

FieldShield®

Pushable Optical Fiber



Application

Designed to simplify the placement of fiber, FieldShield Pushable Optical Fiber reduces the cost of any fiber deployment, while providing industry leading protection when mated with FieldShield Microducts. Pushable Optical Fiber is either pulled or pushed through microduct at turn-up, maximizing installation efficiency. In the event of a later fiber cut, the fiber can be easily pulled from microduct. The duct is then repaired and a new FieldShield Pushable Assembly is pushed or pulled through the microduct for a fast and cost-effective restoration.

Description

FieldShield Pushable Optical Fiber is a durable and crush resistant product that is suitable for most indoor or outdoor environments. Manufactured using PBT jacketing, pushable optical fiber offers flexibility as well as resistance to chemicals. FieldShield Pushable Optical Fiber is typically recommended to be used in conjunction with FieldShield Microduct.

Features and Benefits

Integrity

- Available in singlemode
- Supports all industry standard connectors
- Only solution approved for use with FieldShield Pre-terminated Pushable Connectors

Protection

- Bend-insensitive (G.657.A2) fiber protects optical signal with minimal to zero attenuation down to a 10 mm radius
- Tough PBT jacketing provides high column strength and low coefficient of friction to maximize push and pull distances
- Lightweight and high crush resistance makes Pushable Optical Fiber strong enough to be stapled directly to walls, joists and around corners
- One and two fiber drops protected by water blocking Kevlar strength member
- 6 to 48-fiber utilize water blocking gel

Access

- Standard color is black
- Tech-friendly 250 μm fiber inside the outer jacket reduces splicing steps and installation costs
- Suitable for all types of indoor and outdoor implementations

Investment

- Pushes directly into a Clearview® Cassette, FieldShield is optimized for placement alongside Clearfield® FieldSmart® fiber management platforms
- Quick and easy deployment allows capital investment to be aligned to customer take rates
- Available in multiple fiber counts up to 48 fibers

Technical Specifications

Physical Characteristics

FieldShield Pushable Optical Fiber	
Clad Diameter	125.0 \pm 0.7 μm
Clad Non-circularity	\leq 1%
Core/Clad Concentricity Error	\leq 0.5 μm maximum, < 0.2 μm typically
Coating Diameter (Uncolored)	235 - 245 μm
Coating-Clad Concentricity Error	(Offset) \leq 12 μm
Tensile Proof Test	100 kpsi (0.69 GPa)
Coating Strip Force Range	\geq 0.3 lbf < 2.0 lbf (\geq 1.3 N < 8.9 N)
Cable Spec	0.35 dB/km @ 1,310 nm/0.25 dB/km @ 1,550 nm



Available in 1, 2, 6, 12, 24 and 48 fiber counts

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Environmental Characteristics

FieldShield Pushable Optical Fiber	
Temperature Cycling	$(-60^{\circ}\text{C} + 85^{\circ}\text{C}) \leq 0.05 \text{ dB/km}$
High Temperature Aging	$(85 \pm 2^{\circ}\text{C}) \leq 0.05 \text{ dB/km}$
Temperature & Humidity Cycling (at -10°C to 85°C and 95% RH)	$\leq 0.05 \text{ dB/km}$
Water Immersion ($23 \pm 2^{\circ}\text{C}$)	$\leq 0.05 \text{ dB/km}$

FieldShield Pushable Optical Fiber	
Fiber	OFS All Wave Flex + Fiber Markings or equivalent
Water Peak	ZWP (Zero Water Peak)
Bend-Insensitive	Bend-Insensitive Fiber G.657.A2
Color Code	TIA/EIA 598 (US Standard)
Length	1, 2, 6 and 12-fiber: maximum spool length 20,000 feet 24-fiber: maximum spool length 10,000 feet 48-fiber: maximum spool length 5,000 feet
Fiber Count	Any fiber count up to 48 fibers
Pushable Connectors	FieldShield SC/UPC, SC/APC, Simplex and Duplex LC/UPC, Simplex and Duplex LC/APC, MPO
Standard Connectors	SC/UPC, SC/APC, LC/UPC, LC/APC, FC/UPC, FC/APC, ST/UPC, HFOC SC/APC, MPO
Mode	Singlemode
Internal Fiber Size	250 μm
Outside Diameter	1 to 12-fiber : 0.118" (3 mm) 24-fiber: 0.156" (4 mm) 48-fiber :0.217" (5.5 mm)
Color	Black
Material	PBT
Bend-Radius	10 mm minimum
Operating Temperature	-40°F to 176°F (-40°C to 80°C)
Installation Temperature	-14°F to 158°F (-26°C to 70°C)
Installation Tension	20 lbf for 3 mm; 20 lbf for 4 mm
Markings	Part number, lot number and footage markers every two feet

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Pre-Configured Part Numbers

Part Number	Description
FS-CA1-001-8ZD-B XXXX	FieldShield pushable optical fiber, 1-fiber (250 μm), singlemode, 3 mm jacket
FS-CA1-002-8ZD-B XXXX	FieldShield pushable optical fiber, 2-fiber (250 μm), singlemode, 3 mm jacket
FS-CA1-006-8ZD-B XXXX	FieldShield pushable optical fiber, 6-fiber (250 μm), singlemode, 3 mm jacket
FS-CA1-012-8ZD-B XXXX	FieldShield pushable optical fiber, 12-fiber (250 μm), singlemode, 3 mm jacket
FS-CA1-024-8ZE-B XXXX	FieldShield pushable optical fiber, 24-fiber (250 μm), singlemode, 4 mm jacket
FS-CA1-048-8ZF-B XXXX	FieldShield pushable optical fiber, 48-fiber (250 μm), singlemode, 5.5 mm jacket

Recommended Push/Pull

