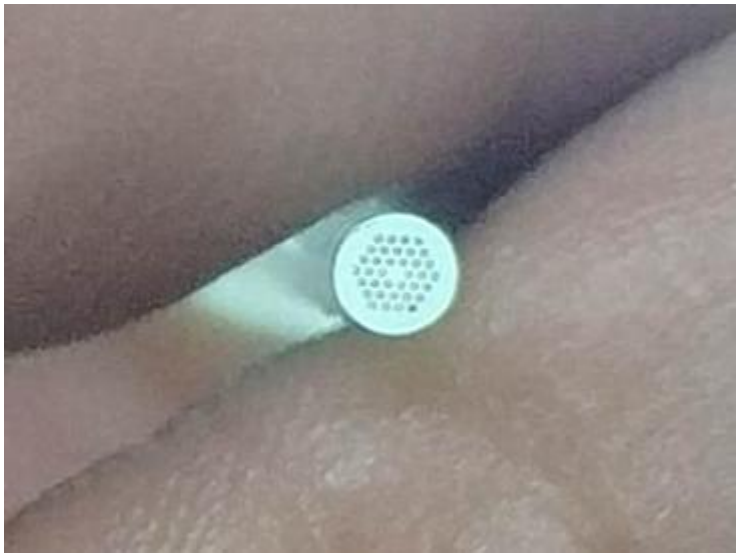
Microstructured Multi-core Sensing Fiber (Hydrogen Corrosion Resistant, Pure Quartz, Mode Field Diameter @ 1550nm: 3μm)



Product Description

Compared to conventional step-index optical fibers, specially designed microstructured optical fibers offer ultra-low loss, improved optical modes, hydrogen corrosion resistance, and a single-material composition (pure silica, without doping). These superior characteristics significantly enhance the sensitivity of distributed optical fiber sensing systems, system stability, spatial measurement accuracy, and fiber lifespan. The fiber structure and parameters can be customized for production.

Part Number

MC1550

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

Application area

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

Specs

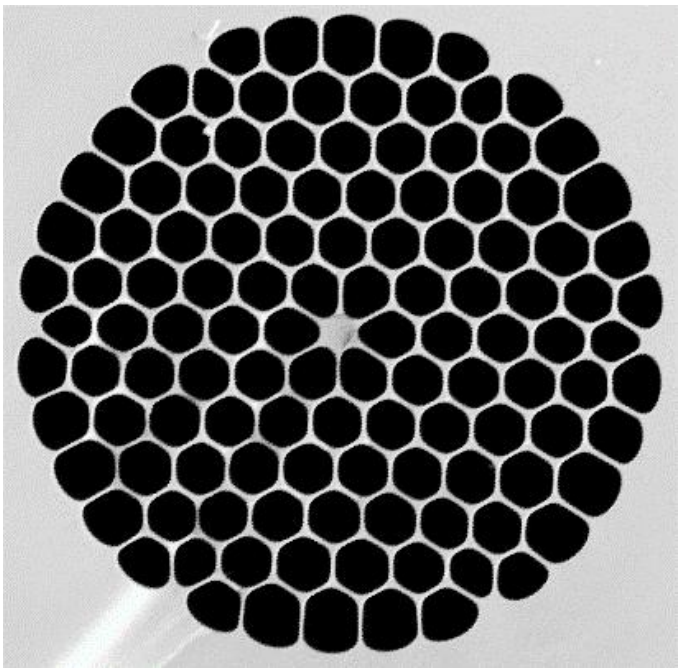
Optical Performance:

Parameter	Attribute
Fiber core material	High purity silica
Mode field diameter	@1310 nm 2.8 ± 0.5 μm @1550 nm 3 ± 0.5 μm
Attenuation coefficient	@1310 nm 1 - 2 dB/km @1550 nm 1 - 2 dB/km

