

# 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

#### 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
- 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 within a microduct

#### 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 ± 0.7 µm
Clad Non-circularity	≤ 1%
Core/Clad Concentricity Error	≤ 0.5 µm maximum, < 0.2 µm typically
Coating Diameter (Uncolored)	235 - 245 µm
Coating-Clad Concentricity Error	(Offset) ≤ 12 µm
Tensile Proof Test	100 kpsi (0.69 GPa)
Coating Strip Force Range	≥ 0.3 lbf < 2.0 lbf (≥ 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	$(-40^{\circ}\text{C} + 85^{\circ}\text{C}) \leq 0.05 \text{ dB/km}$
High Temperature Aging	$(85 \pm 2^{\circ}\text{C}) \leq 0.05 \text{ dB/km}$
Temperature & Humidity Cycling (at $-10^{\circ}\text{C}$ to $85^{\circ}\text{C}$ 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)
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 $\mu\text{m}$
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	$-40^{\circ}\text{F}$ to $176^{\circ}\text{F}$ ( $-40^{\circ}\text{C}$ to $80^{\circ}\text{C}$ )
Installation Temperature	$-14^{\circ}\text{F}$ to $158^{\circ}\text{F}$ ( $-26^{\circ}\text{C}$ to $70^{\circ}\text{C}$ )
Installation Tension	20 lbf for 3 mm; 20 lbf for 4 mm
Markings	Part number, lot number and footage markers every two feet

# FieldShield® Pushable Optical Fiber



## Pre-Configured Part Numbers

Shipped in a Box

Part Number	Description
FS-CA1-001-8ZD-B 01000F	FieldShield pushable optical fiber, 1-fiber (250 μm), singlemode, 3 mm jacket, 1000 ft (305 m)
FS-CA1-001-8ZD-B 02000F	FieldShield pushable optical fiber, 1-fiber (250 μm), singlemode, 3 mm jacket, 2000 ft (610 m)
FS-CA1-001-8ZD-B 03000F	FieldShield pushable optical fiber, 1-fiber (250 μm), singlemode, 3 mm jacket, 3000 ft (914 m)
FS-CA1-001-8ZD-B 05000F	FieldShield pushable optical fiber, 1-fiber (250 μm), singlemode, 3 mm jacket, 5000 ft (1,524 m)
FS-CA1-002-8ZD-B 01000F	FieldShield pushable optical fiber, 2-fiber (250 μm), singlemode, 3 mm jacket, 1000 ft (305 m)
FS-CA1-002-8ZD-B 02000F	FieldShield pushable optical fiber, 2-fiber (250 μm), singlemode, 3 mm jacket, 2000 ft (610 m)
FS-CA1-002-8ZD-B 03000F	FieldShield pushable optical fiber, 2-fiber (250 μm), singlemode, 3 mm jacket, 3000 ft (914 m)
FS-CA1-006-8ZD-B 01000F	FieldShield pushable optical fiber, 6-fiber (250 μm), singlemode, 3 mm jacket, 1000 ft (305 m)
FS-CA1-006-8ZD-B 03000F	FieldShield pushable optical fiber, 6-fiber (250 μm), singlemode, 3 mm jacket, 3000 ft (914 m)
FS-CA1-012-8ZD-B 01000F	FieldShield pushable optical fiber, 12-fiber (250 μm), singlemode, 3 mm jacket, 1000 ft (305 m)
FS-CA1-012-8ZD-B 03000F	FieldShield pushable optical fiber, 12-fiber (250 μm), singlemode, 3 mm jacket, 3000 ft (914 m)
FS-CA1-024-8ZE-B 01000F	FieldShield pushable optical fiber, 24-fiber (250 μm), singlemode, 4 mm jacket, 1000 ft (305 m)
FS-CA1-024-8ZE-B 02000F	FieldShield pushable optical fiber, 24-fiber (250 μm), singlemode, 4 mm jacket, 2000 ft (610 m)
FS-CA1-024-8ZE-B 05000F	FieldShield pushable optical fiber, 24-fiber (250 μm), singlemode, 4 mm jacket, 5000 ft (1,524 m)
FS-CA1-048-8ZF-B 01500F	FieldShield pushable optical fiber, 48-fiber (250 μm), singlemode, 5.5 mm jacket, 1500 ft (457 m)
FS-CA1-048-8ZF-B 02500F	FieldShield pushable optical fiber, 48-fiber (250 μm), singlemode, 5.5 mm jacket, 2500 ft (762 m)

## Recommended Push/Pull

