



YOFC LAPOSH® fibre (Large Effective Area High Capacity Positive Dispersion Shifted Single-mode Fibre) is comprehensively optimized for attenuation and dispersion performance at the 1550 nm operating wavelength. The fibre has the lowest attenuation and moderate dispersion at 1550 nm, which enables excellent performance in multi-channel Dense Wavelength Division Multiplex (DWDM) systems traditionally operating in the C-band (1530 nm -1565 nm), as well as in emerging L-band (1565 nm -1625 nm) systems.

Applications

YOFC LAPOSH® fibre is the commercialized fibre that has the largest effective area in the G.655 series. The fibre is suitable for applications of high output power Erbium Doped Fibre Amplifier (EDFA) and multi-channel Dense Wavelength Division Multiplex (DWDM), and can be effectively applied in the high bit-rate both single-and multi-channel, long distance digital transmission links even without dispersion compensation.

Norms

YOFC LAPOSH® fibre complies with or exceeds the ITU-T G.655.C/D recommendation and IEC-60793-2-50 B4.c/d Optical Fibre Specification.

YOFC tightens many parameters of fibre products so as to offer more conveniences to customers.

Characteristics

- Being applicable in the high bit-rate operation across 1530-1565 nm and 1565-1625 nm band
- Large effective area ensures good economic return from the transmission system
- Low attenuation, low dispersion, low PMD and low zero dispersion slope that satisfy the demand of transmission links
- Low bending induced loss at 1550 nm and at the more sensitive 1625 nm wavelength



Characteristics		Conditions	Specified values	Units
Optical Characteristics				
Attenuation		1550nm	≤0.22	[dB/km]
		1625nm	≤0.24	[dB/km]
Attenuation vs. Wavelength Max. α Difference		1525-1575nm, in reference to 1550nm	≤0.02	[dB/km]
Dispersion Coefficient		1530-1565nm	2.0- 6.0	[ps/(nm · km)]
		1565-1625nm	4.5- 11.2	[ps/(nm · km)]
Zero Dispersion Wavelength (λ_D)		--	≤1520	[nm]
Dispersion Slope		1550nm	≤0.084	[ps/(nm ² · km)]
Typical dispersion slope		1550nm	0.075	[ps/(nm ² · km)]
PMD	Maximum Individual Fibre	--	≤0.2	[ps/ $\sqrt{\text{km}}$]
	Link Design Value (M=20, Q=0.01%)	--	≤0.08	[ps/ $\sqrt{\text{km}}$]
	Typical Value	--	0.04	[ps/ $\sqrt{\text{km}}$]
Cable Cutoff Wavelength (λ_{cc})		--	≤1450	[nm]
Mode field diameter (MFD)		1550nm	9.1-10.1	[μm]
Effective Group Index of Refraction (N_{eff})		1550nm	1.469	--
		1625nm	1.469	--
Point Discontinuities		1550nm	≤0.05	[dB]
Geometrical Characteristics				
Cladding Diameter		--	125.0±0.7	[μm]
Cladding Non-Circularity		--	≤1.0	[%]
Coating Diameter		--	235- 255	[μm]
Coating-Cladding Concentricity Error		--	≤12.0	[μm]
Coating Non-Circularity		--	≤6.0	[%]
Core-Cladding Concentricity Error		--	≤0.6	[μm]
Curl(Radius)		--	≥4	[m]
Delivery Length		--	Up to 25.2	[km/reel]
Environmental Characteristics			1550nm & 1625nm	
Temperature Dependence Induced Attenuation		-60°C to +85°C	≤0.05	[dB/km]
Temperature-Humidity Cycling Induced Attenuation		-10°C to +85°C, 98% RH	≤0.05	[dB/km]
Watersoak Dependence Induced Attenuation		23°C, for 30 days	≤0.05	[dB/km]
Damp Heat Dependence Induced Attenuation		85°C, 85% RH, for 30 days	≤0.05	[dB/km]
Dry Heat Aging		85°C, 30 days	≤0.05	[dB/km]
Mechanical Specifications				
Proof Test		--	≥9.0	[N]
		--	≥1.0	[%]
		--	≥100	[kpsi]
Macro-bend Induced Loss	100 Turns Around a Mandrel of 30 mm Radius	1625nm	≤0.05	[dB]
	100 Turns Around a Mandrel of 25 mm Radius	1550nm	≤0.05	[dB]
	1 Turn Around a Mandrel of 16 mm Radius	1550nm	≤0.05	[dB]
Coating Strip Force		typical average force	1.5	[N]
		peak force	1.3- 8.9	[N]
Dynamic Fatigue Parameter (n_f)		--	≥20	--