

780 & 1060 nm Dispersion Controlled Select Cutoff Fibers



Coherent's -OCT select cutoff single-mode fibers are optimized for Optical Coherence Tomography (OCT) medical imaging methods. These application-specific fibers were developed for next generation OCT applications that operate at both 780 and 1060nm and require exceptional uniformity, tight dispersion and core/clad concentricity control. The fibers are ideally suited for couplers used in OCT. This fiber can still be used for traditional applications as well and is proof tested to 200kpsi for superior strength. These -OCT fibers are part of the NuVIEW™ family of fibers providing extra high performance specifications for increased component reliability, component performance and production yields reducing component manufacturing costs. The -P version has a polyimide coating reducing overall fiber diameter and increasing operating temperature to 300°C.

Typical Applications

- OCT medical imaging
- Components/couplers
- Pump diode pigtailed
- Couplers (including WDM)
- Single clad Yb-fiber pigtailed

Features & Benefits

- Extremely tight dispersion uniformity and control — Required for high performance OCT components
- Exceptional uniformity and core/clad concentricity — Low, consistent splice loss to device components
- Superior low loss — Improves overall system device SNR
- Higher proof test levels — Critical for long term reliability in tight bend applications
- OCT-P version with polyimide coating — Enables high temperature (300°C) operation

Optical Specifications

	780-OCT	1060-OCT	1060-OCT-P
Operating Wavelength	720 – 980 nm	930 – 1550 nm	930 – 1550 nm
Core NA	0.130	0.140	0.140
Mode Field Diameter (Gaussian)	5.0 μm @ 850 nm (nominal) 4.9 μm @ 780 nm (nominal)	6.0 ± 0.3 μm @ 980 nm 6.4 ± 0.3 μm @ 1060 nm	6.0 ± 0.3 μm @ 980 nm 6.4 ± 0.3 μm @ 1060 nm
Cutoff	680 ± 30 nm	890 ± 30 nm	890 ± 30 nm
Core Index Of Refraction	1.4586 ± 0.0004 @ 850 nm	1.4565 ± 0.0004 @ 1060 nm	1.4565 ± 0.0004 @ 1060 nm
Core Attenuation	≤ 3.0 dB/km @ 850 nm ≤ 4.0 dB/km @ 780 nm	≤ 1.1 dB/km @ 1060 nm ≤ 1.8 dB/km @ 980 nm	≤ 2.0 dB/km @ 1060 nm ≤ 2.5 dB/km @ 980 nm
Dispersion	-106 ± 4 ps/(nm-km) @ 850 nm	-38 ± 1 ps/(nm-km) @ 1060 nm	-38 ± 1 ps/(nm-km) @ 1060 nm

Geometrical & Mechanical Specifications

Cladding Diameter	125.0 ± 0.5 μm	125.0 ± 0.5 μm	125.0 ± 0.5 μm
Core Diameter	4.4 μm	5.8 μm	5.8 μm
Coating Diameter	245.0 ± 10.0 μm	245.0 ± 10.0 μm	150.0 ± 5.0 μm
Coating Concentricity	< 2.5 μm	< 2.5 μm	< 2.5 μm
Core/Clad Offset	≤ 0.30 μm	≤ 0.30 μm	≤ 0.30 μm
Coating Material	Acrylate	Acrylate	Polyimide
Operating Temperature Range	-60 to 85 °C	-60 to 85 °C	-65 to 300 °C
Short Term Bend Radius	≥ 6 mm	≥ 6 mm	≥ 12 mm
Long Term Bend Radius	≥ 13 mm	≥ 13 mm	≥ 25 mm
Proof test Level	≥ 200 kpsi (1.4 GN/m ²)	≥ 200 kpsi (1.4 GN/m ²)	≥ 100 kpsi (0.7 GN/m ²)



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Custom developed fiber (FUD) specifications are subject to change without notice. Other configurations such as alternative form factors, optimized cut-off and UV cured color coating may be available. Let us know how Coherent can assist with your requirements.