10,000 m full-ocean-depth neutrally buoyant optical tether

FM011402

15,000 PSI (10,000m) Neutrally Buoyant ROV Optical Tether

ITU-T G.652.D / 15kPSI · 300/500 V · 10,000 m full-ocean-depth neutrally buoyant

15,000 PSI (10,000 m) **200 kpsi OS2 / OM1** **Neutrally Buoyant PUR**

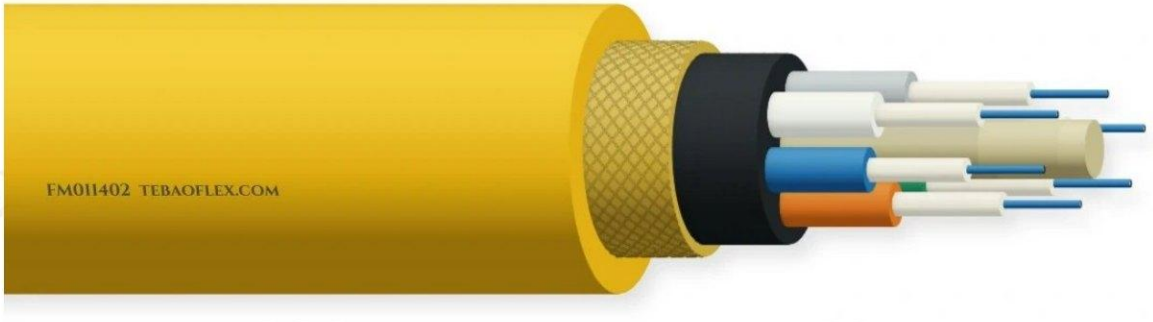


Application

Subsea Optical & High-Flex Optical (FM011402SMNBT / FM011402SM12 / FM011402SM36) 15,000 PSI (10 km) Neutrally Buoyant & Multifiber Subsea ROV/AUV Optical Tether (ITU-T G.652.D / 15kPSI, 300/500 V, -40 to +80 °C).

Typical uses: Work-Class & Observation ROV Systems, Offshore Wind & Subsea Power Grids, Oceanographic, Sonar & Seismic Survey, Commercial Diving & Subsea Intervention

Construction





Cross-section, not to scale

1. Semi-Rigid Center Strength Core
2. 200 kpsi High-Modulus Fibers (6×OS2)
3. Water-Blocked Core & Synthetic Braid
4. Heavy-Duty / Buoyant PUR Jacket (Ø4.6 mm)

Technical data

Typical values

Rated voltage / transmission duty	300/500 V (ITU-T G.652.D 200 kpsi / 15,000 PSI Full-Ocean-Depth)	**Core / conductor construction**	Semi-Rigid Center Strength Core — Central dielectric anti-buckling rod stabilizing multi-fiber lay-up at 15,000 psi
Primary dielectric / buffering	200 kpsi High-Modulus Fibers (6×OS2) — 9.3/125/245/900 µm OS2 single-mode fibers (≤0.40/0.30 dB/km @ 1310/1550 nm)	**Continuous operating temperature**	−40…+80 °C (subsea, marine & submersible duty)
Short-circuit / peak thermal rating	Verified thermal stability per ITU-T G.652.D 200 kpsi / 15,000 PSI Full-Ocean-Depth	**Storage & transport temperature**	−40…+80 °C on export wooden/steel drum
Outer protection / armouring	Heavy-Duty / Buoyant PUR Jacket (Ø4.6 mm) — Abrasion-resistant heavy-duty polyurethane or neutrally buoyant foamed jacket	**Minimum bending radius**	10 × OD
Hydrostatic, tensile & crush duty	Water-Blocked Core & Synthetic Braid — Water-blocked interstices + synthetic fiber strength member (200–300 lbs MBL)	**Hydrostatic pressure & water blocking**	Engineered for continuous submersion and hydrostatic integrity per ITU-T G.652.D 200 kpsi / 15,000 PSI Full-Ocean-Depth
Seawater, oil & chemical resistance	Resistant to seawater hydrolysis, hydraulic oils and abrasion per ITU-T G.652.D 200 kpsi / 15,000 PSI Full-Ocean-Depth	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	ITU-T G.652.D 200 kpsi / 15,000 PSI Full-Ocean-Depth		

Sizes

3 standard constructions

Tick the sizes you need and send this page to info@tebaoflex.com or WhatsApp +86 185 9591 3361.

Order designation	Configuration	Core / stranding	Outer Ø ≈ mm	Net weight ≈ kg/km	Tensile rating kN ≈	Min. bend R mm
FM011402 Construction Schedule (−40…+80 °C) 3 sizes						
☐ **FM011402 4F Single-Mode OS2**	4 × G.652.D / G.657.A2 SM (200 kpsi)	Hermetic / gel-filled optical core	3.5	18	3.4	35
☐ **FM011402 12F Single-Mode OS2**	12 × G.652.D / G.657.A2 SM (200 kpsi)	Hermetic / gel-filled optical core	9.8	145	18.0	98
☐ **FM011402 24F Armoured Subsea**	24 × G.652.D SM + Strength Armour	Subsea pressure-resistant optical unit	17.0	580	95.0	255

– Custom core cross-sections, pair/fibre counts, armour grades and factory drum lengths available per ITU-T G.652.D 200 kpsi / 15,000 PSI Full-Ocean-Depth.

Electrical, optical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} / Atten. Ω/km or dB/km	Rating / Impedance	Operating temp.
4 × G.652.D / G.657.A2 SM (200 kpsi)	0.35	≤0.35 dB/km @ 1310 nm	−40…+80 °C
12 × G.652.D / G.657.A2 SM (200 kpsi)	0.22	≤0.22 dB/km @ 1550 nm	−40…+80 °C
24 × G.652.D SM + Strength Armour	0.20	≤0.20 dB/km @ 1550 nm	−40…+80 °C

– Every production length undergoes routine conductor DC resistance, high-voltage dielectric or OTDR continuity and dimensional verification.

Standards and approvals

- ITU-T G.652.D / 15kPSI Compliant
- EN 10204 3.1 Factory Test Certificate
- CE, RoHS 2 (2011/65/EU) & REACH

Certifications

Management systems: ISO 9001, ISO 14001, ISO 45001

Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

WhatsApp / phone
+86 185 9591 3361

Email
info@tebaoflex.com

Web
tebaoflex.com/cables/fm011402

Typical values for this cable type, based on ITU-T G.652.D 200 kpsi / 15,000 PSI Full-Ocean-Depth. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.