



SPECIFICATION


for

SAVAFLEX-OPF(SM)

Tech Spec. No. : TCC-SPEC-116/2022
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Description : SAVAFLEX-OPF(SM)**Construction****Optical Fiber**

Single Mode Fiber

Buffer

Hytrel v0

Color

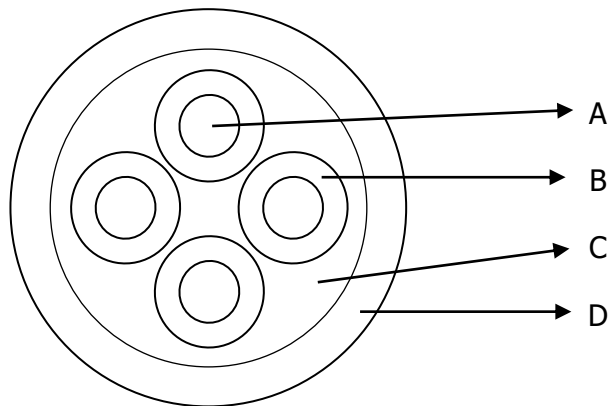
Blue, Orange, Green, Brown

Strength member

Aramid yarn

Sheath

FR-TPU, Black

Drawing

A : Optical Fiber
 B : Buffer
 C : Aramid yarn
 D : Sheath

Cable marking

- Marking method & Interval : White ink printing with max. 1,000mm interval

- Marking content

SAVAX SAVAFLEX-OPF(SM) 4F 9/125 OS2 Distribution Cable General marking

Cable diameter & Construction details

Item	Buffer diameter	Thickness of sheath	Overall diameter	Tensile strength	Cable weight	Remark
	(mm)	(mm)	(mm)	(N)	(kg/km)	
4F 9/125 OS2	0.9 ± 0.05	1.2 ± 0.1	5.4 ± 0.15	1,000	27	-

**Description : SAVAFLEX-OPF(SM)****• Optical Fiber Property****The properties of single mode fiber**

Parameter		Specification
Attenuation coefficient @ 1310 nm @ 1383 nm @ 1550 nm @ 1625 nm		≤ 0.36 dB/km ≤ 0.36 dB/km ≤ 0.22 dB/km ≤ 0.25 dB/km
PMD		≤ 0.25 dB (ps/km ^{1/2})
Cable cut-off wavelength		≤ 1260 nm
Zero-dispersion wavelength		1300 ~ 1324 nm
Zero-dispersion slope		≤ 0.092 ps / (nm ² . km)
Chromatic dispersion @ 1285 ~ 1625 nm @ 1550 nm		≤ 3.0 ps / (nm ² . km) ≤ 18.0 ps / (nm ² . km)
Mode field diameter @ 1310 nm		8.6 ± 0.4 μ m
Core/Clad concentricity error		≤ 0.5 μ m
Cladding diameter		125.0 ± 0.6 μ m
Cladding non-circularity		≤ 0.5 %
Primary Coating diameter		245 ± 10 μ m
Proof test level		100 kpsi, 1%
Attenuation coefficient	Max. at 1310 nm	0.5 dB/km
	Max. at 1383 nm ± 3 nm	0.3 dB/km
	Max. at 1550 nm	0.4 dB/km
Attenuation with bending Loss	10 mm diameter, 1 turn	1550 nm $\leq \Delta 0.15$ dB/km 1625 nm $\leq \Delta 0.45$ dB/km
	15 mm diameter, 1 turn	1550 nm $\leq \Delta 0.08$ dB/km 1625 nm $\leq \Delta 0.25$ dB/km
	20 mm diameter, 10 turn	1550 nm $\leq \Delta 0.03$ dB/km 1625 nm $\leq \Delta 0.1$ dB/km

**Description : SAVAFLEX-OPF(SM)****• Cable Property****Mechanical & Environmental properties**

Cable bending radius : 15 x cable diameter (during operation)
 20 x cable diameter (during installation)

Operating temperature range : - 40°C to + 70°C

Installation temperature range : - 20°C to + 60°C

Mechanical & Environmental requirements

No.	Item	Test Method	Specification
1	Tensile load IEC60794-1-E1	- Load : 1.3 Reference - Length : 90 m - Time : 1.3 Reference	- Loss change ≤ 0.1 dB @ 1550 nm
2	Crush test IEC60794-1-E3	- Applied load : 500 N - Plate : 100*100 mm - Time : 10 mins.	- Loss change ≤ 0.1 dB @ 1550 nm
3	Bending test IEC60794-1-E11A	- Mandrel dia. : Cable dia. X 10 - 5 times	- Loss change ≤ 0.1 dB @ 1550 nm
4	Impact test IEC60794-1-E4	- Radius of impacted surface : 12.5 mm - Impact energy : 10 J - 10 different points	- Loss change ≤ 0.1 dB @ 1550 nm
5	Impact test IEC60794-1-E4	- Length : 2 m - Load : 50 N - Twist angle : ± 180° - No. of cycle : 20	- Loss change ≤ 0.1 dB @ 1550 nm
6	Temperature Cycling IEC60794-1-F1	- Length : 1,000 m - Temperature cycle : +20°C → -40°C → +70°C → -40°C → +70°C → +20°C - Number of cycle : 1 - Time per step : 8 hours	- Loss change ≤ 0.3 dB @ 1550 nm