FEICHUN CABLES®

安徽飞纯特种电缆有限公司

48-Core Single-Mode Armoured Outside-Plant Optical Fibre Cable
GYTA53 / SADJ — Gel-Filled, Corrugated Steel Tape Armour, Double Jacket

Technical Data Sheet — prepared for FRIDAYLINES LLC, RFQ Item 1.00

ITU-T G.652.D | IEC 60794 Series | ANSI/TIA-568.3-D | ISO/IEC 11801 | EN 187000 / EN 50173 | RoHS Compliant

Document No.: FC-TDS-F048A-2026-N4J7 Revision: 00 Issue Date: 02 September 2026

Origin: People's Republic of China

1. Product Description

FeiChun type **FC-OFC GYTA53 (SADJ)** is a loose-tube, gel-filled outside-plant optical fibre cable containing 48 ITU-T G.652.D single-mode fibres. Colour-coded 250 µm fibres are positioned in loose tubes filled with a thixotropic water-blocking compound and stranded, together with PE-filler rods where required, around a phosphated steel central strength member (CSM) in an SZ configuration. The stranded core is longitudinally water-blocked with swellable tape, sheathed with an inner PE jacket, longitudinally wrapped with a chrome-passivated corrugated steel tape (CST) armour, and finally jacketed with a UV-stabilised black HDPE outer sheath — the single-armour / double-jacket (SADJ) construction specified in the enquiry.

The design is intended for **direct burial and duct installation** in harsh outdoor environments, providing rodent protection, high crush and tensile capability, and full longitudinal water blocking without the use of flooding compound in the armour interstices.

48 Cores | OS2 9/125 µm | Gel-Filled Loose Tube | Corrugated Steel Tape Armour | Double Jacket | Direct Burial / Duct | −40 °C to +70 °C | 4 km Minimum Drum Length

