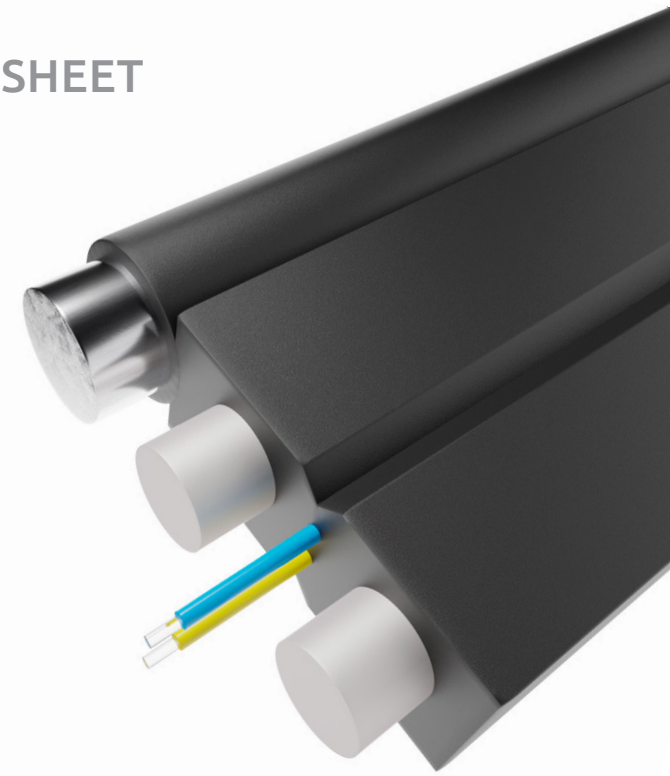
BEYONDTECH® SPECIFICATION SHEET

Beyondtech PureOptics ™

Flat Drop Fiber Optic Cable

Order Code: BTDF8A



Specifically engineered for indoor and outdoor aerial FTTH installations, this self-supporting cable features a central optical fiber encased in a durable LSZH (Low Smoke Zero Halogen) outer jacket. Reinforced with a steel messenger wire, it provides exceptional tensile strength and stability, designed in a figure 8 configuration for easy deployment. Ideal for direct connections in FTTH networks, this cable ensures high durability, simplified installation, and dependable performance, delivering reliable data transmission for last-mile connectivity in fiber optic networks.

FEATURES AND BENEFITS

- Self-Supporting Design: Built for both indoor and outdoor aerial FTTH installations, featuring a robust figure 8 design for stability and easy deployment.
- Enhanced Durability: Reinforced with a steel messenger wire and protected by a LSZH (Low Smoke Zero Halogen) outer jacket, providing strong tensile strength and fire safety.
- Reliable Performance: Delivers high-quality data transmission, making it ideal for last-mile connectivity in FTTH networks.
- Easy Installation: Designed for straightforward setup, reducing installation time and costs in direct FTTH connections.
- Suitable for a range of environments, this cable supports reliable FTTH connections in both indoor and outdoor settings, including aerial and direct-to-premise installations.

SPECIFICATIONS

Fiber Type:
Single-mode: G652.D or G.657.A2

Wavelengths:
1310 nm, 1490 nm, 1550 nm and 1625 nm

Number of Fibers:
1, 2, and 4 strings available

Jacket Material:
LSZH (Low Smoke Zero Halogen)

Color Coding:
Natural/Blue,Orange,Green, Brown

OD of cable(mm):
2.0×5.0±0.1

Test Metodology:
IEC 60794-1-E1
IEC 60794-1-E3
IEC 60794-1-E4
IEC 60794-1-E6
IEC 60794-1-E7
IEC 60794-1-F1

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Technical Specifications

Mechanical Specifications

CABLE TYPE	FIBER COUNT	CABLE DIAMETER (MM)	CABLE WEIGHT (KG/KM)	TENSILE STRENGTH (N) (LONG/SHORT TERM)	CRUSH RESISTANCE (N/100MM) (LONG/SHORT TERM)	BENDING RADIUS (MM) (STATIC/DYNAMIC)
BTDF8A	1	2.0±0.02 × 5.2±0.02	21	300/600	1000/2200	10D/20D
BTDF8A	2	2.0±0.02 × 5.2±0.02	22	300/600	1000/2200	10D/20D
BTDF8A	4	2.0±0.02 × 5.4±0.02	23	300/600	1000/2200	10D/20D

