



Product Data Sheet

| Product Description

Indoor Fiber Optic Patch Cord - Single Mode G652D Series

Manufacturer: Shenzhen Tibtronix Technology Co.,LTD

Tibtronix indoor fiber optic patch cords are designed for reliable optical interconnection in telecommunication networks, transmission systems, optical distribution frames, equipment rooms and data center cabling. The product series is available with standard connector types, contact polish types, cable diameters, core configurations and cable jacket materials according to each contract/order requirement.

This catalogue is prepared as a common datasheet for both 2-core duplex and 1-core simplex indoor patch cord requirements. Connector type and contact type are configurable in the ordering information section.

Features:

Low connector loss

High return loss

Good repeatability and interchangeability

Excellent environmental adaptability

Aramid yarn strength member

Dust-proof plastic caps

100% optical performance test before delivery

Product application areas:

Telecommunication optical networks

Optical transmission systems

FTTx and access networks

Optical distribution frames and patch panels

Data center cabling

Base station and equipment-room interconnection

Testing equipment and fiber sensing systems

| Technical Parameter

Parameter	Specification
Fiber type	Single Mode G652D, core/cladding diameter 9.2 μm / 125 μm , compliant with ITU-T G.652D
Connector type	SC / LC / FC / ST, or customized according to contract/order requirement
Contact polish type	For duplex 2-core: UPC / APC; For simplex 1-core: PC / UPC / APC
Number of cores	02 cores for duplex cable; 01 core for simplex cable
Cable outer diameter	2.0 mm for duplex cable; ≥ 3.0 mm for simplex cable
Cable length	3 m / 5 m / 10 m for duplex; 3 m / 5 m for simplex; customized length available
Cable jacket material	PVC / LSZH / OFNP
Cable color for single mode	Yellow
Strength member	Aramid yarn
Working wavelength	1310 nm / 1550 nm
Connector Loss	≤ 0.25 dB per connector, tested according to IEC 61300-3-3
Return Loss / Reflectance	PC: RL ≥ 35 dB; UPC: RL ≥ 55 dB; APC: RL ≥ 65 dB
Repeatability	≤ 0.1 dB
Interchangeability	≤ 0.2 dB
Number of mating cycles	≥ 500 times
Operating temperature	0°C to +75°C
Storage temperature	0°C to +85°C
Minimum bending radius	During installation: 60 mm; After installation: 30 mm
Tensile strength	Operating tensile strength ≥ 100 N; Installation tensile strength ≥ 200 N
Fiber attenuation	≤ 0.30 dB/km @1310 nm; ≤ 0.27 dB/km @1550 nm
Chromatic dispersion	≤ 3.5 ps/nm·km @1310 nm; ≤ 18 ps/nm·km @1550 nm
Long-term crush resistance	≥ 100 N/cm ²
Short-term crush resistance	≥ 500 N/cm ²

Parameter	Specification
Impact resistance	0.74 Nm, hammer radius r = 25 mm, minimum 20 impacts
Protection	Dust-proof plastic caps on connector/adaptor ends
Compliance	REACH, SVHC and RoHS

| Ferrule Technical Parameters

Ferrule parameters describe the precision ceramic sleeve inside the optical connector. The ferrule is used to hold and align the optical fiber accurately at the connector end-face.

Description	Single Mode Typical Value
Ferrule material	Zirconia ceramic
Ferrule length	LC: 6.40 ± 0.10 mm; SC/FC/ST: 10.50 ± 0.05 mm
Outer diameter	LC: 1.249 ± 0.0005 mm; SC/FC/ST: 2.499 ± 0.005 mm
Inside diameter	126 ± 1 μm
Concentricity	≤ 1.0 μm

| Ordering Information

Since the final connector type may be determined by each contract/order, the part number is structured as a configurable ordering code. The ordering code should be confirmed according to actual connector type, contact polish type, cable diameter, cable core configuration, fiber type, length and jacket material.

Code Segment	Option	Description
A1 / A2	SC / LC / FC / ST / Customized	Connector type at end 1 / end 2
P	PC / UPC / APC	Contact polish type. Duplex 2-core supports UPC/APC; Simplex 1-core supports PC/UPC/APC
B	2.0 / 3.0	Cable outer diameter: 2.0 mm or 3.0 mm
C	SX / DX	Cable configuration: SX = Simplex 1-core; DX = Duplex 2-core
D	SM-G652D	Single mode G652D fiber
E	3M / 5M / 10M / Customized	Nominal cable length according to contract/order requirement
F	PVC / LSZH / OFNP	Cable jacket material

Ordering code format: A1-A2 / P / B / C / D / E / F

Example	Meaning
LC-LC / UPC / 2.0 / DX / SM-G652D / 10M / PVC	Duplex 2.0mm G652D PVC patch cord, LC/UPC to LC/UPC, 10m
SC-LC / APC / 3.0 / SX / SM-G652D / 5M / LSZH	Simplex 3.0mm G652D LSZH patch cord, SC/APC to LC/APC, 5m
FC-ST / PC / 3.0 / SX / SM-G652D / 3M / PVC	Simplex 3.0mm G652D PVC patch cord, FC/PC to ST/PC, 3m

Note: Actual part number and connector configuration shall follow the final contract/order. The product performance shall comply with the technical parameters stated in this catalogue.

| Statement of Compliance to Patch Cord Requirements

Item	Catalogue Declaration
2-core duplex patch cord	Duplex, SC/LC/FC/ST, UPC/APC, 02 cores, 2.0mm, 3m/5m/10m, PVC/LSZH/OFNP, yellow single-mode cable
1-core simplex patch cord	Simplex, SC/LC/FC/ST, PC/UPC/APC, ≥3.0mm, 3m/5m, PVC/LSZH/OFNP, yellow single-mode cable
Optical performance	Connector Loss ≤0.25 dB/connector; Return Loss PC ≥35dB, UPC ≥55dB, APC ≥65dB
Mechanical performance	Operating tensile strength ≥100N; installation tensile strength ≥200N; long-term crush ≥100N/cm ² ; short-term crush ≥500N/cm ² ; impact 0.74Nm, minimum 20 impacts
Environmental and compliance	Operating 0°C to +75°C; storage 0°C to +85°C; REACH, SVHC and RoHS

Shenzhen Tibtronix Technology Co.,LTD

3/F, 12th Building, Nangang 1st Industrial Park, Baimang Xili, Songbai Road, Nanshan District, Shenzhen, Guangdong 518055, CN