2. Cable Construction

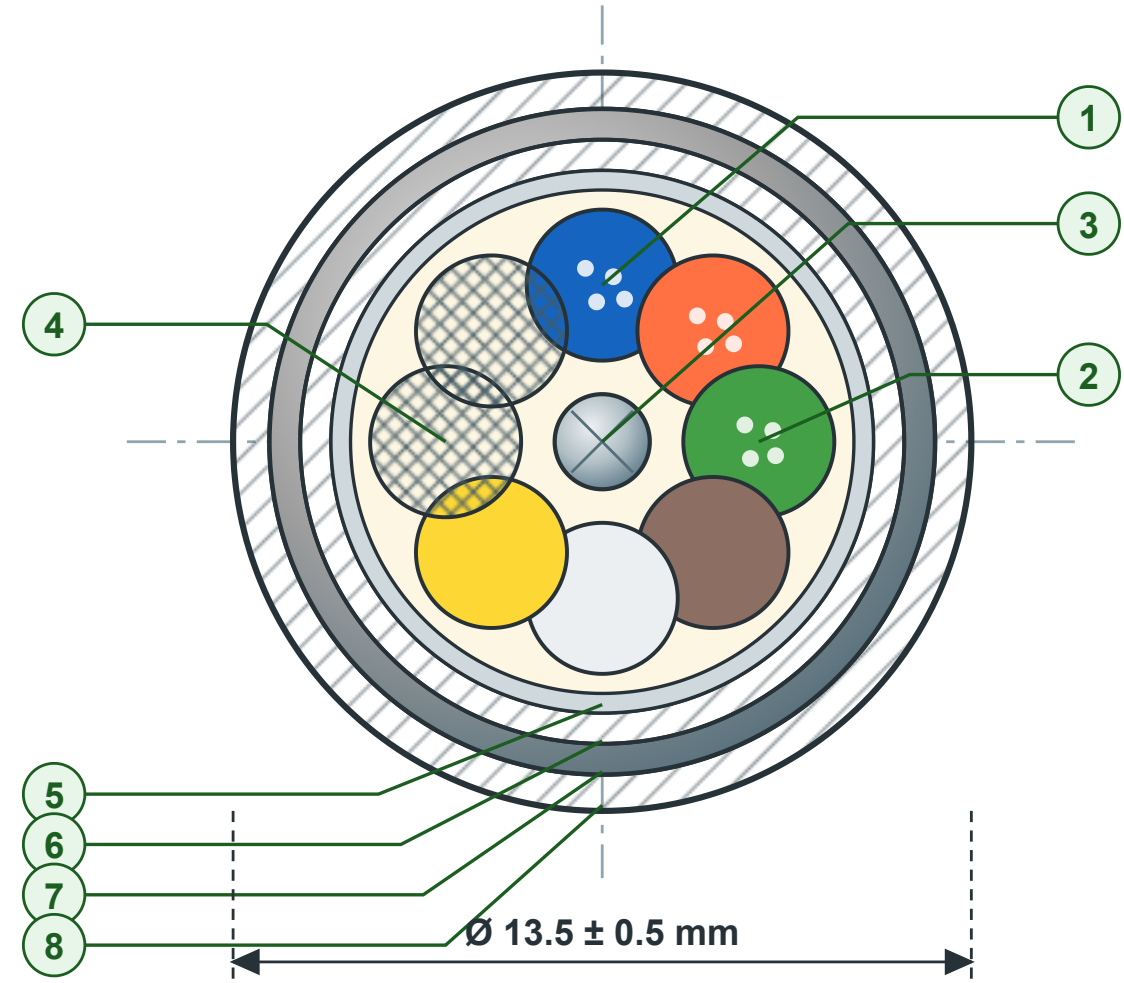


Figure 1 — Indicative cross-section, 48-core armoured OSP cable (GYTA53 / SADJ)

Pos.	Element	Material
1	Optical fibre, 250 µm coloured	Single-mode G.652.D silica
2	Loose tube (6 × 8 fibres)	PBT + thixotropic gel
3	Central strength member	Phosphated steel wire
4	Filler rod	Solid PE
5	Water-blocking tape	Swellable non-woven
6	Inner jacket	Black PE
7	Armour	Corrugated steel tape, chrome-passivated
8	Outer jacket	UV-stabilised black HDPE

3. Optical Characteristics — ITU-T G.652.D (OS2)

Parameter	Unit	Specified Value
Fibre type / geometry	—	Single-mode OS2, 9/125 µm
Mode field diameter @ 1310 nm	µm	9.2 ± 0.4
Cladding diameter	µm	125.0 ± 0.7
Coating diameter	µm	245 ± 7
Cabled attenuation @ 1310 nm	dB/km	≤ 0.35
Cabled attenuation @ 1550 nm	dB/km	≤ 0.22
Cabled attenuation @ 1625 nm	dB/km	≤ 0.25
Attenuation @ 1383 nm (after H_2 ageing, G.652.D)	dB/km	≤ 0.35
Chromatic dispersion, 1285–1330 nm	ps/(nm·km)	≤ 3.5
Chromatic dispersion @ 1550 nm	ps/(nm·km)	≤ 18.0
Zero-dispersion wavelength / slope	nm / ps/(nm^2·km)	1300–1324 / ≤ 0.092
Cable cut-off wavelength (λcc)	nm	≤ 1260
PMD link design value	ps/√km	≤ 0.20
Fibre proof-test level	GPa / kpsi	≥ 0.69 / 100
Fibre & buffer tube colour coding	—	ANSI/TIA-598-D

