submarine aquaculture, shore power & shipboard power cable

SOFC Submarine Optical-Power Cable

SOFC Submarine Optical Fiber & Power Composite Cable

IEC 60502-2 / ITU-T G.652 · 0.6/1 kV – 6/10 kV · Submarine aquaculture, shore power &



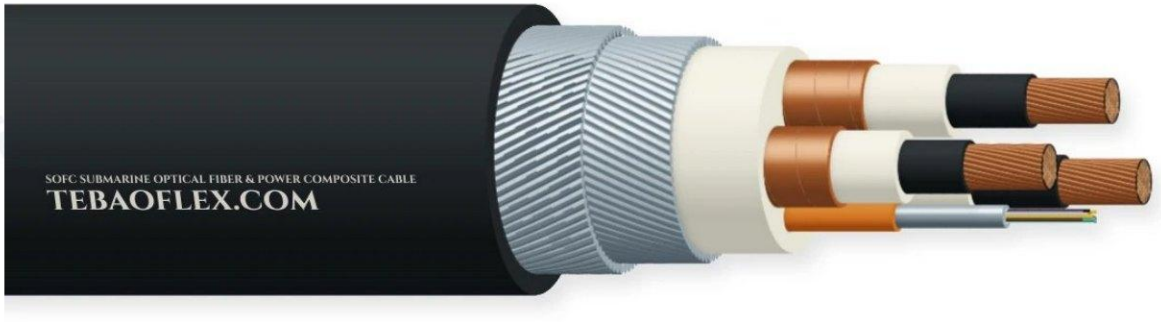
IEC 60502-2 / ITU-T G.652 | 0.6/1 kV – 6/10 kV (-20 to +90 °C) | Subsea / Marine Outer Protective She

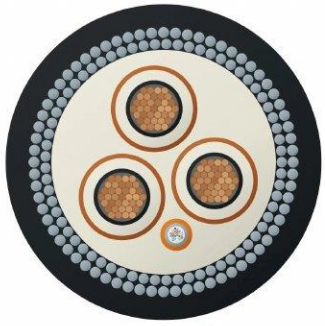
Application

SOFC Submarine Optical Fiber & Power Composite Cable featuring single-mode / multi-mode optical unit and subsea / marine outer protective sheath (IEC 60502-2 / ITU-T G.652, 0.6/1 kV – 6/10 kV, -20 to +90 °C, min. bend radius 12 × OD).

Typical uses: Submarine Electro-Optical Marine Ranch & Island Grids, NEK 400-8-820 / NS 9415 Floating Fish Farm Power Distribution, Aquaculture Workboats, Live-Fish Carriers & Offshore Vessels, Port Marina & Fishing Harbour Shore Power Connections

Construction





Cross-section, not to scale

1. Single-Mode / Multi-Mode Optical Unit
2. Power & Control Copper Conductors
3. Subsea / Marine Outer Protective Sheath

Technical data

Typical values

Rated voltage / operating system	0.6/1 kV – 6/10 kV (IEC 60502-2 & ITU-T G.652.D SOFC Submarine Optical-Power Composite Standard)	**Core / conductor construction**	Single-Mode / Multi-Mode Optical Unit — Hermetic stainless-steel tube / tight-buffered optical unit
Primary dielectric / optical buffer	Power & Control Copper Conductors — Stranded copper conductors with Cross-linked polyethylene (XLPE) insulation	**Continuous operating temperature**	−20…+90 °C (submerged seawater & topside deck service)
Hydrostatic & thermal cycling endurance	Verified cold-bend and wet dielectric stability across −20…+90 °C per IEC 60502-2 & ITU-T G.652.D SOFC Submarine Optical-Power Composite Standard	**Storage & transport temperature**	−40…+80 °C on export wooden/steel cable drum
Outer jacket / sheath protection	Subsea / Marine Outer Protective Sheath — Black heavy-duty submersible elastomeric outer sheath	**Minimum bending radius**	12 × OD
Reinforcement / screen / bedding layer	Power & Control Copper Conductors — Stranded copper conductors with Cross-linked polyethylene (XLPE) insulation	**Seawater, hydrolysis & oil resistance**	Resistant to permanent seawater immersion, hydrolysis, hydraulic oil and bio-fouling per IEC 60502-2 & ITU-T G.652.D SOFC Submarine Optical-Power Composite Standard
Hydrostatic pressure & water blocking	Radial and longitudinal water-blocking integrity verified per IEC 60502-2 & ITU-T G.652.D SOFC Submarine Optical-Power Composite Standard	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	IEC 60502-2 & ITU-T G.652.D SOFC Submarine Optical-Power Composite 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
SOFC Submarine Optical-Power Cable Construction Schedule (−20…+90 °C) 3 sizes						
☐ **SOFC Submarine Optical-Power Cable Hybrid 4G2.5+**	**4G2.5 mm² Power + 4×SM + 2×2×0.5**	**Class 5 SnCu + Aramid Braid + Subsea PUR**	**14.6**	**285**	**18.0**	**90**
☐ **SOFC Submarine Optical-Power Cable Hybrid 4G6+FO**	**4G6.0 mm² Power + 4×SM/MM + 4×2×0.5**	**Class 5 SnCu + Aramid Braid + Subsea PUR**	**19.2**	**540**	**32.0**	**120**
☐ **SOFC Submarine Optical-Power Cable Hybrid 4G16+F**	**4G16 mm² Power + 8×SM/MM + 4×2×0.75**	**Class 5 SnCu + Heavy Aramid + Subsea PUR**	**26.5**	**1,120**	**55.0**	**165**

– Custom core counts, optical fiber channels, wet-mate terminations and continuous winch lengths available per IEC 60502-2 & ITU-T G.652.D SOFC Submarine Optical-Power Composite Standard.

Electrical, optical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} Ω/km	Rating / Impedance / Load	Operating temp.
4G2.5 mm² Power + 4×SM + 2×2×0.5	**7.98**	**0.6/1 kV – 6/10 kV · 18 kN Tensile**	**−20…+90 °C**
4G6.0 mm² Power + 4×SM/MM + 4×2×0.5	**3.30**	**0.6/1 kV – 6/10 kV · 32 kN Tensile**	**−20…+90 °C**
4G16 mm² Power + 8×SM/MM + 4×2×0.75	**1.21**	**0.6/1 kV – 6/10 kV · 55 kN Tensile**	**−20…+90 °C**

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

Standards and approvals

- IEC 60502-2 / ITU-T G.652 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/sofc-submarine-optical-fiber-power-composite-cable

Typical values for this cable type, based on IEC 60502-2 & ITU-T G.652.D SOFC Submarine Optical-Power Composite Standard. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.