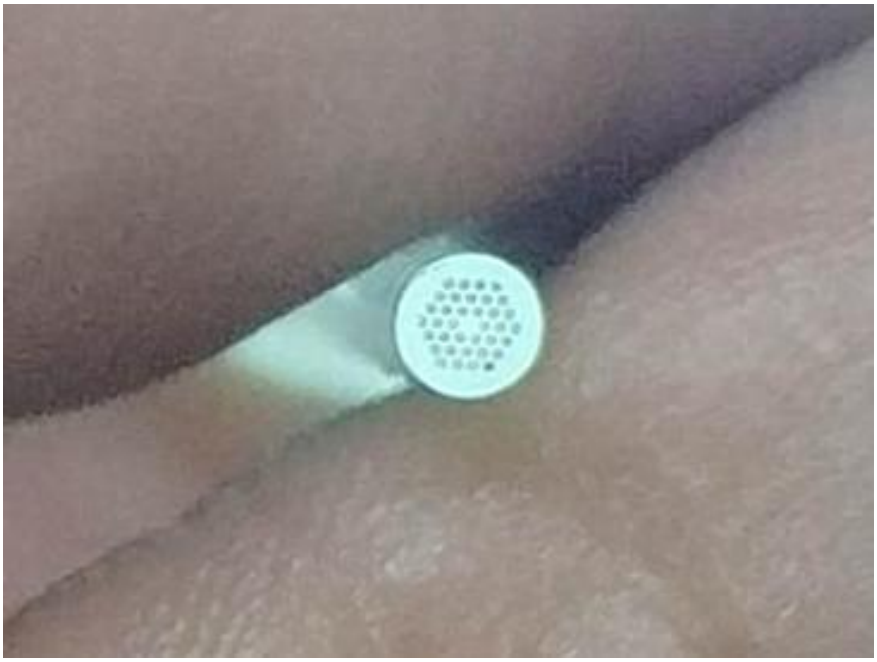
High Nonlinear Microstructured Optical Fiber



Product Description

Using the most advanced fiber fabrication technologies, we can manufacture ultra-nonlinear photonic crystal fibers. Based on a high duty cycle structure design, the fiber exhibits ultra-high nonlinearity and allows for custom tailoring of its waveguide dispersion curve. This type of fiber is an ideal choice for supercontinuum generation and optical frequency comb generation.

Product features

High-temperature resistance 、 Durability, high bending strength, and sealing performance 、Enables the welding of embedded optical fibers, fiber bundles, and pigtails into high-vacuum environments

Part Number

MP-PCF-150/250

Application area

High-temperature environments 、Harsh chemical environments 、Nuclear radiation environments 、 High-power laser transmission 、 Medical applications 、Optical fiber bundle welding

Core parameters

Zero Dispersion	Mode Field Diameter	Core Diameter	Numerical Aperture NA
790nm	1.7 ± 0.3 μm	2.1± 0.3 μm	0.48 ± 0.05