4. Mechanical, Environmental & Dimensional Data

Property	Unit	Value	Test Method
Fibre count / configuration	—	48 F (6 tubes × 8 fibres)	—
Nominal overall diameter	mm	13.5 ± 0.5	IEC 60794-1-2
Nominal cable mass	kg/km	≈ 180	IEC 60794-1-2
Tensile strength — installation (short term)	N	3000	IEC 60794-1-21 E1
Tensile strength — operation (long term)	N	1500	IEC 60794-1-21 E1
Crush resistance — short term	N/100 mm	3000	IEC 60794-1-21 E3
Crush resistance — long term	N/100 mm	1000	IEC 60794-1-21 E3
Impact resistance	N·m	10 (5 cycles)	IEC 60794-1-21 E4
Repeated bending	cycles	25 @ 20 × D	IEC 60794-1-21 E6
Torsion	cycles	10 @ ±180°	IEC 60794-1-21 E7
Minimum bending radius — installation	mm	≥ 20 × D (≈ 270)	IEC 60794-1-21
Minimum bending radius — operation	mm	≥ 10 × D (≈ 135)	IEC 60794-1-21
Water penetration	—	No leakage, 1 m head / 24 h / 3 m sample	IEC 60794-1-22 F5B
Operating temperature	°C	−40 to +70	IEC 60794-1-22 F1
Installation temperature	°C	−15 to +60	—
Storage / transport temperature	°C	−50 to +70	—
UV resistance of outer sheath	—	Carbon black content 2.6 % ± 0.25, suitable for permanent outdoor exposure	ASTM D1603

Property	Unit	Value	Test Method
Installation method	—	Direct burial, duct, culvert	—

5. Standards Compliance

Standard	Scope
ITU-T G.652.D	Single-mode fibre characteristics, low water peak
IEC 60793-1 / -2 series	Optical fibre — measurement methods and product specifications
IEC 60794-1-1 / -1-2 / -1-21 / -1-22 / -3-10	Cable generic specification, mechanical & environmental test methods, outdoor duct cables
ANSI/TIA-568.3-D	Optical fibre cabling components
ANSI/TIA-598-D	Optical fibre and buffer tube colour coding
ISO/IEC 11801	Generic cabling for customer premises
EN 187000 / EN 50173	Generic specification for optical cables / information technology cabling
EU Directive 2011/65/EU (RoHS) as amended	Restriction of hazardous substances
ISO 9001:2015	Quality management system (accredited certification held by FeiChun)
EN 10204 / ISO 10474 Type 2.1	Certificate of compliance with the order, issued by the manufacturer

6. Colour Coding — ANSI/TIA-598-D

Buffer tubes (6 off)

No.	Tube Colour	Fibres
1	Blue	1–8
2	Orange	9–16
3	Green	17–24
4	Brown	25–32
5	Slate	33–40
6	White	41–48

Fibres within each tube (8 off)

No.	Fibre Colour	No.	Fibre Colour
1	Blue	5	Slate
2	Orange	6	White
3	Green	7	Red
4	Brown	8	Black

Two PE filler rods (natural) complete the stranded core.

7. Sheath Marking

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FEICHUN CABLES  GYTA53  48F  G.652.D  OSP SADJ  <CUSTOMER REF>  YEAR 2026  MADE IN CHINA  xxxxx m
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Sequential metre marking is applied continuously along the outer sheath at 1 m intervals, hot-foil printed in white. Customer-specific text can be added free of charge at order confirmation.

8. Packing & Drum Length

Item	Value
Standard delivery length	4,000 m per drum (minimum continuous length, per RFQ clause 6)
Length tolerance	+3 % / −0 %
Drum type	Non-returnable timber drum, ISPM 15 heat-treated and stamped
Drum protection	Both ends sealed with heat-shrink caps; full timber battening; drum lagged
Drum labelling	Drum no., cable type, fibre count, length, gross/net mass, batch no., attenuation report reference, direction of rotation

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48-Core Single-Mode Non-Armoured Outside-Plant Optical Fibre Cable
GYFTY — All-Dielectric, Gel-Filled Multi Loose Tube, HDPE Sheath

Technical Data Sheet — prepared for FRIDAYLINES LLC, RFQ Item 2.00

ITU-T G.652.D | IEC 60794 Series | ISO/IEC 11801 | EN 50173 | Fully Dielectric | RoHS Compliant

Document No.: FC-TDS-F048D-2026-N4J8 Revision: 00 Issue Date: 02 September 2026

Origin: People's Republic of China

1. Product Description

FeiChun type **FC-OFC GYFTY** is a fully dielectric, gel-filled multi loose-tube outside-plant optical fibre cable containing 48 ITU-T G.652.D single-mode fibres. Coloured 250 µm fibres are housed in gel-filled PBT loose tubes stranded SZ around a **fibre-reinforced plastic (FRP) central strength member**, with PE filler rods as required. The core is longitudinally water-blocked with swellable tape and sheathed directly in UV-stabilised black HDPE. Containing no metallic element whatsoever, the cable requires no earthing or bonding and is immune to induction and lightning strike — the preferred solution for duct routes running alongside power circuits, in substations, and across areas of high soil resistivity.

