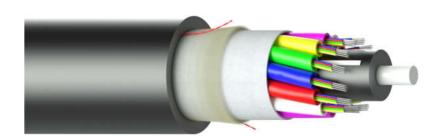


ADSS 288/M24 G.652D SJ HDPE 2.7kN D16





*indicative purpose drawings

APPLICATION & STANDARDS

- ~ Designed for outdoor aerial installation on poles. It can also be used in ducts where there is no need of rodent protection;
- ~ IEC 60794-4-20 Aerial optical cables along electrical power lines Family specification for ADSS (all dielectric self-supported) optical cables:
- ~ EN 60794-1 Optical fibre cables. Generic specification. Basic optical cable test procedures;
- ~ ITU-T G.652 Characteristics of a single-mode optical fibre and cable;

CONSTRUCTION

- ~ Central FRP rod, PE coated;
- ~ **PBT loose tubes** containing fibers, filled with a suitable water tightness compound;
- ~ Water swellable yarn;
- ~ Water blocking tape;
- ~ **Aramid yarns** as peripheral strength member;
- ~ Ripcords;
- Outer Jacket (Black HDPE, UV resistant);

Stranding: Loose tubes SZ stranded around central strength member;

GENERAL DESCRIPTION

All Dielectric Self-Supporting Fiber Optic Cables are designed for aerial installation. It does not need support or messenger wire for installation which makes it a cost-effective and simple way of setting up fiber optic networks.

The aramid yarns helps the cable to have good tensile performance and temperature performance under extreme weathers.

This cable contains fibers made of high pure silica and germanium doped silica.

The above design is only a sample of the options available. Contact our sales team for other specifications. Our policy of continuous improvement may result in a change of specifications without notice.

