subsea ROV umbilical, AUV tether & sonar tow cable

SPE-7043 Non-Kink STFOC Tether

SPE-7043 Non-Kink STFOC Drone Tether

ITU-T G.657.B3 / IEC 60794 · Optical (0 V) · Subsea rov umbilical, auv tether & sonar



ITU-T G.657.B3 / IEC 60794 | Optical (0 V) (-40 to +85 °C) | Subsea / Marine Outer Protective She

Application

SPE-7043 Non-Kink STFOC Drone Tether featuring bend-insensitive optical core (1×sm/mm) and subsea / marine outer protective sheath (ITU-T G.657.B3 / IEC 60794, Optical (0 V), -40 to +85 °C, min. bend radius 5 × OD).

Typical uses: Work-Class & Observation ROV Umbilicals and TMS Tethers, Offshore Aquaculture Net Cleaners & Subsea Cage Inspection, AUV, Ocean Glider & Expendable Spool-Payoff Micro-Tethers, USV Towed Sonar Arrays, Seabed Crawlers & Subsea Trenchers

Construction





Cross-section, not to scale

1. Bend-Insensitive Optical Core (1×SM/MM)
2. UV-Cured Acrylate Primary Buffer Coating
3. Non-Kink High-Modulus Dielectric Buffer
4. Subsea / Marine Outer Protective Sheath

Technical data

Typical values

Rated voltage / operating system	Optical (0 V) (ITU-T G.657.B3 SPE-7043 Non-Kink STFOC Subsea Drone Optical Tether Standard)	**Core / conductor construction**	Bend-Insensitive Optical Core (1×SM/MM) — ITU-T G.657.B3 bend-insensitive single-mode / multi-mode optical fiber core
Primary dielectric / optical buffer	UV-Cured Acrylate Primary Buffer Coating — Concentric dual-layer micro-bend-resistant elastomeric primary optical buffer	**Continuous operating temperature**	−40…+85 °C (submerged seawater & topside deck service)
Hydrostatic & thermal cycling endurance	Verified cold-bend and wet dielectric stability across −40…+85 °C per ITU-T G.657.B3 SPE-7043 Non-Kink STFOC Subsea Drone Optical Tether Standard	**Storage & transport temperature**	−40…+80 °C on export wooden/steel cable drum
Outer jacket / sheath protection	Subsea / Marine Outer Protective Sheath — Black hydrolysis- & abrasion-resistant marine Polyurethane (PUR) outer sheath	**Minimum bending radius**	5 × OD
Reinforcement / screen / bedding layer	Non-Kink High-Modulus Dielectric Buffer Tube — Precision-extruded kink-resistant structural buffer for high-speed spool payoff	**Seawater, hydrolysis & oil resistance**	Resistant to permanent seawater immersion, hydrolysis, hydraulic oil and bio-fouling per ITU-T G.657.B3 SPE-7043 Non-Kink STFOC Subsea Drone Optical Tether Standard
Hydrostatic pressure & water blocking	Radial and longitudinal water-blocking integrity verified per ITU-T G.657.B3 SPE-7043 Non-Kink STFOC Subsea Drone Optical Tether Standard	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	ITU-T G.657.B3 SPE-7043 Non-Kink STFOC Subsea Drone Optical Tether Standard		

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	Max. pulling kN ≈	Min. bend R mm
SPE-7043 Non-Kink STFOC Tether Construction Schedule (−40…+85 °C) 3 sizes						
☐ SPE-7043 Non-Kink STFOC Tether 1×SM Ultra-Slim	1 × G.657.B3 Single-Mode Micro-Tether	ITU-T G.657.B3 + Non-Kink Buffer + Aramid	0.9	1	0.5	10
☐ SPE-7043 Non-Kink STFOC Tether 2×SM Buoyant	2 × G.657.B3 Single-Mode Buoyant Tether	ITU-T G.657.B3 + Aramid/LCP + Foamed PUR	2.8	6	2.2	20
☐ SPE-7043 Non-Kink STFOC Tether 4×SM/MM Tactical	4 × G.657.A2/OM3 Subsea Optical Tether	Tight-Buffered Fiber + Aramid + Subsea PUR	5.6	28	6.8	35

– Custom core counts, optical fiber channels, wet-mate terminations and continuous winch lengths available per ITU-T G.657.B3 SPE-7043 Non-Kink STFOC Subsea Drone Optical Tether Standard.

Electrical, optical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} Ω/km	Rating / Impedance / Load	Operating temp.
1 × G.657.B3 Single-Mode Micro-Tether	0.01	1310/1550 nm (≤0.35 dB/km)	−40…+85 °C
2 × G.657.B3 Single-Mode Buoyant Tether	0.01	1310/1550 nm · SG ≈ 1.01	−40…+85 °C
4 × G.657.A2/OM3 Subsea Optical Tether	0.01	4-Ch Optical · 6.8 kN MBS	−40…+85 °C

– Every production length undergoes routine conductor DC resistance / OTDR optical attenuation, AC dielectric and dimensional verification.

Standards and approvals

- ITU-T G.657.B3 / IEC 60794 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-7043-non-kink-stfoc-drone-tether

Typical values for this cable type, based on ITU-T G.657.B3 SPE-7043 Non-Kink STFOC Subsea Drone Optical Tether Standard. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.