

Optical Fiber

TECHNICAL DATA SHEET

Fiber Optic ST/APC SX Connector green



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Product Description:

The ST APC Single-Mode Epoxy Fiber Optic Connector is a field-terminated optical connector designed for use with single-mode fiber cables having an outer diameter up to 3 mm. It uses an ST (Straight Tip) bayonet style coupling which allows for secure and easy mating and unmating of optical fibers in networking environments.



Applications:

- Telecommunication backbone networks (long-distance and metro links)
- Fiber-to-the-Home (FTTH) installations
- Passive Optical Networks (PON)
- LAN and WAN corporate networks
- Data centers and server farm fiber connections
- CATV (Cable TV) networks
- High-precision optical test and measurement setups

Technical Specifications:

Parameter	Specification
Connector Type	ST (Straight Tip) with APC (Angled Physical Contact)
Fiber Mode	Single-Mode (SM 9/125 μm)
Ferrule Material	Zirconia Ceramic
Insertion Loss (IL)	≤ 0.30 dB (typical)

Return Loss (RL)	≥ 60 dB (APC type)
Operating Wavelengths	1310 nm, 1550 nm
Cable Jacket Diameter	Up to 3 mm (boot size)
Operating Temperature Range	-40 °C to +85 °C
Durability / Mating Cycles	≥ 500 insertions
Standards Compliance	IEC 61754, Telcordia GR-326-CORE
Termination Type	Epoxy / Polish Field Termination

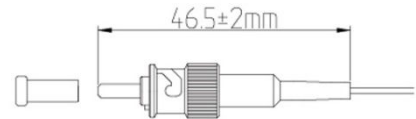
Mechanical Characteristics:

Parameter	Specification
Connector Coupling Type	Bayonet (Twist-Lock)
Ferrule Material	Zirconia Ceramic
Ferrule Diameter	1.25 mm
Housing Material	PBT (Polybutylene Terephthalate) or equivalent durable plastic
Boot / Strain Relief Material	TPU / TPV or flexible plastic, 3 mm cable compatible
Insertion / Extraction Force	10–20 N typical (per IEC 61300-3-4)
Durability / Mating Cycles	≥ 500 cycles minimum
Alignment Sleeve / Spring	Stainless steel / PBT spring ensures precise fiber alignment
Operating Temperature (Mechanical)	-40 °C to +85 °C

Resistance to Vibration	Compliant with IEC 61300-2-1 standards
Resistance to Shock	Compliant with IEC 61300-2-2 standards
Dust Cap / Protection	Removable LDPE or PBT dust cap included
Cable Retention / Pull Strength	Meets Telcordia GR-326-CORE pull-out requirements (~10–20 N)

Benefits:

- **Low Insertion Loss** – ensures minimal signal attenuation for high-quality optical transmission.
- **High Return Loss** – APC angled polish reduces back-reflection, ideal for long-distance single-mode links.
- **Reliable Mechanical Connection** – ST bayonet twist-lock provides secure mating and easy installation.
- **Durable Ferrule Material** – zirconia ceramic ensures precise fiber alignment and long-term stability.
- **Wide Operating Temperature** – works in harsh environments from $-40\text{ }^{\circ}\text{C}$ to $+85\text{ }^{\circ}\text{C}$.
- **Field-Termination Capability** – epoxy/polish allows on-site installation and repair.



Raw Materials Detailed List:

Item	Part	Material	RoHS Compliance
1	Anti-dust Cap	LDPE (Low-Density Polyethylene)	Yes
2	Housing	PBT (Polybutylene Terephthalate)	Yes
3	Inner Core	PBT (Polybutylene Terephthalate)	Yes
4	Spring	SUS304 Stainless Steel	Yes
5	Ferrule	Zirconia Ceramic	Yes
6	Body	Copper Alloy	Yes
7	Boot	TPV (Thermoplastic Vulcanizate)	Yes

Note:

The connector boot is available in Blue and White colors.