CONSTRUCTION & MAIN FEATURES

G.652D - OPTICAL FIBER PERFORMANCE Attenuation Coefficient: at 1310 nm Max : ≤ 0.36 dB/km at 1350 nm Max : ≤ 0.23 dB/km Chromatic Dispersion: between 1285 - 1330 nm: ≤ 3.5 ps/nm·km at 1550nm ≤ 18 ps/nm·km Chromatic dispersion coefficient \text{\text{Aomin:1300 nm}} Foint Discontinuity: ≤ 0.1 dB at 1310 k1550 nm ≤ 0.2 ps/vkm Polarization Mode Dispersion (PMD Individual) ≤ 0.2 ps/vkm Polarization Mode Dispersion (Link Design) ≤ 0.2 ps/vkm Cable Cut off Wavelength (\text{\text{kc}}) ≤ 1260 nm Mode Field Diameter: at 1310 nm at 1310 nm 9.2 ± 0.4 µm at 13150 nm 10.4±0.5 µm Cladding Diameter 125 ± 1.0 µm Cladding Don-Circularity ≤ 0.5 µm Core / Cladding Concentricity error ≤ 0.5 µm Coating Diameter 250 ± 7µm Fiber Count 288 Tube Count 12 Filler Count 0 Cable Weight 190 ± 20 kg/km Max. Installation Tensile Strength (IEC-60	CHARACTERISTIC	SPECIFIED VALUE					
at 1310 nm Max :	G.652D - OPTICAL FIBER PERFORMANCE						
at 1550 nm Max : ≤ 0.23 dB/km Chromatic Dispersion: between 1285 - 1330 nm: at 1550nm ≤ 18 ps/nm-km Chromatic dispersion coefficient λomin:1300 nm Point Discontinuity: ≤ 0.1 dB at 13108,1550 nm ≤ 0.1 dB Polarization Mode Dispersion (PMD Individual) ≤ 0.2 ps/vkm Polarization Mode Dispersion (Link Design) ≤ 0.28 ps / vkm. Cable Cut off Wavelength (λcc) ≤ 1260 nm Mode Field Diameter: 3 1260 nm at 1310 nm 9.2 ± 0.4 μm at 1550 nm 10.4±0.5 μm Cladding Diameter 125 ± 1.0 μm Cladding Diameter 9.5 μm Core / Cladding Concentricity error ≤ 0.5 μm Coating Diameter 20.5 μm Fiber Optic Cable PARAMETERS 50.5 μm Core Type G.652D Fiber Count 288 Tube Count 12 Filler Count 0 Cable Diameter 16.0 ± 1.0 mm Cable Weight 190 ± 20 kg/km Max. Installation Tensile Strength (IEC-60794-1-21-E1) 2700 N,	Attenuation Coefficient:						
Chromatic Dispersion: ≤ 3.5 ps/nm·km between 1285 - 1330 nm: ≤ 18 ps/nm·km at 1550 nm Aomin: 1300 nm Chromatic dispersion coefficient λomin: 1300 nm Point Discontinuity: ≤ 0.1 dB at 13108.1550 nm ≤ 0.2 ps/vkm Polarization Mode Dispersion (PMD Individual) ≤ 0.2 ps/vkm Polarization Mode Dispersion (Link Design) ≤ 0.08 ps / vkm. Cable Cut off Wavelength (λcc) ≤ 1260 nm Mode Field Diameter: = 1260 nm at 1310 nm 9.2 ± 0.4 μm at 1550 nm 10.4±0.5 μm Cladding Diameter 125 ± 1.0 μm Cladding Non-Circularity ≤ 0.5 μm Core / Cladding Concentricity error ≤ 0.5 μm Coating Diameter 250 ± 7μm FIBER OPTIC CABLE PARAMETERS Core Type G.652D Fiber Count 288 Tube Count 12 Filler Count 0 Cable Diameter 16.0 ± 1.0 mm Cable Weight 190 ± 20 kg/km Max. Installation Tensile Strength (IEC-60794-1-21-E3) 270	at 1310 nm Max :	≤ 0.36 dB/km					
between 1285 - 1330 nm: ≤ 3.5 ps/nm·km at 1550nm ≤ 18 ps/nm·km Chromatic dispersion coefficient λomin:1300 nm λoMax:1324 nm Point Discontinuity: ≤ 0.1 dB at 1310&1550 nm ≤ 0.2 ps/vkm Polarization Mode Dispersion (PMD Individual) ≤ 0.2 ps/vkm Polarization Mode Dispersion (Link Design) ≤ 0.2 ps/vkm Cable Cut off Wavelength (λcc) ≤ 1260 nm Mode Field Diameter: 3 at 1310 nm 9.2 ± 0.4 μm at 1350 nm 10.4±0.5 μm Cladding Diameter 125 ± 1.0 μm Cladding Non-Circularity ≤ 0.7% Core / Cladding Concentricity error ≤ 0.5 μm Coating Diameter 250 ± 7μm FiBER OFTIC CABLE PARAMETERS Core Type G.652D Fiber Count 288 Tube Count 12 Filler Count 0 Cable Weight 190 ± 20 kg/km Max. Installation Tensile Strength (IEC-60794-1-21-E1) 5000 N, 10min., fibre strain ≤ 0.33% Max. Operation Tensile Strength (IEC-60794-1-21-E3) 2000 N/10cm	at 1550 nm Max :	≤ 0.23 dB/km					