CABLE TYPE	FIBER COUNT	STRENGTH MEMBER (MM)	MESSENGER (MM)	CERTIFICATES
BTDF8A	1	FRP Fiber-reinforced polymer Φ: 0.5 ±0.02	Steel Wire: Galvanized Strength member Φ: 1.0 ±0.02	ISO9001, UL, RoHS, CPR (EN 50575)
BTDF8A	2	FRP Fiber-reinforced polymer Φ: 0.5 ±0.02	Steel Wire: Galvanized Strength member Φ: 1.0 ±0.02	ISO9001, UL, RoHS, CPR (EN 50575)
BTDF8A	4	FRP Fiber-reinforced polymer Φ: 0.5 ±0.02	Steel Wire: Galvanized Strength member Φ: 1.0 ±0.02	ISO9001, UL, RoHS, CPR (EN 50575)

The information in this table is for reference only and subject to change without notice. Values such as dimensions, weight, tensile strength, and certifications may vary slightly due to manufacturing tolerances or testing conditions. Ensure compatibility with project requirements and local regulations. Beyondtech is not liable for improper or unintended use. For specific details, contact our technical team.

Optical and Mechanical Properties of G652.D and G657.A2 Fibers

CHARACTERISTICS	UNIT	G652.D	G657.A2
Fiber type	Type	G652.D	G657.A2
Attenuation at 1310 nm	dB/km	~0.35 dB/km	~0.35-0.40 dB/km
Attenuation at 1550 nm	dB/km	~0.20 dB/km	~0.21-0.25 dB/km
Attenuation at 1625 nm	dB/km	~0.30 dB/km	~0.25-0.30 dB/km
Chromatic Dispersion at 1310 nm	ps/nm·km	~0 ps/nm·km	
Chromatic Dispersion at 1550 nm	ps/nm·km	~17 ps/nm·km	
Bending Tolerance	Qualitative	Low	High
Zero Dispersion Slope	ps/nm²·km	~0.092 ps/nm²·km (at λ_0)	
Zero Dispersion Wavelength (λ_0)	nm	1300-1324 nm (typical ~1310 nm)	
Cut-off Wavelength (λcc)	nm	≤1260 nm	
Attenuation vs. Bending (60mm x 100 turns) at 1310 nm	dB	~0.8-1.2 dB	≤0.03 dB
Attenuation vs. Bending (60mm x 100 turns) at 1550 nm	dB	~1.5-2.5 dB	≤0.03 dB
Mode Field Diameter (MFD) at 1310 nm	μm	8.6 - 9.2 μm	8.6 - 9.0 μm
Mode Field Diameter (MFD) at 1550 nm	μm	9.5 - 10.5 μm	9.0 - 9.5 μm
Core-Clad Concentricity Error	μm	≤0.5 μm	
Cladding Diameter	μm	125 ± 1 μm	
Cladding Non-circularity	%	≤0.8%	≤0.8%
Coating Diameter	μm	245 ± 10 μm	245 ± 10 μm
Proof Test	GPa	≥0.69 GPa (69 kpsi)	≥0.69 GPa (69 kpsi)

This table is based on standard industry data for G652.D and G657.A2 optical fibers manufactured by Beyondtech. The values presented are representative but may vary depending on the specific thread and manufacturing conditions. For critical applications, please refer to the official technical specifications provided by Beyondtech or the thread manufacturer. Beyondtech assumes no responsibility for the use of this information without prior confirmation.

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Configuration Options

A

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B

Cable Outer Sheath:

- LSZH (Low Smoke Zero Halogen)
- PE (Polietileno)
- HDPE (Higth Density PE)
- PVC (Polyvinyl Chloride)

C

Strength Member type:

- FRP: fiber-reinforced polymer
- KFRP: Kevlarr-reinforced Polymer
- AFRP: Aramid-reinforced Polymer
- SW: Steel Wire

D

Messenger Member:

- FRP: fiber-reinforced polymer
- KFRP: Kevlarr-reinforced Polymer
- AFRP: Aramid-reinforced Polymer
- SW: Steel Wire

E

N° Fibers:

1, 2 or 4

F

Standard :

- G.652.D
- G.657.A1
- G.657.A2
- G.657.B3

Other options are available.
Ask your Beyondtech sales representative.

