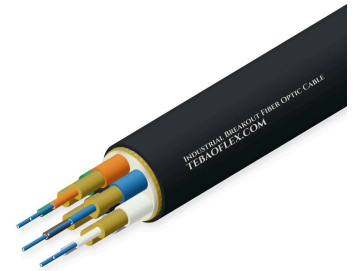




fiber optic cable series

Industrial Breakout Fiber Optic Cable

Tight-buffered 2.0 mm sub-unit industrial breakout optical cable



IEC 60794-2-20

Ø 2.0 mm Sub-Units

LSZH / PUR Jacket

Application

Industrial Breakout Fiber Optic Cable with individual 2.0 mm aramid-reinforced simplex sub-units around a central FRP rod for direct LC, SC or ST connector termination in industrial cabinets, trays and ducts per IEC 60794-2-20.

Typical uses: Factory Automation & PLC Backbones, Power Substations & Switchgear, Process Plant Control Rooms, Wind Turbine Nacelle Interconnects, Tunnel & Rail Signalling Cabinets

Construction



Cross-section, not to scale

- 1 Optical waveguide & tight buffer
- 2 Simplex 2.0 mm sub-unit jacket
- 3 Central strength member
- 4 Water-blocking & rodent barrier
- 5 Outer industrial jacket

IEC 60793-2-50 / IEC 60793-2-10

Technical data

Typical values

Dielectric design	100 % all-dielectric (metal-free)	EMI / RFI immunity	Complete immunity to HV switching surges
Sub-unit pull strength	≥ 400 N per 2.0 mm simplex sub-cable	Operating temperature	-40 °C to +75 °C
Installation temperature	-15 °C to +60 °C	Storage temperature	-40 °C to +80 °C
Thermal cycling delta	≤ 0.05 dB/km (SM) / ≤ 0.10 dB/km (MM)	Sub-unit diameter	2.0 mm ± 0.1 mm (900 µm tight buffer)
Min. bend radius, static	10 × cable OD (25 mm per sub-unit)	Min. bend radius, dynamic	15 × cable OD during installation pull
Crush resistance	1,500 N / 100 mm (short-term) · 800 N (long-term)	Impact resistance	15 J, 3 impacts (IEC 60794-1-21 Method E4)
Fibre options	G.657.A1 (OS2) · OM2 · OM3 · OM4 (50/125 µm)	Attenuation (OS2 SM)	≤ 0.36 dB/km @ 1310 nm · ≤ 0.22 dB/km @ 1550 nm
Attenuation (OM3/OM4)	≤ 2.5 dB/km @ 850 nm · ≤ 0.7 dB/km @ 1300 nm	Modal bandwidth (OM4)	≥ 3,500 MHz·km (OFL) · ≥ 4,700 MHz·km (EMB @ 850 nm)
Flame retardance	IEC 60332-1-2 & IEC 60332-3-24 Cat. C (LSZH)	Halogen-free & smoke	IEC 60754-1/2 & IEC 61034-2 (≥ 60 % transmittance)
Oil & chemical resistance	EN 60811-404 mineral oil resistant (PUR sheath)	Water penetration	Longitudinal dry block per IEC 60794-1-22 F5B
Standards	IEC 60794-2-20 (Multi-fibre breakout cables)		

Sizes

8 standard constructions

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

Order designation	Sub-units × Ø	Outer Ø ≈ mm	Weight ≈ kg/km	Max. pull N	Min. bend R static mm
Single-mode OS2 (ITU-T G.657.A1) 5 sizes					
☐ IND-BRK-02SM-G657A1	2 × 2.0 mm OS2	6.5	42	800	65
☐ IND-BRK-04SM-G657A1	4 × 2.0 mm OS2	7.6	58	1,200	76
☐ IND-BRK-08SM-G657A1	8 × 2.0 mm OS2	9.8	94	1,800	98
☐ IND-BRK-12SM-G657A1	12 × 2.0 mm OS2	11.6	132	2,200	116
☐ IND-BRK-24SM-G657A1	24 × 2.0 mm OS2	15.2	215	2,800	152
Multimode OM3 / OM4 (50/125 µm) 3 sizes					
☐ IND-BRK-04MM-OM4	4 × 2.0 mm OM4	7.6	58	1,200	76
☐ IND-BRK-08MM-OM4	8 × 2.0 mm OM4	9.8	94	1,800	98
☐ IND-BRK-12MM-OM4	12 × 2.0 mm OM4	11.6	132	2,200	116

– Each simplex sub-unit is 2.0 mm OD with an internal 900 µm tight buffer and dedicated polyaramid yarn for direct connector crimping.

Optical transmission performance

3 sizes

Fibre grade	Core / Cladding	Max. α primary dB/km	Max. α secondary dB/km	Bandwidth / Dispersion
OS2 (ITU-T G.657.A1)	9 / 125 µm SM	0.35	0.22	≤ 18 ps/(nm·km) @ 1550 nm
OM3 (IEC A1a.2)	50 / 125 µm MM	2.50	0.70	≥ 2000 MHz·km EMB @ 850 nm
OM4 (IEC A1a.3)	50 / 125 µm MM	2.50	0.70	≥ 4700 MHz·km EMB @ 850 nm

– Primary/secondary wavelength windows: 1310 nm / 1550 nm for OS2 single-mode; 850 nm / 1300 nm for OM3/OM4 multimode.

Standards and approvals

- ✓ IEC 60794-2-20 & ISO/IEC 11801
- ✓ CPR EN 50575 Class Cca-s1a,d1,a1 (LSZH)
- ✓ 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/industrial-breakout-fiber-optic-cable



Typical values for this cable type, based on IEC 60794-2-20 / ISO/IEC 11801 / EN 50173. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.