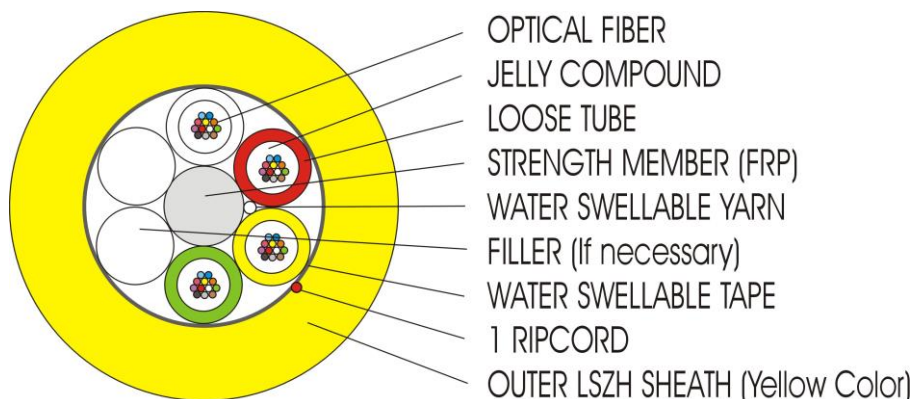


■ FLAME RETARDANT DUCT INSTALLATION CABLE (12C~144C)



- SINGLE MODE OPTICAL FIBER (ITU-T G.652D, LWPF ; Low Water Peak Fiber)
- LOOSE TUBE (JELLY FILLED)
- CENTRAL STRENGTH MEMBER (FRP)
- DRY CORE DESIGN, SZ STRANDING
- OPE_LSZH_Y* SHEATH FOR FLAME RETARDANT DUCT INSTALLATION (Halogen free PE)

Fiber Counts		12C ~ 72C	96C	144C
Nom. cable diameter (mm)		11.1	12.5	15.4
Fibers per tube		12	12	12
Nom. loose tube diameter (mm)		2.2	2.2	2.2
Nom. outer sheath thickness (mm)		2.0	2.0	2.0
Min. bend radius (mm)	No load	111	125	154
	Under load	222	250	308
Max. pulling tension (N)	Installation	1700	2400	3300
	Operation	850	1200	1600
Cable weight (kg/km)		113	142	209
Recommended temperature range		-40℃ ~ +70℃ (Transportation & Storage) -10℃ ~ +50℃ (Installation) -40℃ ~ +70℃ (Operation)		

Note) OPE_LSZH_Y* : Outer Flame Retardant LSZH (Low Smoke Zero Halogen) Sheath _ Yellow Color

● Mechanical and Environmental Properties

Item	Test Method	Test Condition	Acceptance Criteria
Tensile strength	IEC 60794-1-E1	- Load: over 1.5times 1km cable weight	Note 1), 2)
Crush	IEC 60794-1-E3	- Load: 2000 N/100mm	Note 1), 2)
Impact	IEC 60794-1-E4	- Impact energy : 10kg x 1m (10Nm) - Impact diameter: 25mm	Note 1), 2)
Repeated bending	IEC 60794-1-E6	- Bending radius: 20×cable diameter - Bending cycles: 20	Note 1), 2)
Torsion	IEC 60794-1-E7	- Test length: 2m - Twist angle: ±180 degrees - Twist cycles: 10	Note 1), 2)
Temperature cycling	IEC 60794-1-F1	- Temperature change: -40℃→+70℃	Note 3)
Water penetration	IEC 60794-1-F5	- Cable length: 3m, Water height: 1m - Duration time: 24 hrs	No water leak

Note 1) Attenuation : ≤ 0.1dB

2) No mechanical damage

3) Attenuation : ≤ 0.2dB/km (each procedure), ≤ 0.1dB/km (after test)

Annex 1. Color Code of Optical Fiber and Loose Tube

No.	1	2	3	4	5	6	7	8	9	10	11	12
Color	White	Red	Yellow	Green	Blue	Grey	Brown	Black	Violet	Turquoise	Orange	Pink

Annex 2. Optical Fiber Cable Unit Composition

Cable Core	The count of optical fiber per loose tube and unit composition											
	U1	U2	U3	U4	U5	U6	U7	U8	U9	U10	U11	U12
12C	12	F	F	F	F	F						
24C	12	12	F	F	F	F						
36C	12	12	12	F	F	F						
48C	12	12	12	12	F	F						
72C	12	12	12	12	12	12						
96C	12	12	12	12	12	12	12	12				
144C	12	12	12	12	12	12	12	12	12	12	12	12

Note) F : Filler (Natural color)