submarine & offshore power composite cable

10–220kV Submarine Composite

10–220 kV AC Oxygen-Free Copper XLPE Lead-Alloy Sheathed PE-Jacketed S

IEC 60502-2 / IEC 60840 / IEC 62067 · 10 kV – 220 kV · Submarine & offshore power



IEC 60502-2 / IEC 60840 / IEC 62067 | **10 kV – 220 kV (-20 to +90 °C)** | **Extruded Polyethylene (PE) Outer She**

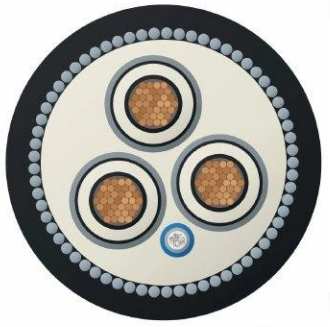
Application

10–220 kV AC Oxygen-Free Copper XLPE Lead-Alloy Sheathed PE-Jacketed Submarine Composite Cable (IEC 60502-2 / IEC 60840 / IEC 62067) engineered for 10 kV – 220 kV service across -20 to +90 °C (min. bend radius 15 × OD).

Typical uses: Offshore Wind Inter-Array & Export Submarine Links, Subsea Island & Platform HV/MV Power Interconnects, Offshore Oil & Gas Drilling Rigs & FPSOs, Commercial Vessels, Polar Ships & Marine Propulsion

Construction





Cross-section, not to scale

1. 10-220 kV Oxygen-Free Copper XLPE Cores
2. 24-96F G.652D Submarine Optical Unit
3. Galvanized Steel Wire Armour
4. Extruded Polyethylene (PE) Outer Sheath

Technical data

Typical values

Rated voltage / transmission duty	10 kV – 220 kV (IEC 60502-2 / IEC 60840 / IEC 62067 10–220 kV Submarine Optical Composite Power Specification)	**Core / conductor construction**	10-220 kV Oxygen-Free Copper XLPE Cores — Three phase cores with triple-extruded XLPE and lead-alloy sheaths
Primary dielectric / buffering	24-96F G.652D Submarine Optical Unit — Interstitial stainless-steel tube optical fiber unit	**Continuous operating temperature**	−20...+90 °C (subsea & offshore duty)
Hydrostatic & thermal stability	Verified thermal and hydrostatic stability per IEC 60502-2 / IEC 60840 / IEC 62067 10–220 kV Submarine Optical Composite Power Specification	**Storage & transport temperature**	−40...+80 °C on export wooden/steel winch reel
Outer protection / armouring	Extruded Polyethylene (PE) Outer Sheath — Smooth abrasion-resistant black PE outer protective jacket	**Minimum bending radius**	15 × OD
Armour, strength member & mechanical duty	Galvanized Steel Wire Armour — Single or double layer of galvanized round steel wire armour	**Seawater, hydrostatic & hydrolysis resistance**	Engineered for continuous seawater immersion, pressure cycling and hydrolysis resistance per IEC 60502-2 / IEC 60840 / IEC 62067 10–220 kV Submarine Optical Composite Power Specification
Oil, drilling mud & abrasion resistance	Resistant to marine hydraulic oils, salt mist, winch sheave wear and seabed abrasion per IEC 60502-2 / IEC 60840 / IEC 62067 10–220 kV Submarine Optical Composite Power Specification	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	IEC 60502-2 / IEC 60840 / IEC 62067 10–220 kV Submarine Optical Composite Power Specification		

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	Breaking / tensile kN ≈	Min. bend R mm
10–220kV Submarine Composite Construction Schedule (−20...+90 °C) 3 sizes						
☐ **10–220kV Submarine Composite Config A**	**3×25–50 mm² (or 3P+FO Composite)**	**Compacted / Class 5 Cu/SnCu + FO**	**32.0**	**1,850**	**85.0**	**380**
☐ **10–220kV Submarine Composite Config B**	**3×95–150 mm² (or Heavy EOM)**	**Compacted / Class 5 Cu/SnCu + FO**	**48.5**	**4,280**	**130.0**	**580**
☐ **10–220kV Submarine Composite Config C**	**3×240–400 mm² (or Trunk HV/MV)**	**Compacted Cu + Lead/Armour + FO**	**78.0**	**9,650**	**210.0**	**950**

– Custom core cross-sections, pair/fibre counts, armour breaking loads and continuous winch/seabed lengths available per IEC 60502-2 / IEC 60840 / IEC 62067 10–220 kV Submarine Optical Composite Power Specification.

Electrical, optical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} / Atten. Ω/km or dB/km	Rating / Impedance	Operating temp.
3×25–50 mm² (or 3P+FO Composite)	**0.49**	**10 kV – 220 kV (Subsea/MV)**	**−20...+90 °C**
3×95–150 mm² (or Heavy EOM)	**0.19**	**10 kV – 220 kV (Subsea/MV)**	**−20...+90 °C**
3×240–400 mm² (or Trunk HV/MV)	**0.07**	**10 kV – 220 kV (Trunk/HV)**	**−20...+90 °C**

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

Standards and approvals

- IEC 60502-2 / IEC 60840 / IEC 62067 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/submarine-optical-composite-cable-10-220kv

Typical values for this cable type, based on IEC 60502-2 / IEC 60840 / IEC 62067 10–220 kV Submarine Optical Composite Power Specification. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.