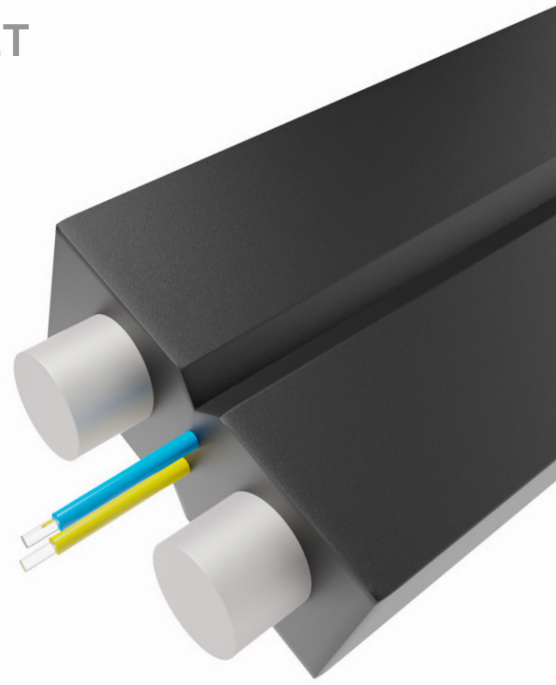
BEYONDTECH® SPECIFICATION SHEET

Beyondtech PureOptics ™

Drop Flat Square Fiber Optic Cable

Order Code: BTDFSA



Specifically designed for both indoor and outdoor FTTH installations, this versatile drop cable features a central optical fiber protected by a robust LSZH (Low Smoke Zero Halogen) jacket, ensuring fire safety in various environments. Reinforced with Fiber Reinforced Plastic (FRP) elements, it offers enhanced flexibility and durability under environmental stress. Ideal for last-mile connections, this cable provides reliable data transmission, easy installation, and consistent performance, making it an excellent choice for direct FTTH links to the ONT in residential and commercial networks.

FEATURES AND BENEFITS

- Compact Drop Design: Its flat, compact form factor allows for efficient space utilization, making it ideal for streamlined installations in tight environments and reducing overall installation costs.
- Lightweight and Flexible Construction: Engineered for ease of handling, the cable's flexibility enables quick installations, reducing labor time and enhancing installation efficiency in FTTH applications.
- Built with Quality Materials: Constructed with premium materials to ensure durability and resilience, delivering reliable performance in both indoor and outdoor settings.
- Low Attenuation, High-Quality Fiber: Equipped with premium fiber, this cable supports high-speed data transmission over extended distances, guaranteeing stable and consistent connectivity for FTTH networks.

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

Jacket Material:
LSZH (Low Smoke Zero Halogen)

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

OD of cable(mm):
2.0×3.0±0.02

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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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

N° Fibers:

1,2, 4, 8, or 12

E

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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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)
BTDFSA	1	2.0±0.02 × 3.0±0.02	8.8	40/80	500/1000	10D/20D
BTDFSA	2	2.0±0.02 × 3.0±0.02	8.9	40/80	500/1000	10D/20D
BTDFSA	4	2.0±0.02 × 3.0±0.02	9.2	40/80	500/1000	10D/20D