at 1550nm ≤ 18 ps/nm·km Chromatic dispersion coefficient λomin:1300 nm λoMax:1324 nm Point Discontinuity: at 1310&1550 nm ≤ 0.1 dB Polarization Mode Dispersion (PMD Individual) ≤ 0.2 ps/vkm Polarization Mode Dispersion (Link Design) ≤ 0.08 ps / vkm. Cable Cut off Wavelength (λcc) ≤ 1260 nm Mode Field Diameter : at 1310 nm 9.2 ± 0.4 μm at 1550 nm 10.4±0.5 μm Cladding Diameter 20.7% Core / Cladding Concentricity error ≤ 0.5 μm Coating Diameter 25.5 μm FIBER OPTIC CABLE PARAMETERS Core Type G.652D Fiber Count 288 Tube Count 12 Filler Count 0 Cable Diameter 16.0 ± 1.0 mm Cable Weight 190 ± 20 kg/km Max. Installation Tensile Strength (IEC-60794-1-21-E1) 5000 N, 10min., fibre strain ≤ 0.33% 1-21-E1) 2700 N, no fibre strain Crush (IEC-60794-1-21-E3) 2000 N/10cm Water Penetration (IEC-60794-1-22-F5) 1 m water head, 3 m sample, 24 hours Minimum Bending Radi	·						
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Chromatic dispersion coefficient λoMax:1324 nm Point Discontinuity: at 1310&1550 nm ≤ 0.1 dB Polarization Mode Dispersion (PMD Individual) ≤ 0.2 ps/vkm Solarization Mode Dispersion (Link Design) ≤ 0.2 ps/vkm Cable Cut off Wavelength (λcc) ≤ 1260 nm Mode Field Diameter: at 1310 nm at 1550 nm 9.2 ±0.4 μm Cladding Diameter 10.4±0.5 μm Cladding Diameter 125±1.0 μm Cladding Non-Circularity ≤ 0.7% Core / Cladding Concentricity error ≤ 0.5 μm Coating Diameter 250 ± 7μm FIBER OPTIC CABLE PARAMETERS Core Type G.652D Fiber Count 288 Tube Count 12 Filler Count 0 Cable Diameter 16.0 ± 1.0 mm Cable Diameter 16.0 ± 1.0 mm Cable Weight 190 ± 20 kg/km Max. Installation Tensile Strength (IEC-60794-1-21-E1) 2700 N, no fibre strain Max. Operation Tensile Strength (IEC-60794-1-21-E3) 2000 N/10cm Water Penetration (IEC-60794-1-22-F5) 1 m water head, 3 m sample, 24 hours Minimum Bending Radius 20 x D	at 1550nm						
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at 1310 nm at 1550 nm		≤ 1260 nm					
at 1550 nm $10.4\pm0.5~\mu m$ Cladding Diameter $125\pm1.0~\mu m$ Cladding Non-Circularity		9.2 ±0.4 µm					
Cladding Diameter $125 \pm 1.0 \mu m$ Cladding Non-Circularity≤0.7%Core / Cladding Concentricity error≤ 0.5 $ \mu m$ Coating Diameter $250 \pm 7 \mu m$ FIBER OPTIC CABLE PARAMETERSCore TypeG.652DFiber Count288Tube Count12Filler Count0Cable Diameter $16.0 \pm 1.0 mm$ Cable Weight $190 \pm 20 kg/km$ Max. Installation Tensile Strength (IEC-60794-1-21-E1) $5000 N$, $10 min.$, fibre strain ≤ 0.33%Max. Operation Tensile Strength (IEC-60794-1-21-E3) $2700 N$, no fibre strainCrush (IEC-60794-1-21-E3) $2000 N/10 cm$ Water Penetration (IEC-60794-1-22-F5)1 m water head, 3 m sample, 24 hoursMinimum Bending Radius $20 x D$ Temperature (Installation) $-10^{\circ} \text{C} \div +50 ^{\circ} \text{C}$ Temperature (Operation) $-40^{\circ} \text{C} \div +70 ^{\circ} \text{C}$ Temperature (Storage) $-20^{\circ} \text{C} \div +70 ^{\circ} \text{C}$		•					
