Graded Index Multi-mode Fibre (GIMM)

YOFC silica-cladding multimode fibres (preforms) with graded index profile are comprehensively optimized at both 850nm and 1300nm operating wavelengths. At both wavelengths, extremely low attenuation and high bandwidth could be achieved. To satisfy the demand of client to the most extent, a series of silica-cladding graded index multimode fibres can be customized with different fibre designs, including core diameter, cladding diameter, fibre diameter and NA.

YOFC fibres are manufactured with the advanced Plasma Activated Chemical Vapor Deposition (PCVD) process. Due to the inherent advantages of the process, YOFC fibres have extremely precise refractive index profiles (RIPs), which could provide excellent geometrical, optical, environmental and mechanical properties.

Customization Information

- Flexible Numerical Aperture (NA): 0.14-0.3
- Flexible Core-Cladding Diameter Ratio (CCDR): 1.05-2.0
- Core Diameter: 50μm-1000μm
- Customized Preform
- Silicone or Polyimide coating is available to achieve high temperature fibre
- Tight buffer with diameter 500μm or 900μm is available. PVC, ETFE and Hytrel are provided for the tight buffer material

Characteristics

- High coupling efficiency to LED and laser sources
- High power transmission
- Good stripping performance
- Low attenuation and high bandwidth

Application

- Fibre sensor and laser transmission
- Data communications, local area networks and CATV
- Medical apparatus
- Optical devices and connectors

Specifications-1

Fibre Type		GI 50/125-20/250	GI 80/125-30/250	GI 100/125-29/250	GI 100/140-29/250	GI 105/125-30/250	GI 100/125-14/250
Part No.		GI2012-E	GI2017-C	GI2016-F	GI2016-H	GI2017-A	GI2011-A
Optical Properties							
Numerical Aperture		0.20±0.015	0.30±0.02	0.29±0.02	0.29±0.02	0.30±0.02	0.14±0.02
Attenuation	@850nm (dB/km)	⩽2.45	⩽3.5	⩽3.0	⩽3.2	⩽4.0	⩽6.0
	@1300nm (dB/km)	⩽0.6	⩽0.7	⩽0.7	⩽0.8	⩽1.0	
Bandwidth	@850nm (MHz·km)	⩾500	⩾300	⩾250	⩾100	⩾200	⩾200
	@1300nm (MHz·km)	⩾2000	⩾200	⩾500	⩾200	⩾300	⩾300
Geometrical Properties							
Core Diameter (μm)		50.0±2.0	80.0±3.0	100.0±3.0	100.0±3.0	105.0±3.0	100.0±3.0
Cladding Diameter (μm)		125.0±2.0	125.0±2.0	125.0±2.0	140.0±2.0	125.0±2.0	125.0±2.0
Coating Diameter (μm)		250.0±10.0	250.0±10.0	250.0±10.0	250.0±10.0	250.0±10.0	250.0±10.0
Core Concentricity Error (μm)		⩽3.0	⩽3.0	⩽3.0	⩽3.0	⩽3.0	⩽3.0
Core Non-circularity (%)		⩽2.0	⩽5.0	⩽2.0	⩽3.0	⩽2.0	⩽3.0
Cladding Non-circularity (%)		⩽1.0	⩽1.0	⩽1.0	⩽1.0	⩽1.0	⩽1.0
Material Composition							
Core		Ge/F Doped silica Glass					
Cladding		Pure Silica Glass					
Coating		Dual-layer UV-Acrylat					
Mechanical Properties							
Proof Test Level (kpsi)		100	100	100	100	100	100
Spool Length (km)		Customized spool					

Specifications-2

Fibre Type		GI 105/125-24/250	GI 50/80-29/165	GI 300/330-25/500	GI 200/220-22/500	GI 230/250-22/500
Part No.		GI2014-J	GI2016-C	GI2014-B	GI2013-N	GI2013-P
Optical Properties						
Numerical Aperture		0.24±0.02	0.29±0.02	0.25±0.02	0.22±0.02	0.22±0.02
Attenuation	@850nm (dB/km)	⩽3.5	⩽4.0	⩽7.0	⩽6.0	⩽5.0
	@1300nm (dB/km)	⩽1.5	⩽2.0			
Bandwidth	@850nm (MHz·km)	⩾200	⩾200			
	@1300nm (MHz·km)	⩾300	⩾500			
Geometrical Properties						
Core Diameter (μm)		105.0±3.0	50.0±3.0	300.0±10.0	200.0±4.0	230.0±5.0
Cladding Diameter (μm)		125.0±2.0	80.0±2.0	330.0±5.0	220.0±3.0	250.0±5.0
Coating Diameter (μm)		250.0±10.0	165.0±8.0	500.0±20.0	500.0±20.0	500.0±20.0
Core Concentricity Error (μm)		⩽3.0	⩽3.0	⩽3.0	⩽3.0	⩽3.0
Core Non-circularity (%)		⩽2.0	⩽2.0			
Cladding Non-circularity (%)		⩽1.0	⩽1.0			
Material Composition						
Core		Ge/F Doped silica Glass				
Cladding		Pure Silica Glass				
Coating		Dual-layer UV-Acrylate				
Mechanical Properties						
Proof Test Level (kpsi)		100	100	100	100	100
Spool Length (km)		Customized spool				