

Visible Wavelength Select Cutoff Single-Mode Fibers



Coherent visible wavelength fibers are optimized for use from 400 up to 900 nm. The high-performance fibers were developed for applications such as RGB components requiring generation of couplers, diode pigtailed and unique delivery needs. These fibers feature greater proof test levels and a tighter second mode cutoff tolerance than standard fibers, resulting in higher strength, increased component reliability, better production yields and reduced costs for component manufacturers.

Typical Applications

- Diode Pigtailed
- Compact UV sources
- RGB components
- Couplers

Features & Benefits

- Superior fiber geometrical tolerances — Improved connectorization and coupling performance
- Extremely tight second mode cutoff tolerance — Enhanced component reproducibility
- Higher proof test level — Greater reliability for tight bend applications

Optical Specifications

	405-HP	460-HP	630-HP
Operating Wavelength	400 – 550 nm	450 – 600 nm	600 – 770 nm
Core NA	0.130	0.130	0.130
Mode Field Diameter (Gaussian)	3.5 ± 0.5 μm @ 515 nm	3.5 ± 0.5 μm @ 515 nm	4.0 ± 0.5 μm @ 630 nm
Cutoff	370 ± 20 nm	430 ± 20 nm	570 ± 30 nm
Core Attenuation	≤ 30.0 dB/km @ 515 nm ≤ 12.0 dB/km @ 630 nm	≤ 12.0 dB/km @ 630 nm ≤ 30.0 dB/km @ 515 nm	≤ 12.0 dB/km @ 630 nm

Geometrical & Mechanical Specifications

	405-HP	460-HP	630-HP
Cladding Diameter	125.0 ± 1.0 μm	125.0 ± 1.0 μm	125.0 ± 1.0 μm
Core Diameter	2.1 μm	2.5 μm	3.5 μm
Coating Diameter	245.0 ± 15.0 μm	245.0 ± 15.0 μm	245.0 ± 15.0 μm
Coating Concentricity	< 5.0 μm	< 5.0 μm	< 5.0 μm
Core/Clad Offset	≤ 0.50 μm	≤ 0.50 μm	≤ 0.50 μm
Coating Material	Acrylate	Acrylate	Acrylate
Operating Temperature Range	-55 to 85 °C	-55 to 85 °C	-55 to 85 °C
Short Term Bend Radius	≥ 6 mm	≥ 6 mm	≥ 6 mm
Long Term Bend Radius	≥ 13 mm	≥ 13 mm	≥ 13 mm
Proof Test Level	≥ 200 kpsi (1.4 GN/m ²)	≥ 200 kpsi (1.4 GN/m ²)	≥ 200 kpsi (1.4 GN/m ²)



405-HP and 460-HP are designed for lower power applications. For powers >5-10 mW, Nufern S405-XP and S460-XP fibers are recommended.

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www.coherent.com ; www.shop.coherent.com • Coherent products are manufactured under an ISO 9001:2008 certified quality management system.



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.