



780 & 1060 nm Dispersion Controlled Select Cutoff Fibers

Nufern'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 pigtails
- Couplers (including WDM)
- Single clad Yb-fiber pigtails

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

Operating Wavelength
Core NA
Mode Field Diameter (Gaussian)
Cutoff
Core Index Of Refraction
Core Attenuation
Dispersion

780-OCT

720 – 980 nm
0.130
5.0 μm @ 850 nm (nominal)
4.9 μm @ 780 nm (nominal)
680 \pm 30 nm
1.4586 \pm 0.0004 @ 850 nm
 \leq 3.0 dB/km @ 850 nm
 \leq 4.0 dB/km @ 780 nm
-106 \pm 4 ps/(nm-km) @ 850 nm

1060-OCT

930 – 1550 nm
0.140
6.0 \pm 0.3 μm @ 980 nm
6.4 \pm 0.3 μm @ 1060 nm
890 \pm 30 nm
1.4565 \pm 0.0004 @ 1060 nm
 \leq 1.1 dB/km @ 1060 nm
 \leq 1.8 dB/km @ 980 nm
-38 \pm 1 ps/(nm-km) @ 1060 nm

1060-OCT-P

930 – 1550 nm
0.140
6.0 \pm 0.3 μm @ 980 nm
6.4 \pm 0.3 μm @ 1060 nm
890 \pm 30 nm
1.4565 \pm 0.0004 @ 1060 nm
 \leq 2.0 dB/km @ 1060 nm
 \leq 2.5 dB/km @ 980 nm
-38 \pm 1 ps/(nm-km) @ 1060 nm

Geometrical & Mechanical Specifications

Cladding Diameter
Core Diameter
Coating Diameter
Coating Concentricity
Core/Clad Offset
Coating Material
Operating Temperature Range
Short Term Bend Radius
Long Term Bend Radius
Proof test Level

125.0 \pm 0.5 μm
4.4 μm
245.0 \pm 10.0 μm
< 2.5 μm
 \leq 0.30 μm
Acrylate
-60 to 85 °C
 \geq 6 mm
 \geq 13 mm
 \geq 200 kpsi (1.4 GN/m²)

125.0 \pm 0.5 μm
5.8 μm
245.0 \pm 10.0 μm
< 2.5 μm
 \leq 0.30 μm
Acrylate
-60 to 85 °C
 \geq 6 mm
 \geq 13 mm
 \geq 200 kpsi (1.4 GN/m²)

125.0 \pm 0.5 μm
5.8 μm
150.0 \pm 5.0 μm
< 2.5 μm
 \leq 0.30 μm
Polyimide
-65 to 300 °C
 \geq 12 mm
 \geq 25 mm
 \geq 100 kpsi (0.7 GN/m²)



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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 Nufern can assist with your requirements.

