0-185-FC-XX-1-1-20** – Fibrain thermally expanded core termination with 18.5 µm mode field diameter based on 1 m of G.657A fiber in 2.0 mm tube with FC/PC connector and bare fiber on the TEC side.

Important notice

Buyer and/or user of this product has to make sure before using this product that it is suitable for the intended use. All questions of liability relating to this product are subject – in accordance with the prevailing – to the Term of Sale of the selling Fibrain subsidiary.