Custom cabling per request

BEYONDTECH® PREMIUM WARRANTY

For more information on Beyondtech Premium Warranty, visit **beyondtech.us/warranty**

RoHS Compliant CE

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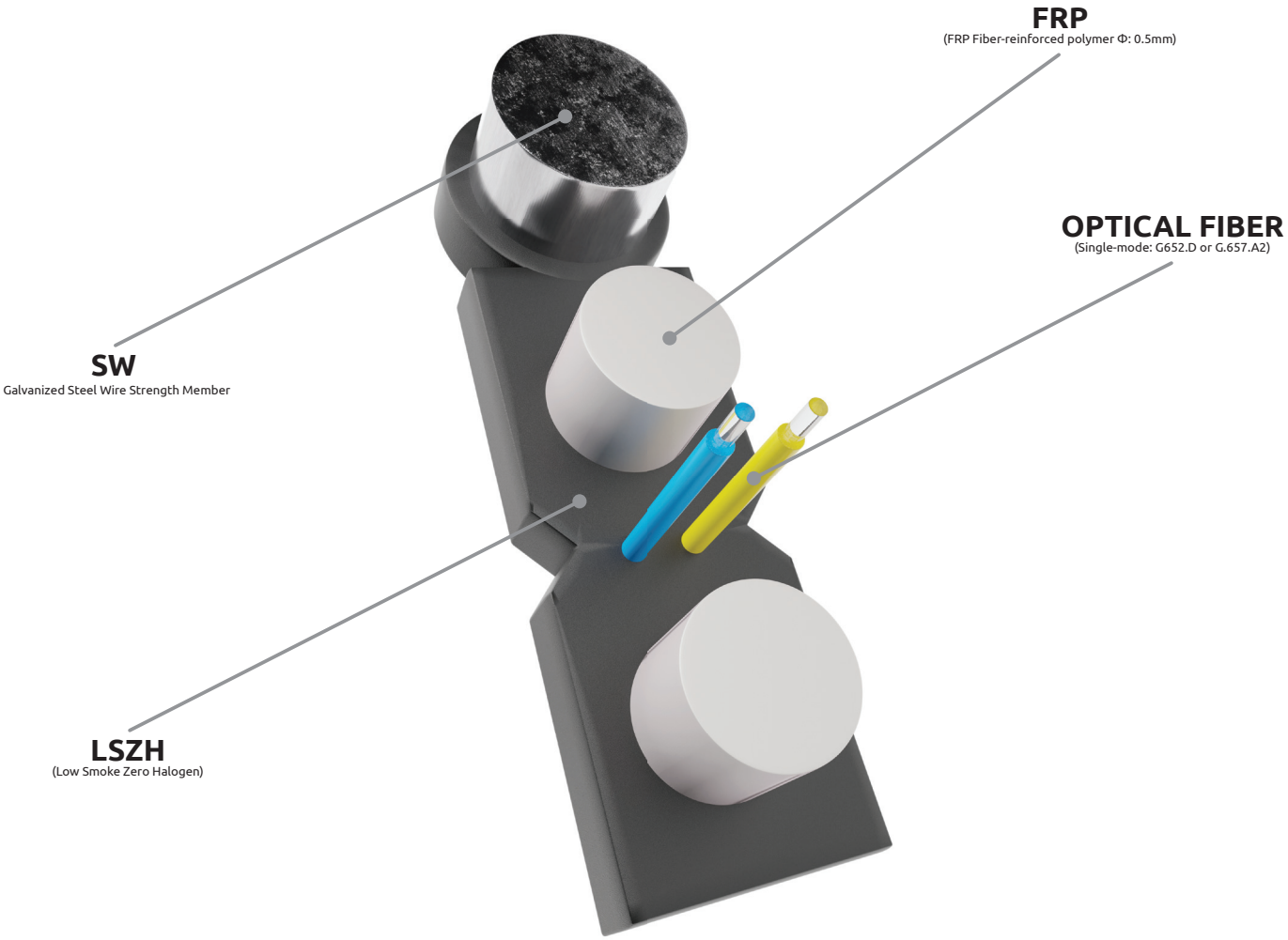
Cross Sectional Diagram



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Fiber Type: Single-mode: G652.D or G.657.A2
Wavelengths: 1310 nm, 1490 nm, 1550 nm and 1625 nm.
Number of Fibers: 1, 2, and 4 strings available
Color Coding: EIA/TIA-598
OD of cable(mm): 1, 2 String: (2.0 +- 0.1) x (5.2+-0.2) - 4 String: (5.4+-0.2)
Test Methodology: IEC 60794-1-E1 / IEC 60794-1-E3 / IEC 60794-1-E4 / IEC 60794-1-E6 / IEC 60794-1-E7 / IEC 60794-1-F1

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