48 Cores | OS2 9/125 µm | All-Dielectric | Gel-Filled Loose Tube | HDPE Sheath | Duct Installation | −40 °C to +70 °C | 4 km Minimum Drum Length

2. Cable Construction

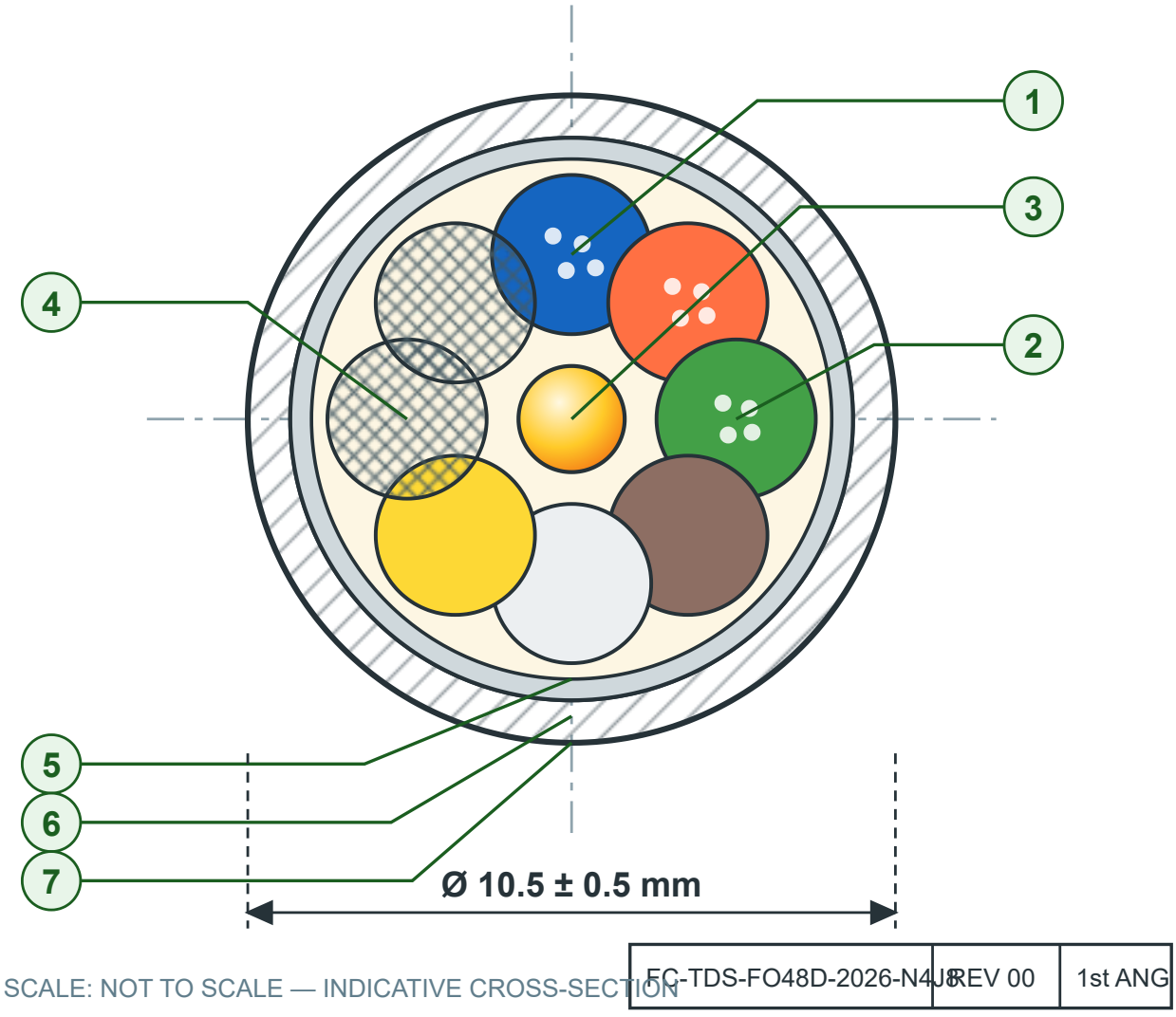


Figure 2 — Indicative cross-section, 48-core all-dielectric OSP cable (GYFTY)

