

Optical Fiber Pigtail

TECHNICAL DATA SHEET

**ST Single Mode Fiber Optic Pigtail UPC –
ITU-T G.657A1, 12 Fiber**



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Product Description

The Fiber Optic Pigtail ST/UPC to Underterminated is a factory-terminated 12-fiber optical pigtail designed for high-density fiber termination and fusion splicing applications. It features ST/UPC connectors on one end and unterminated fibers on the opposite end, enabling fast and reliable installation in Optical Distribution Frames (ODFs), fiber termination boxes, patch panels, and telecommunications networks.



Manufactured with OS2 single-mode (9/125 μm) bend-insensitive optical fiber compliant with ITU-T G.657.A1, and protected by a Low Smoke Zero Halogen (LSZH) jacket, this pigtail provides excellent optical performance, low insertion loss, and high reliability for long-distance transmission and FTTH deployments.

Product Features

- ST/UPC connectors on one end, unterminated fibers on the other
- 12-fiber construction
- OS2 single-mode fiber (9/125 μm)
- Compliant with **ITU-T G.657.A1**
- Bend-insensitive fiber design
- Low insertion loss and high return loss
- High-precision zirconia ceramic ferrules
- LSZH (Low Smoke Zero Halogen) jacket
- Factory polished and 100% optically tested

Applications

- FTTH (Fiber to the Home)
- Optical Distribution Frames (ODF)
- Fiber Termination Boxes (FTB)
- Telecommunications Networks
- GPON / EPON Systems
- CATV Networks
- Backbone Fiber Networks
- Optical Access Networks

Product Parameters

Item	Specification
Connector A	ST/UPC
Connector B	Unterminated
Fiber Count	12 Fibers
Fiber Type	OS2 (9/125 μm)
Fiber Standard	ITU-T G.657.A1
Cable Construction	12-Fiber
Jacket Material	LSZH

Optical Specifications

Parameter	Value
Fiber Type	OS2 (9/125 μm)
Fiber Standard	ITU-T G.657.A1
Connector Type	ST/UPC
Polish Type	UPC
Operating Wavelength	1310 / 1550 nm
Insertion Loss	≤ 0.30 dB (Typical ≤ 0.20 dB)
Return Loss	≥ 50 dB
Repeatability	≤ 0.20 dB
Interchangeability	≤ 0.20 dB
Durability	≤ 0.20 dB change after 500 mating cycles

Environmental Performance

Test Item	Condition	Requirement
High Temperature	+85°C, 96 Hours	$\Delta\text{IL} \leq 0.2$ dB
Low Temperature	-40°C, 96 Hours	$\Delta\text{IL} \leq 0.2$ dB
Thermal Cycling	-40°C to +85°C	$\Delta\text{IL} \leq 0.2$ dB
Humidity	95% RH, 96 Hours	Stable Performance

Mechanical Reliability

Test Item	Requirement
Mating Durability	≥ 500 Cycles
Tensile Strength	≥ 10 N
Vibration Resistance	$\Delta IL \leq 0.2$ dB
Shock Resistance	$\Delta IL \leq 0.2$ dB
Twist Test	Meets IEC Requirements