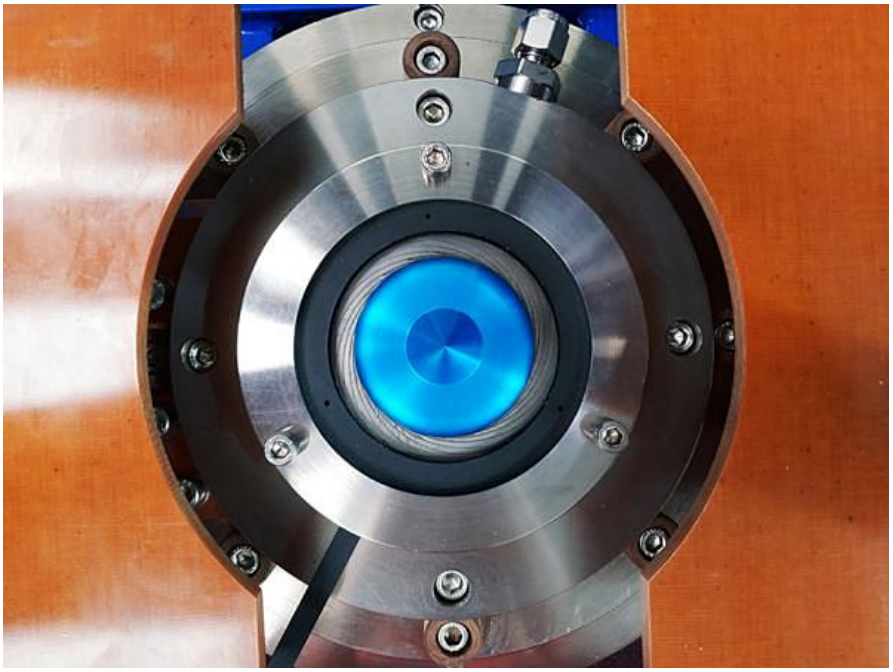
Geometrical parameter

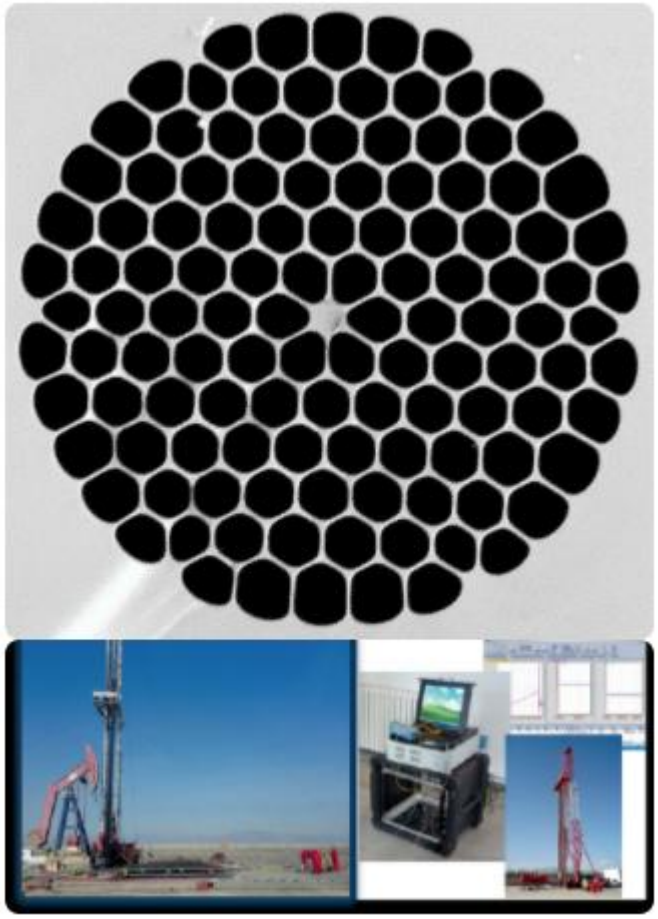
Delivery length	1 - 30 km
Cladding diameter	150 ± 1 μm
Coating layer diameter	180 ± 5 μm
Concentricity of core cladding layer	≤3 μm
Cladding non-circularity	≤0.5
Coating material	poly
Long term use temperature	-55 - 300 ℃
Short term temperature tolerance	400 ℃
Filter intensity	100 kpsi

Structure



Manufacturing Platform





Ordering info

PN#MC1550 Optical Fiber - Microstructured Multi-Core Sensing Optical Fiber