CABLE TYPE	FIBER COUNT	STRENGTH MEMBER (MM)	TEMPERATURE (℃)	CERTIFICATES
BTDFSA	1	FRP Fiber-reinforced polymer Φ: 0.5 ± 0.02	Working: -40~+70 Storage/Transportation: -40~+70 Installation: -20~+60	ISO9001, UL, RoHS, CPR (EN 50575)
BTDFSA	2	FRP Fiber-reinforced polymer Φ: 0.5± 0.02	Working: -40~+70 Storage/Transportation: -40~+70 Installation: -20~+60	ISO9001, UL, RoHS, CPR (EN 50575)
BTDFSA	4	FRP Fiber-reinforced polymer Φ: 0.5 ± 0.02	Working: -40~+70 Storage/Transportation: -40~+70 Installation: -20~+60	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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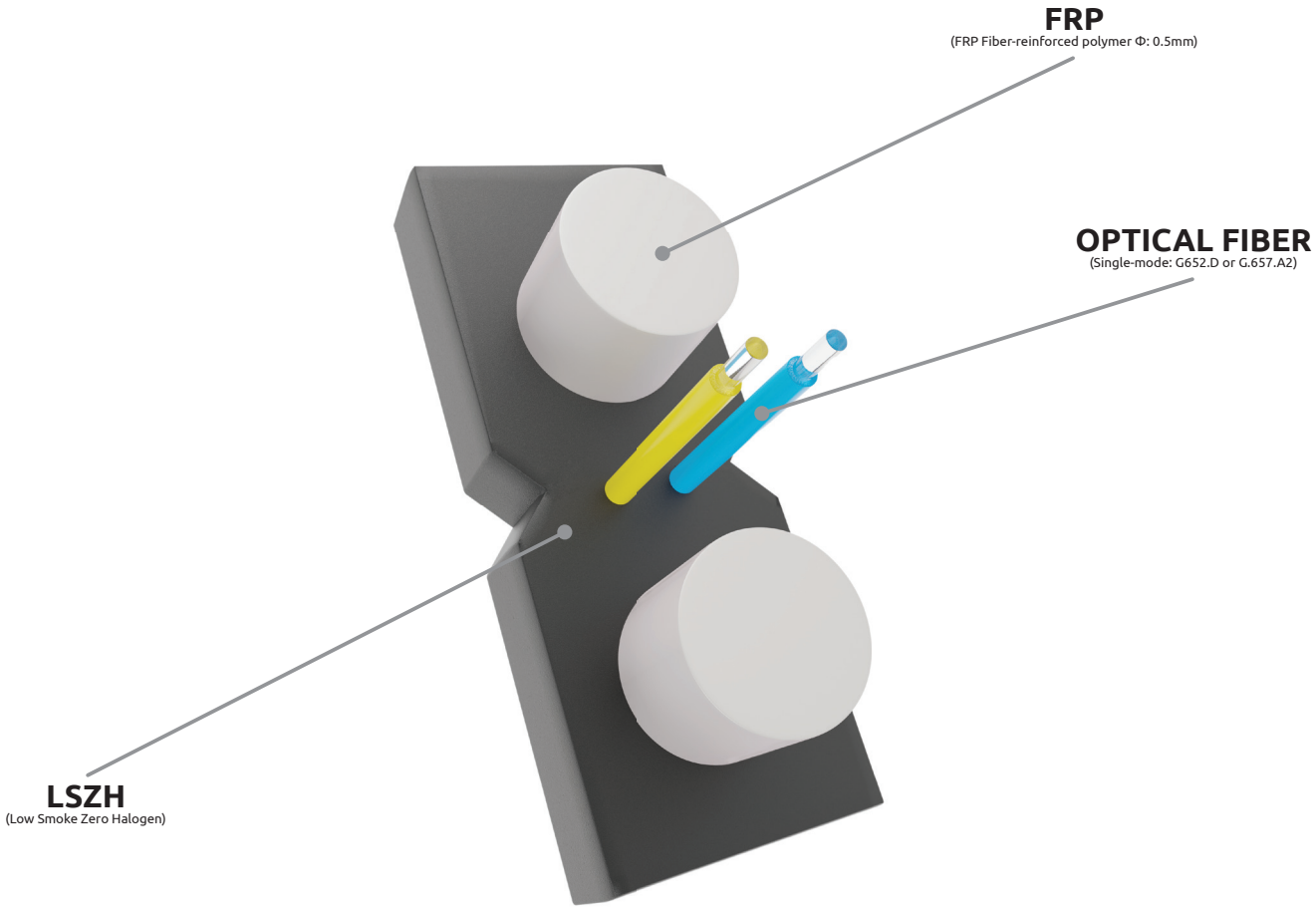
Cross Sectional Diagram



Order Code: BTDFSA
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): 2.0×3.0±0.02
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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