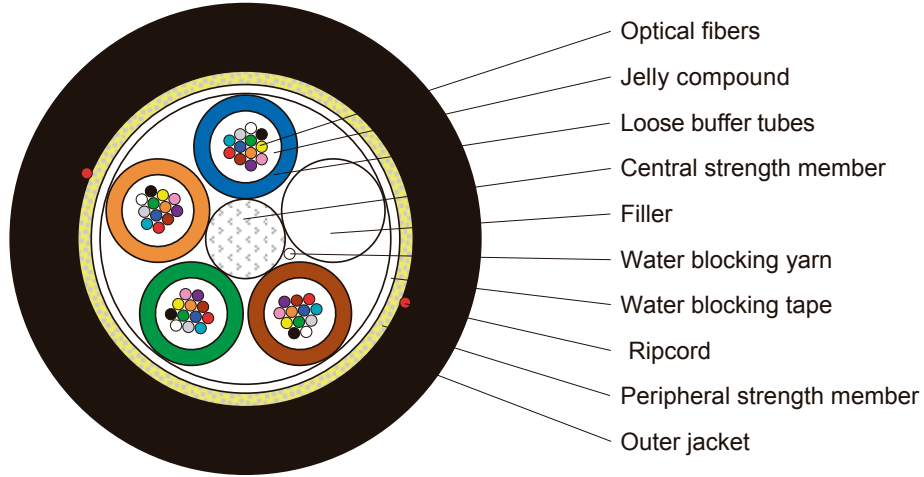


F.O. 48H SM LOOSE ADSS G652D SPAN 100

PROFILE VIEW



CABLE DESCRIPTION

Color coded fibers in jelly filled loose tubes. The tubes and fillers (if necessary) are SZ-stranded and laid up around a dielectric central strength member, dry blocked, taped, sheathed outer jacket. Peripheral strength elements are laid under outer jacket.

OPTICAL FIBER

The optical, geometrical, mechanical and environmental performance of the optical fiber shall be in accordance with Table 1

Items	Units	Specification
Attenuation coefficient	dB/km	≤ 0.36 at 1,310nm ≤ 0.35 at 1,383nm ≤ 0.22 at 1,550nm
Chromatic dispersion	ps/nm.km	≤ 3.5 at 1,285nm ~ 1,330nm ≤ 18 at 1,550nm
Zero dispersion wavelength	nm	1,300 ~ 1,322
Zero dispersion slope	ps/nm ² .km	≤ 0.092
Cable PMD (PMD _Q)	ps/√km	≤ 0.2 (20 section link)
Cut-off wavelength (λ_{cc} , cabled fiber)	nm	$\leq 1,260$
Attenuation vs. bending (30mm radius x 100turns)	dB	≤ 0.1 at 1,625nm
Mode field diameter	μm	9.2 ± 0.4 at 1,310nm 10.4 ± 1.0 at 1,550nm
Core-clad concentricity error	μm	≤ 0.6
Cladding diameter	μm	125 ± 1.0
Cladding non-circularity	%	≤ 1.0
Coating diameter	μm	245 ± 10
Proof test	Gpa	≥ 0.69

CABLE CONSTRUCTION

Items		Description
No. of Fibers		48
No. of Fibers per Tube		12
No. of Tubes		4
No. of Fillers		1
Loose Buffer Tube	Material	PBT (Polybutylene Terephthalate)
	Diameter	Nom. 2.3 mm
Filling Compound in Loose Buffer Tube		Thixotropic Jelly Compound
Filler (If necessary)		Polyethylene or polypropylene rod
Central Strength Member		FRP with PE coating if necessary
Water Blocking Material		Water blocking yarn around central strength member
Core Wrapping Tape		Water blocking tape
Peripheral Strength Element		Aramid yarns
Ripcord		2 ripcords
Outer Jacket	Material	Black PE
	Thickness	Nom. 1.5 ~ 1.7 mm

PHYSICAL/MECHANICAL/ENVIRONMENTAL PERFORMANCE AND TESTS

Items	Test method and acceptance criteria
Tensile strength	<ul style="list-style-type: none"> ▪ Test method: IEC 60794-1-21 Method E1 - MAT(Maximum Allowable Tension) ▪ Acceptance criteria - Fiber strain: $\leq 0.33\%$ during the test - Attenuation increment: ≤ 0.10 dB
Crush resistance	<ul style="list-style-type: none"> ▪ Test method: IEC 60794-1-21 Method E3 - Applied load: 1,000 N/100 mm for 10 minutes - No of points: 1 point ▪ Acceptance criteria - Attenuation increment: ≤ 0.1 dB during the test
Impact resistance	<ul style="list-style-type: none"> ▪ Test method: IEC 60794-21 Method E4 - Impact energy: 5J - No. of impact per point: 1 time - No. of impact points: 3 points (300mm interval) ▪ Acceptance criteria - Attenuation increment : ≤ 0.1 dB
Cable bend	<ul style="list-style-type: none"> ▪ Test method: IEC 60794-1-21 Method E11A - Bending radius (mandrel): 20D (D = cable diameter) - No. of turns: 4 turns (wrapped and unwrapped) - No. of flexing cycles: 10 cycles ▪ Acceptance criteria - Attenuation increment: ≤ 0.1 dB
Cable twist test	<ul style="list-style-type: none"> ▪ Test method: IEC 60794-1-21 Method E7 - Cable length under test: 2m - No. of twist cycles: 10 cycles - Twist angle: $\pm 180\%$ ▪ Acceptance criteria - Attenuation increment: ≤ 0.1 dB
Water penetration	<ul style="list-style-type: none"> ▪ Test method: IEC 60794-1-21 Method F5B - Length of specimen: 3m - Height of pressure head: 1m - Test time: 24 hours ▪ Acceptance criteria - No leakage through the open cable end

Items	Test method and acceptance criteria
Cable temperature cycling	<ul style="list-style-type: none"> ▪ Test method: IEC 60794-1-22 Method F1 - Temperature cycling schedule : 23°C → -40°C → 70°C - Soak time at each temperature: 24 hours - No of cycles: 2 ▪ Acceptance criteria - Attenuation increment: ≤ 0.1 dB/km

SAG/TENSION PERFORMANCE

Items	Value	
Operating temperature (°C)	-1	
Wind load (kgf/mm ²)	48.3 (= 100 km/h)	
Ice thickness (mm)	No ice	
Minimum installation sag (%)	1.5 %	2.0 %
Maximum installation span (m)	100 m	200 m

Span	Fiber	Maximum Operation Tension			Maximum Allowable Tension		
		Span (m)	Sag (%)	Tension (kgf)	Vertical Sag (m)	Horizontal Sag (m)	Tension (kgf)
S100M	48	100	1.5%	76	0.7	4.7	217

ORDER INFORMATION

P/N	Description
CFO-4869	Fiber Optic Cable ADSS 48-Fiber LOOSE SM SPAN 100