Pos.	Element	Material
1	Optical fibre, 250 µm coloured	Single-mode G.652.D silica
2	Loose tube (6 × 8 fibres)	PBT + thixotropic gel
3	Central strength member	FRP (non-metallic)
4	Filler rod	Solid PE
5	Water-blocking tape	Swellable non-woven
6	Binder yarn	Polyester
7	Outer sheath	UV-stabilised black HDPE

3. Optical Characteristics — ITU-T G.652.D (OS2)

Parameter	Unit	Specified Value
Fibre type / geometry	—	Single-mode OS2, 9/125 µm
Mode field diameter @ 1310 nm	µm	9.2 ± 0.4
Cladding diameter	µm	125.0 ± 0.7
Cabled attenuation @ 1310 nm	dB/km	≤ 0.35
Cabled attenuation @ 1550 nm	dB/km	≤ 0.22
Cabled attenuation @ 1625 nm	dB/km	≤ 0.25
Chromatic dispersion, 1285–1330 nm	ps/(nm·km)	≤ 3.5
Chromatic dispersion @ 1550 nm	ps/(nm·km)	≤ 18.0
Cable cut-off wavelength (λcc)	nm	≤ 1260
PMD link design value	ps/√km	≤ 0.20
Fibre proof-test level	GPa / kpsi	≥ 0.69 / 100
Fibre & buffer tube colour coding	—	ANSI/TIA-598-D

4. Mechanical, Environmental & Dimensional Data

Property	Unit	Value	Test Method
Fibre count / configuration	—	48 F (6 tubes × 8 fibres)	—
Nominal overall diameter	mm	10.5 ± 0.5	IEC 60794-1-2
Nominal cable mass	kg/km	≈ 105	IEC 60794-1-2
Tensile strength — installation (short term)	N	2000	IEC 60794-1-21 E1
Tensile strength — operation (long term)	N	1000	IEC 60794-1-21 E1
Crush resistance — short term	N/100 mm	2000	IEC 60794-1-21 E3
Crush resistance — long term	N/100 mm	1000	IEC 60794-1-21 E3
Impact resistance	N·m	5 (5 cycles)	IEC 60794-1-21 E4
Repeated bending	cycles	25 @ 20 × D	IEC 60794-1-21 E6
Torsion	cycles	10 @ ±180°	IEC 60794-1-21 E7
Minimum bending radius — installation	mm	≥ 20 × D (≈ 210)	IEC 60794-1-21
Minimum bending radius — operation	mm	≥ 10 × D (≈ 105)	IEC 60794-1-21
Water penetration	—	No leakage, 1 m head / 24 h / 3 m sample	IEC 60794-1-22 F5B
Operating temperature	°C	−40 to +70	IEC 60794-1-22 F1
Installation temperature	°C	−15 to +60	—
Electrical characteristic	—	Fully dielectric — no metallic element, no earthing required	—
UV resistance of outer sheath	—	Carbon black content 2.6 % ± 0.25, suitable for permanent outdoor exposure	ASTM D1603

Property	Unit	Value	Test Method
Installation method	—	Duct, sub-duct, culvert (not for unprotected direct burial)	—

5. Standards Compliance

Standard	Scope
ITU-T G.652.D	Single-mode fibre characteristics, low water peak
IEC 60793-1 / -2 series	Optical fibre — measurement methods and product specifications
IEC 60794-1-1 / -1-2 / -1-21 / -1-22 / -3-10	Cable generic specification and outdoor duct cables
ANSI/TIA-598-D	Optical fibre and buffer tube colour coding
ISO/IEC 11801 / EN 50173	Generic cabling for customer premises
EU Directive 2011/65/EU (RoHS) as amended	Restriction of hazardous substances
ISO 9001:2015	Quality management system (accredited certification held by FeiChun)
EN 10204 / ISO 10474 Type 2.1	Certificate of compliance with the order, issued by the manufacturer

6. Colour Coding, Marking & Packing

Buffer tube and fibre colour coding are identical to Section 6 of data sheet **FC-TDS-FO48A-2026-N4J7** and follow ANSI/TIA-598-D in full.