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Coating Diameter250 ± 7μmFIBER OPTIC CABLE PARAMETERSCore TypeG.652DFiber Count288Tube Count12Filler Count0Cable Diameter $16.0 \pm 1.0 \text{ mm}$ Cable Weight $190 \pm 20 \text{ kg/km}$ Max. Installation Tensile Strength (IEC-60794-1-21-E1) $5000 \text{ N}, 10 \text{min.}, \text{ fibre strain } ≤ 0.33%Max. Operation Tensile Strength (IEC-60794-1-21-E1)2700 \text{ N}, \text{ no fibre strain}Crush (IEC-60794-1-21-E3)2000 \text{ N/10cm}Water Penetration (IEC-60794-1-22-F5)1 m water head, 3 m sample, 24 hoursMinimum Bending Radius20 \times DTemperature (Installation)-10^{\circ}\text{C} \div +50^{\circ}\text{C}Temperature (Operation)-40^{\circ}\text{C} \div +70^{\circ}\text{C}Temperature (Storage)-20^{\circ}\text{C} \div +70^{\circ}\text{C}$							
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Tube Count12Filler Count0Cable Diameter $16.0 \pm 1.0 \text{ mm}$ Cable Weight $190 \pm 20 \text{ kg/km}$ Max. Installation Tensile Strength (IEC-60794-1-21-E1) $5000 \text{ N}, 10 \text{min.}, \text{ fibre strain} \le 0.33\%$ Max. Operation Tensile Strength (IEC-60794-1-21-E1) $2700 \text{ N}, \text{ no fibre strain}$ Crush (IEC-60794-1-21-E3) 2000 N/10cm Water Penetration (IEC-60794-1-22-F5) $1 \text{ m water head, } 3 \text{ m sample, } 24 \text{ hours}$ Minimum Bending Radius $20 \times D$ Temperature (Installation) $-10^{\circ}\text{C} \div +50^{\circ}\text{C}$ Temperature (Operation) $-40^{\circ}\text{C} \div +70^{\circ}\text{C}$ Temperature (Storage) $-20^{\circ}\text{C} \div +70^{\circ}\text{C}$	Core Type	G.652D					
Filler Count 0 Cable Diameter $16.0 \pm 1.0 \text{ mm}$ Cable Weight $190 \pm 20 \text{ kg/km}$ Max. Installation Tensile Strength (IEC-60794-1-21-E1) $5000 \text{ N}, 10 \text{min.}, \text{ fibre strain} \leq 0.33\%$ Max. Operation Tensile Strength (IEC-60794-1-21-E1) $2700 \text{ N}, \text{ no fibre strain}$ Crush (IEC-60794-1-21-E3) 2000 N/10cm Water Penetration (IEC-60794-1-22-F5) $1 \text{ m water head, 3 m sample, 24 hours}$ Minimum Bending Radius $20 \times D$ Temperature (Installation) $-10^{\circ}\text{C} \div +50^{\circ}\text{C}$ Temperature (Operation) $-40^{\circ}\text{C} \div +70^{\circ}\text{C}$ Temperature (Storage) $-20^{\circ}\text{C} \div +70^{\circ}\text{C}$	Fiber Count	288					
Cable Diameter $16.0 \pm 1.0 \text{ mm}$ Cable Weight $190 \pm 20 \text{ kg/km}$ Max. Installation Tensile Strength (IEC-60794-1-21-E1) $5000 \text{ N}, 10 \text{min.}, \text{ fibre strain} \le 0.33\%$ Max. Operation Tensile Strength (IEC-60794-1-21-E1) $2700 \text{ N}, \text{ no fibre strain}$ Crush (IEC-60794-1-21-E3) 2000 N/10cm Water Penetration (IEC-60794-1-22-F5) $1 \text{ m water head, } 3 \text{ m sample, } 24 \text{ hours}$ Minimum Bending Radius $20 \times D$ Temperature (Installation) $-10^{\circ}\text{C} \div +50 ^{\circ}\text{C}$ Temperature (Operation) $-40^{\circ}\text{C} \div +70 ^{\circ}\text{C}$ Temperature (Storage) $-20^{\circ}\text{C} \div +70 ^{\circ}\text{C}$	Tube Count	12					
Cable Weight $190 \pm 20 \text{ kg/km}$ Max. Installation Tensile Strength (IEC-60794-1-21-E1) $5000 \text{ N}, 10 \text{min.}, \text{ fibre strain} \le 0.33\%$ Max. Operation Tensile Strength (IEC-60794-1-21-E1) $2700 \text{ N}, \text{ no fibre strain}$ Crush (IEC-60794-1-21-E3) 2000 N/10cm Water Penetration (IEC-60794-1-22-F5) $1 \text{ m water head, } 3 \text{ m sample, } 24 \text{ hours}$ Minimum Bending Radius $20 \times D$ Temperature (Installation) $-10^{\circ}\text{C} \div +50^{\circ}\text{C}$ Temperature (Operation) $-40^{\circ}\text{C} \div +70^{\circ}\text{C}$ Temperature (Storage) $-20^{\circ}\text{C} \div +70^{\circ}\text{C}$	Filler Count	0					
