

105 & 106.5 Micron Core Power Delivery Fibers



Nufern's specialty multimode step-index fibers are designed for compatibility with the majority of fiber-coupled, single-emitter, diode-laser packages and support the diode laser power delivery market. These power delivery fibers are available in a 105/125 core/clad ratio in low and high NA versions and also in a 106.5/125 core/clad ratio with high NA. The 106.5/125 fiber features high temperature acrylate as a standard coating in order to meet the challenges of harsh environments and high pump powers demanded by today's need for robust applications. Other fiber diameters and coatings are available upon request.

Typical Applications

- Fiber coupled diode lasers
- Couplers and pump combiners

Features & Benefits

- 0.12, 0.15 and 0.22 NA — Compatible with majority of fiber-coupled, diode-laser packages
- Exceptional geometric uniformity and core/clad concentricity — Ease of coupling to pump diodes
- Pure Silica Core — High resistance to optical damage

Optical Specifications

Operating Wavelength
Core NA
OH Level

MM-S105/125-12A

800 – 1600 nm
0.120 ± 0.020
Low

MM-S105/125-15A

800 – 1600 nm
0.150 ± 0.020
Low

MM-S105/125-22A

800 – 1600 nm
0.220 ± 0.020
Low

MM-S106.5/125-22HTA

800 – 1600 nm
0.220 ± 0.020
Low

Geometrical & Mechanical Specifications

Cladding Diameter
Core Diameter
Coating Diameter
Core/Clad Offset
Coating Material

125.0 ± 2.0 μm
105.0 ± 3.0 μm
245.0 ± 15.0 μm
≤ 3.00 μm
UV Cured, Dual Acrylate

125.0 ± 2.0 μm
105.0 ± 3.0 μm
245.0 ± 15.0 μm
≤ 3.00 μm
UV Cured, Dual Acrylate

125.0 ± 2.0 μm
105.0 ± 3.0 μm
245.0 ± 15.0 μm
≤ 3.00 μm
UV Cured, Dual Acrylate

125.0 ± 1.0 μm
106.5 ± 1.5 μm
245.0 ± 15.0 μm
≤ 3.00 μm
UV Cured, High Temperature, Dual Acrylate

Operating Temperature Range
Short Term Bend Radius
Long Term Bend Radius
Proof Test Level

-40 to 85 °C
≥ 12 mm
≥ 25 mm
≥ 100 kpsi (0.7 GN/m²)

-40 to 85 °C
≥ 12 mm
≥ 25 mm
≥ 100 kpsi (0.7 GN/m²)

-40 to 85 °C
≥ 12 mm
≥ 25 mm
≥ 100 kpsi (0.7 GN/m²)

-55 to 125 °C
≥ 12 mm
≥ 25 mm
≥ 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.