> FEICHUN CABLES GYFTY 48F G.652.D OSP NON-ARMOURED <CUSTOMER REF> YEAR 2026
> MADE IN CHINA xxxxx m

Item	Value
Standard delivery length	4,000 m per drum (minimum continuous length, per RFQ clause 6)
Length tolerance	+3 % / −0 %
Drum type	Non-returnable timber drum, ISPM 15 heat-treated and stamped
Drum protection	Both ends sealed with heat-shrink caps; full timber battening; drum lagged

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Commercial Quotation — 48-Core Single-Mode Optical Fibre Cable

Issued to FRIDAYLINES LLC (India | UAE | Oman) — attention Mr Nijas Navas, Procurement Specialist

Currency: USD | FOB Shanghai, Incoterms 2020 | Validity 120 Days | Origin: China

Quotation No.: FC-QTN-FL-2026-N4J9 Revision: **00** Date: **02 September 2026**

Your Ref: **RFQ Items 1.00 & 2.00**

1. Priced Schedule

SL	Description	Data Sheet	Qty (m)	Unit Price USD/m	Amount USD
1.00	**Fibre optic cable, 48 cores single-mode armoured** FeiChun GYTA53 / SADJ — gel-filled loose tube, corrugated steel tape armour, double jacket, OS2 9/125 µm G.652.D, ≤0.35 dB/km @1310 nm, ≤0.22 dB/km @1550 nm, −40 °C to +70 °C, direct burial & duct	FC-TDS-FO48A-2026-N4J7	27,000	0.80	21,600.00
2.00	**Fibre optic cable, 48 cores single-mode non-armoured** FeiChun GYFTY — gel-filled multi loose tube, all-dielectric construction, HDPE sheath, OS2 9/125 µm G.652.D, ≤0.35 dB/km @1310 nm, ≤0.22 dB/km @1550 nm, −40 °C to +70 °C, duct installation	FC-TDS-FO48D-2026-N4J8	20,200	0.74	14,948.00
TOTAL — FOB SHANGHAI, INCOTERMS 2020			**47,200 m**	—	**USD 36,548.00**

Amount in words: **United States Dollars Thirty-Six Thousand Five Hundred and Forty-Eight Only.** Prices exclude any duties, taxes or charges levied outside the People's Republic of China.

2. Weights, Dimensions & Packing Details

SL	Drum Type	Length per Drum	Drums	Drum Size (mm) Flange × Traverse	Net Mass (kg)	Gross Mass (kg)	Volume (m^3)
1.00	Timber, ISPM 15	6 × 4,000 m + 1 × 3,000 m	7	1,400 × 900	4,860	6,120	12.35
2.00	Timber, ISPM 15	5 × 4,040 m	5	1,200 × 850	2,121	2,871	6.12
TOTAL SHIPMENT			**12**	—	**6,981**	**8,991**	**18.47**

SHIPPING NOTE

The complete consignment of 12 timber drums (approximately 9.0 tonnes gross, 18.5 m^3) loads comfortably into one 20' GP container. Cable is supplied on non-returnable drums; no drum deposit or return freight applies. Final weights and dimensions will be confirmed on the packing list at the time of shipment and may vary by up to ±5 %.