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1-21-E1) Max. Operation Tensile Strength (IEC-60794-1-21-E1) Crush (IEC-60794-1-21-E3) Water Penetration (IEC-60794-1-22-F5) Minimum Bending Radius Temperature (Installation) Temperature (Operation) Temperature (Storage) $5000 \text{ N, 10min., fibre strain} \leq 0.33\%$ $2700 \text{ N, no fibre strain}$ 2000 N/10cm $1 \text{ m water head, 3 m sample, 24 hours}$ $20 \times D$ $1 \text{ m water head, 3 m sample, 24 hours}$	Cable Weight	190 ± 20 kg/km					
1-21-E1) Crush (IEC-60794-1-21-E3) Water Penetration (IEC-60794-1-22-F5) Minimum Bending Radius Temperature (Installation) Temperature (Operation) Temperature (Storage) $2700 \text{ N, no fibre strain}$ 2000 N/10cm 1 m water head, 3 m sample, 24 hours $20 \times D$ $-10^{\circ}\text{C} \div +50^{\circ}\text{C}$ $-40^{\circ}\text{C} \div +70^{\circ}\text{C}$		5000 N, 10min., fibre strain ≤ 0.33%					
Crush (IEC-60794-1-21-E3) 2000 N/10cm Water Penetration (IEC-60794-1-22-F5) $1 \text{ m water head, } 3 \text{ m sample, } 24 \text{ hours}$ Minimum Bending Radius $20 \times D$ Temperature (Installation) $-10^{\circ}\text{C} \div +50^{\circ}\text{C}$ Temperature (Operation) $-40^{\circ}\text{C} \div +70^{\circ}\text{C}$ Temperature (Storage) $-20^{\circ}\text{C} \div +70^{\circ}\text{C}$		2700 N, no fibre strain					
Minimum Bending Radius $20 \times D$ Temperature (Installation) $-10^{\circ}\text{C} \div +50^{\circ}\text{C}$ Temperature (Operation) $-40^{\circ}\text{C} \div +70^{\circ}\text{C}$ Temperature (Storage) $-20^{\circ}\text{C} \div +70^{\circ}\text{C}$, ,	2000 N/10cm					
Temperature (Installation) $-10^{\circ}\text{C} \div +50^{\circ}\text{C}$ Temperature (Operation) $-40^{\circ}\text{C} \div +70^{\circ}\text{C}$ Temperature (Storage) $-20^{\circ}\text{C} \div +70^{\circ}\text{C}$	Water Penetration (IEC-60794-1-22-F5)	1 m water head, 3 m sample, 24 hours					
Temperature (Operation) $-40^{\circ}\text{C} \div +70^{\circ}\text{C}$ Temperature (Storage) $-20^{\circ}\text{C} \div +70^{\circ}\text{C}$	Minimum Bending Radius	20 x D					
Temperature (Storage) -20°C ÷ +70 °C	Temperature (Installation)	-10°C ÷ +50 °C					
The state of the s	Temperature (Operation)	-40°C ÷ +70 °C					
Packing Wooden drum with protection	Temperature (Storage)	-20°C ÷ +70 °C					
	Packing	Wooden drum with protection					

The above design is only a sample of the options available. Contact our sales team for other specifications. Our policy of continuous improvement may result in a change of specifications without notice.

CHARACTERISTIC	SPECIFIED VALUE						
Delivery Lengths	To be confirmed, ± 5% tolerance						
	<pre><optivine> + <adss 288="" g.652d="" m24="" pre="" sj<=""></adss></optivine></pre>						
Marking	HDPE 2.7kN D16>+ <manufacturing date=""> +</manufacturing>						
	<length marking=""></length>						

	Fiber&Tube Color Identification											
No.	1	2	3	4	5	6	7	8	9	10	11	12
Color	Red	Green	Yellow	Blue	Orange	Brown	White	Violet	Pink	Aqua	Grey	Black
	Fiber Color Identification*											
No.	13	14	15	16	17	18	19	20	21	22	23	24
Color	Red	Green	Yellow	Blue	Orange	Brown	White	Violet	Pink	Aqua	Grey	Natural

^{*} Fibers from 13 to 24 will be marked with one black ring at every 50mm.