LCP crush-proof neutrally buoyant deep-sea AUV/ROV tether

SPE-7098 BUOYANT STFOC

SPE-7098 Buoyant STFOC LCP-Braided Deep-Sea AUV/ROV Optical Tether

ITU-T G.657 / STFOC · 300/500 V · Lcp crush-proof neutrally buoyant deep-sea auv/rov



3,000 m+ Deep-Sea AUV | **340 kgf LCP Braid** | **SG 0.99 Buoyant Ø3.5mm**

Application

Buoyant STFOC (SPE-7098 / 7055 / 7094 / 7281 / 7229) Patented LCP Crush-Proof LCP-Braided Neutrally Buoyant Deep-Sea AUV/ROV Fiber-Optic Tether (ITU-T G.657 / STFOC, 300/500 V, -40 to +80 °C, min. bend radius 8 × OD).

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. Hermetically Coated SM Fiber
2. Patented LCP Inner Tube (Code A-27)
3. 16-Carrier LCP Braid (Code O-55)
4. Buoyant Outer Jacket (Code X-137)

Technical data

Typical values

Rated voltage / transmission duty	300/500 V (ITU-T G.657 / US Pat. 7,570,853 LCP Crush-Proof Tether)
Primary dielectric / buffering	Patented LCP Inner Tube (Code A-27) — Extruded Liquid Crystal Polymer (Ø 0.69 mm) crush-proof STFOC core
Short-circuit / peak thermal rating	Verified thermal stability per ITU-T G.657 / US Pat. 7,570,853 LCP Crush-Proof Tether
Outer protection / armouring	Buoyant Outer Jacket (Code X-137) — Low-density polymer jacket (Ø 3.5 mm, SG = 0.99 g/cm³) for neutral buoyancy
Hydrostatic, tensile & crush duty	16-Carrier LCP Braid (Code O-55) — Precision braided LCP strength member rated to 750 lbs (340 kgf)
Seawater, oil & chemical resistance	Resistant to seawater hydrolysis, hydraulic oils and abrasion per ITU-T G.657 / US Pat. 7,570,853 LCP Crush-Proof Tether
Standards	ITU-T G.657 / US Pat. 7,570,853 LCP Crush-Proof Tether
Core / conductor construction	Hermetically Coated SM Fiber — Bend-insensitive single-mode fiber sealed against deep-sea water & H_2 darkening
Continuous operating temperature	−40…+80 °C (subsea, marine & submersible duty)
Storage & transport temperature	−40…+80 °C on export wooden/steel drum
Minimum bending radius	8 × OD
Hydrostatic pressure & water blocking	Engineered for continuous submersion and hydrostatic integrity per ITU-T G.657 / US Pat. 7,570,853 LCP Crush-Proof Tether
RoHS & REACH compliance	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant

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
SPE-7098 BUOYANT STFOC Construction Schedule (−40…+80 °C) 3 sizes						
☐ **SPE-7098 BUOYANT STFOC 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
☐ **SPE-7098 BUOYANT STFOC 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
☐ **SPE-7098 BUOYANT STFOC 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.657 / US Pat. 7,570,853 LCP Crush-Proof Tether.

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.657 / STFOC 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/spe-7098-buoyant-stfoc

Typical values for this cable type, based on ITU-T G.657 / US Pat. 7,570,853 LCP Crush-Proof Tether. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.