



**SPECIFICATION**  
for  
**SAVAFLEX-OPF(SM)**

Tech Spec. No. : TCC-SPEC-128/2022  
Issued date : 19th. Jul. 2022  
Revised No. : -  
Revised date : -

Prepared by JH Park  
JH. Park

Checked by \_\_\_\_\_

Approved by IG. Hwang  
IG. Hwang



Tech Spec. No. : TCC-SPEC-128/2022

Revised No. : -

**Description : SAVAFLEX-OPF(SM)****Construction****Optical Fiber**

G652D

**Tight tube**

LSZH

**Color**

Blue, Orange, Green, Brown

**Inner sheath**

LSZH

**Central strength member**

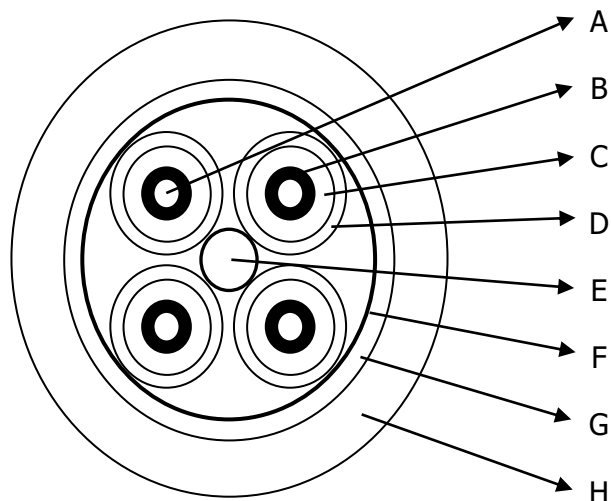
FRP

**Binder**

Water blocking tape

**Outer sheath**

TPU, Black

**Drawing**

- A : Optical Fiber  
 B : LSZH tight tube  
 C : Aramid yarn  
 D : LSZH inner sheath  
 E : FRP central strength member  
 F : Water blocking tape  
 G : Aramid yarn  
 H : Outer sheath

**Cable marking**

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

**- Marking content**

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

**Cable diameter & Construction details**

Item	Overall diameter	Tensile strength	Operation temperature range	Installation temperature range	Transport and storage temperature range	Permissible bending radius
	(mm)	(N)	(°C)	(°C)	(°C)	
4C 9/125 OS2	7.8	700	- 40°C to + 70°C	- 40°C to + 70°C	- 40°C to + 70°C	Static : $\geq 15 \times$ outer diameter Dynamic : $\geq 20 \times$ outer diameter

**Description : SAVAFLEX-OPF(SM)****• Optical Fiber Data****Optics Specification**

Attenuation (dB/km)	@ 1310 nm	$\leq 0.36$ dB/km
	@ 1383 nm (after hydrogen aging)	$\leq 0.32$ dB/km
	@ 1550 nm	$\leq 0.22$ dB/km
	@ 1625 nm	$\leq 0.24$ dB/km
Dispersion	@ 1285 nm ~ 1340 nm	- 3.0 ~ 3.0 ps / (nm*km)
	@ 1550 nm	$\leq 18.0$ ps / (nm*km)
	@ 1625 nm	$\leq 22.0$ ps / (nm*km)
Zero-dispersion wavelength		1300 ~ 1324 nm
Zero-dispersion slope		$\leq 0.092$ ps / (nm <sup>2</sup> * km)
Mode field diameter @ 1310 nm		$9.2 \pm 0.4$ $\mu$ m
Mode field diameter @ 1550 nm		$10.4 \pm 0.8$ $\mu$ m
PMD	Max. value for fiber on the reel	$\leq 0.2$ ps/km <sup>1/2</sup>
	Max. Designed value for link	$\leq 0.08$ ps/km <sup>1/2</sup>
Cable cut-off wavelength		$\leq 1260$ nm
Effective group index (Neff) @ 1310 nm		1.4675
Effective group index (Neff) @ 1550 nm		1.4680
Macro-bend loss ( $\Phi$ 60mm, 100 turns) @ 1550 nm		$\leq 0.05$ dB

**Back scatter characteristic (@ 1310 nm & 1550 nm)**

Point discontinuity	$\leq 0.05$ dB
Attenuation uniformity	$\leq 0.05$ dB/km
Attenuation coefficient difference for bi-directional measurement	$\leq 0.05$ dB/km

**Geometrial characteristics**

Cladding diameter	$125 \pm 1$ $\mu$ m
Cladding non-circularity	$\leq 1$ %
Core/cladding concentricity error	$\leq 0.4$ $\mu$ m
Fiber diameter with coating (uncolored)	$245 \pm 5$ $\mu$ m
Cladding / coating concentricity error	$\leq 12.0$ $\mu$ m
Curl	$\geq 4$ m

**Mechanical characteristic**

Proof test	0.69 GPa
Coating strip force (typical value)	1.4 N
Dynamic stress corrosion susceptibility parameter (typical value)	$\geq 20$

**Environmental characteristics (@ 1310 nm & 1550 nm)**

Temperature induced attenuation (- 60 ~ + 85°C)	$\leq 0.05$ dB/km
Dry heat induced attenuation (85 $\pm$ 2°C, 30days)	$\leq 0.05$ dB/km
Water immersion induced attenuation (23 $\pm$ 2°C, 30days)	$\leq 0.05$ dB/km
Damp heat induced attenuation (85 $\pm$ 2°C, RH85%, 30days)	$\leq 0.05$ dB/km