

COIA High Temperature Optical Fibre Temperature Range from $-40\text{ }^{\circ}\text{C}$ up to $+250\text{ }^{\circ}\text{C}$

HTF250 - MM 50/125/245 – Low / Medium Tg (Dual Layer)

High end applications require reliable Special Optical Fibres.

The typical applications for the latest development of COIA HTF250, High Temperature Optical Fibres up to $+250\text{ }^{\circ}\text{C}$, includes medical and industrial lasers, in high temperature environment, for high efficiency fibre optic bundles, harsh environmental sensors, energy research, mining, Fibre Optic DTS, Oil hole drilling & refinery, Food & aircraft industries, car & train tunnel cabling, etc...

COIA offers GIMM $50\mu\text{m}$, $62.5\mu\text{m}$ as well as SM 9/125 High End Fibres with an extended operating temperature range up to $+250\text{ }^{\circ}\text{C}$.

The Fibre Primary and Secondary Coating is a special developed and Patent pending Dual Layer UV-Acrylate Coating (**COIA Galaxy® HPHTC 250 – Patent p. No. 10 2005 032 619.6**), a unique & world-wide sole developed & manufactured High Performance Product by COIA.

Furthermore COIA's Galaxy® HPHTC 250 High Performance High Temperature Coatings and HTF250 High Temperature Optical Fibres do comply with ROHS 2002/95/EG regulation.

Optical Characteristics		Specific Value Range	Unit
Attenuation Coefficient	@ 850 nm	$\leq 2.3 - \leq 2.5$	dB/km
	@ 1300 nm	$\leq 0.5 - \leq 0.7$	dB/km
Bandwidth Assuming a linear relationship	@ 850 nm	$\geq 400 - \geq 800$	MHz•km
	@ 1300 nm	$\geq 800 - \geq 2000$	MHz•km
Numerical Aperture		0.200 ± 0.010	
Effective Group Index of Refraction	@ 850 nm	1.483	
	@ 1300 nm	1.478	
Geometrical Characteristics			
Core Diameter		50 ± 2.5	μm
Core Non-Circularity		≤ 5.0	%
Core/Clad Concentricity Error		≤ 1.5	μm
Cladding Diameter		125 ± 2.0	μm
Cladding Non-Circularity		≤ 2.0	%
Coating Diameter		245 ± 10	μm
Standard Lengths		1.1 – 8.8	km
Mechanical Characteristics			
Proof Test		≥ 100 ≥ 8.8	kpsi N
Coating Strip Force		3.0 - 4.0	N
Life Time		@ Max. Operating Temperature	
Short Term (3 hours)		$+250\text{ }^{\circ}\text{C}$	
Medium Term (10 days)		$+200\text{ }^{\circ}\text{C}$	
Long Term (> 100 days)		$+150\text{ }^{\circ}\text{C}$	

COIA reserves the right to modify above specifications without notice as all Fibres, Preforms and Coatings are subject to COIA's continuing process development and quality improvement policy to ensure high reliability and superior performance of our Products.

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