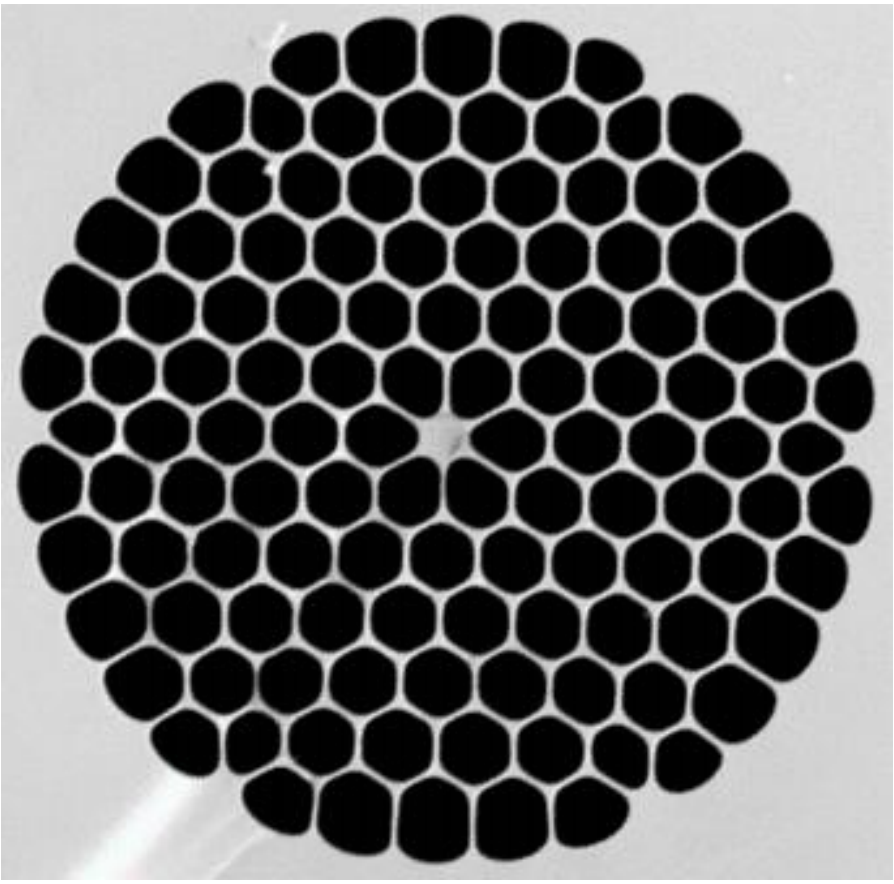
General Parameters

Parameters	Property
Fiber Material	High-purity quartz
Zero Dispersion@1550 nm	790 nm
Dispersion@1550 nm	130 ps/(nm.km)
Mode Field Diameter	1.7 ± 0.3 μm
Core Diameter	2.1± 0.3 μm
Numerical Aperture NA@1550 nm	0.48 ± 0.05
Nonlinear Coefficient	20 ± 3 $km^{-1}W^{-1}$
Cladding Non-circularity	⩽0.5

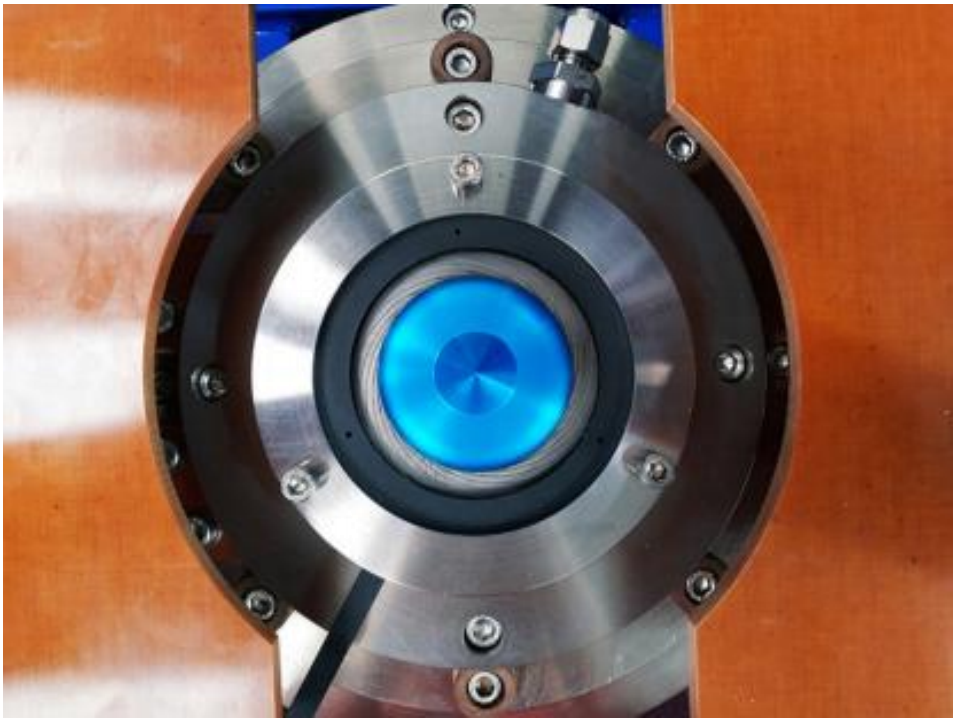
Delivery length	1 - 50 m
Cladding diameter	150 ± 3μm
Coating diameter	250 ± 5 μm（Polyacrylic resin）
Core-cladding concentricity	⩽5μm
Cladding Non-circularity	⩽0.5
Proof strength	100 kpsi
Coating materials	Polyimide or Polyacrylic resin

Long-term operating temperature	Polyimide -55 - 300 ℃ Polyacrylic resin 0 - 90 ℃
Short-term tolerable temperature	Polyimide 400 ℃ Polyacrylic resin 120℃

Structure



Manufacturing Platform



Ordering info

PN#MP-PCF-150/250