Distributed Temperature System-multimode Fiber (DTS-MMF)

Applications

• Distributed temperature System

Characteristics

• Low attenuation at DTS operating wavelength 1450nm, 1550nm and 1650nm

• High bandwidth at C-band (especially at 1550nm)

• High temperature resistance

• Low splicing loss

• Excellent bending insensitivity

Compared with communication multimode fiber, the advantages of DTS-MMF are as follows:

1.Low attenuation at DTS operating wavelength

The lower attenuation of the DTS-MMF at the wavelength of 1450nm, 1550nm and 1650nm can increase the distance of the distributed temperature measurement system.

2.High bandwidth at 1550nm

According to IEC 60793-1-41-2010 (bandwidth), the actual measured bandwidth at 1550nm of DTS-MMF can exceed more than 1000MHz·km, which effectively improves the spatial resolution of the long-distance distributed temperature measurement system.

Specifications

Fibre Type		GI 62.5/125-27/250DTS	GI 50/125-20/250DTS
Part No.		GI2015-B	GI2012-B
Optical Properties			
Numerical Aperture (NA)		0.275±0.02	0.195±0.02
Loss	@1300nm（dB/km)	≤0.60	≤0.60
	@1450 nm（dB/km)	≤0.50	≤0.50
	@1550 nm（dB/km)	≤0.40	≤0.40
	@1650 nm（dB/km)	≤0.50	≤0.50
Splicing Loss (dB)		≤0.1	≤0.1
Bandwidth	@1300 nm（MHz·km)	≥200	≥200
	@1550 nm（MHz·km)	≥800	--
Geometrical Properties			
Fiber Core Radium (μm)		62.5±1.5	50±2.5
Cladding Diameter(μm)		125±1	125±1
Fiber Diameter (μm)		245±7	245±7
Concentricity of Core Cladding (μm)		≤1.5	≤1.5
Non-circularity of Core (%)		≤5.0	≤5.0
Non-circularity of Cladding (%)		≤1.0	≤1.0
Mechanical Properties			
Proof Test Level (kpsi)		≥100	≥100
Environmental Properties			
Operating Temperature Range（℃)		-40 to +85/-40 to +150(Optional)	-40 to +85/-40 to +150(Optional)