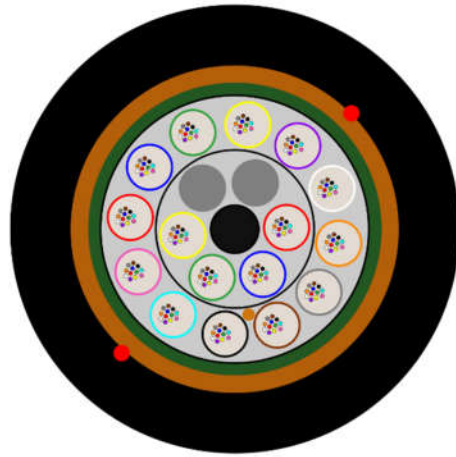


## OPUG 512/M32 G.652D SJ HDPE 3.5kN D17.5



### APPLICATION & STANDARDS

- ~ Designed for outdoor installation, in ducts, where there is no need of rodent protection;
- ~ 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**;
- ~ **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 and fillers, SZ stranded around central strength member;

### GENERAL DESCRIPTION

OPUG Fiber Optic Cables are designed for outdoor installation, usually in ducts. 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.

## CONSTRUCTION & MAIN FEATURES

CHARACTERISTIC	SPECIFIED VALUE
<b>G.652D - OPTICAL FIBER PERFORMANCE</b>	
Attenuation Coefficient: at 1310 nm Max : at 1550 nm Max :	$\leq 0.36$ dB/km $\leq 0.23$ dB/km
Chromatic Dispersion: between 1285 - 1330 nm: at 1550nm	$\leq 3.5$ ps/nm·km $\leq 18$ ps/nm·km
Chromatic dispersion coefficient	$\lambda_{\text{omin}}:1300$ nm $\lambda_{\text{oMax}}:1324$ nm
Point Discontinuity: at 1310&1550 nm	$\leq 0.1$ dB
Polarization Mode Dispersion (PMD Individual) Polarization Mode Dispersion (Link Design)	$\leq 0.2$ ps/√km $\leq 0.08$ ps / √km.
Cable Cut off Wavelength ( $\lambda_{\text{cc}}$ )	$\leq 1260$ nm
Mode Field Diameter : at 1310 nm at 1550 nm	$9.2 \pm 0.4$ μm $10.4 \pm 0.5$ μm
Cladding Diameter	$125 \pm 1.0$ μm
Cladding Non-Circularity	$\leq 0.7\%$
Core / Cladding Concentricity error	$\leq 0.5$ μm
Coating Diameter	$250 \pm 7$ μm
<b>FIBER OPTIC CABLE PARAMETERS</b>	
Core Type	G.652D
Fiber Count	512
Tube Count	Layer 1: 4 tubes Layer 2: 12 tubes
Filler Count	Layer 1: 2 fillers Layer 2: 0 fillers
Cable Diameter	$17.5 \pm 1.0$ mm
Cable Weight	$225 \pm 25$ kg/km
Max. Installation Tensile Strength (IEC-60794-1-21-E1)	3500 N, fibre strain $\leq 0.6\%$
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 Radius (Dynamic)	20 x D
Minimum Bending Radius (Static)	15 x D
Temperature (Installation)	-20°C ÷ +70 °C
Temperature (Operation)	-20°C ÷ +70 °C
Temperature (Storage)	-20°C ÷ +70 °C

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
Packing	Wooden drum with protection
Delivery Lengths	To be confirmed, $\pm 5\%$ tolerance
Marking	<OPTIVINE> + <OPUG 512/M32 G.652D SJ HDPE 3.5kN D17.5>+ <manufacturing date> + <length marking>

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.

Fiber Color Identification**								
No.	25	26	27	28	29	30	31	32
Color	Red	Green	Yellow	Blue	Orange	Brown	White	Violet

\*\* Fibers from 25 to 32 will be marked with two black rings at every 50mm.