3. Commercial Terms

Seller	Anhui FeiChun Special Cable Co., Ltd., International Business Department
Country of origin	People's Republic of China
Manufacturer / OEM	Anhui FeiChun Special Cable Co., Ltd. — cable is manufactured in our own works, not traded
Collection address	Anhui FeiChun Special Cable Co., Ltd., Feichun Industrial Park, Feidong Economic Development Zone, Hefei, Anhui Province 231600, P.R. China
Delivery term	FOB Shanghai, Incoterms® 2020 (CFR / CIF Jebel Ali, Sohar or Nhava Sheva available on request)
Port of loading	Shanghai, P.R. China
Payment terms	T/T — 50 % with order as down payment, 50 % against copy of Bill of Lading. Irrevocable L/C at sight acceptable for orders above USD 50,000
Lead time	30–35 calendar days from receipt of down payment and approved drawings
Price validity	120 calendar days from the date of this quotation, as requested in the RFQ
Warranty	24 months from date of delivery, or 18 months from commissioning, whichever occurs first, against defects in materials and workmanship
Partial shipment / transhipment	Allowed
HS code	8544.70.00

4. Documentation — Confirmation Against RFQ Requirements

FeiChun confirms it will supply, in both electronic and hard copy, the complete documentation package listed below. A **Certificate of Compliance to BS EN 10204 / ISO 10474 Type 2.1** will be issued by ourselves as the OEM and will certify each of the eight points raised.

Ref	Requirement	Confirmation
1	Valid and accredited ISO 9001 Quality Management System certification	**Confirmed** — copy attached with the tender
2	Compliance of optical fibres with IEC 60793 (characteristics, measurement methods, test procedures)	**Confirmed**
3	Compliance of the cable with IEC 60794 (construction, performance, testing)	**Confirmed**
4	Compliance of the fibres with ITU-T G.652.D single-mode specification	**Confirmed**
5	Factory attenuation test results for each cable drum	**Confirmed** — per-drum, per-fibre report at 1310 and 1550 nm
6	Confirmation of cable length per drum, minimum continuous length 4 km	**Confirmed** — 4,000 m minimum continuous per drum
7	Fibre core and buffer tube colour coding to ANSI/TIA-598-D	**Confirmed**
8	Routine test certificate	**Confirmed** — issued per batch and per drum

Shipping documents supplied with each consignment

Commercial invoice · packing list with drum schedule · Certificate of Origin (CCPIT or Form E / Form A as applicable) · Bill of Lading · ISPM 15 fumigation-free heat treatment declaration · RoHS declaration of conformity · EN 10204 / ISO 10474 Type 2.1 Certificate of Compliance · factory routine and attenuation test reports · installation and handling instructions.

TECHNICAL EVALUATION PACKAGE

The two technical data sheets forming part of this document (FC-TDS-FO48A-2026-N4J7 and FC-TDS-FO48D-2026-N4J8) include full construction drawings, optical parameters, mechanical and environmental data, and standards compliance, and are submitted for your technical evaluation. Fully dimensioned production drawings and a sample per-drum attenuation report can be issued within two working days on request.

5. Notes & Clarifications

1. Prices are based on the quantities stated. A revised offer will be issued if quantities change materially.
2. Prices are subject to fluctuation in raw material markets (optical fibre, steel tape and polyethylene) and are firm within the stated validity period once an order is confirmed.
3. Drum lengths shown give the most economical cutting plan. Alternative drum lengths can be produced at no additional cost provided the 4 km minimum continuous length is respected.
4. Item 1 is offered as a corrugated-steel-tape armoured double-jacket design (GYTA53) suitable for direct burial and duct installation, meeting the 3,000 N crush and 3,000 N installation tensile requirements of the specification.
5. Item 2 is offered as a fully dielectric design (GYFTY), meeting the 2,000 N crush and 2,000 N installation tensile requirements of the specification.
6. This quotation is subject to our General Conditions of Sale, available on request, and does not constitute a binding contract until an order is accepted in writing by FeiChun.

6. Issued By

Company	Anhui FeiChun Special Cable Co., Ltd.
Prepared by	Zihao Yang, Global Sales Manager
Department	International Business Department
E-mail	zihao.yang@feichuncables.com
WhatsApp	+86 138 5512 3218

SIGNATURE & COMPANY STAMP

For and on behalf of Anhui FeiChun Special Cable Co., Ltd.

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