Planet
Structure Cabling Systems

Flame-Retardant Tight-Buffered Cable | LSZH | All-Dielectric | Indoor Outer LSZH Jacket

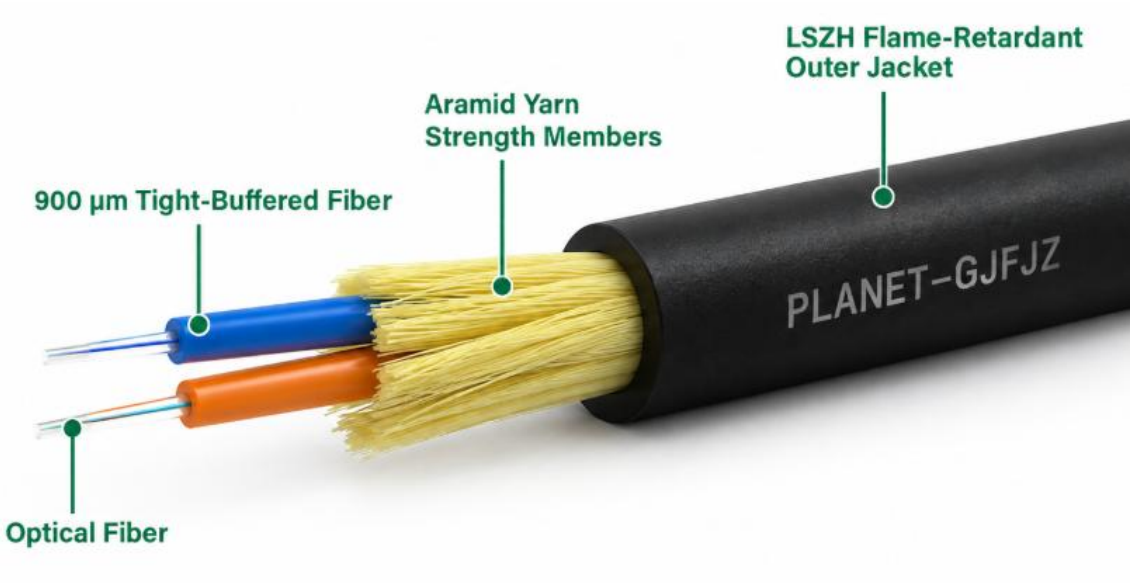
Fiber Optic Cable

1. General Description

PLANET GJFJZ is an indoor flame-retardant tight-buffered fiber optic cable family intended for short indoor links, telecom rooms, equipment interconnection, patching, protected distribution and subscriber-side fiber connections. The standard construction uses color-coded 900 µm tight-buffered optical fiber, aramid yarn dielectric strength members and a flame-retardant LSZH outer jacket. The cable contains no metallic armor or steel strength member in the standard construction.

The current PLANET commercial family includes compact 1-core and 2-core LSZH versions around 3 mm. Final outer diameter, geometry, fiber grade, jacket color and flame classification shall be confirmed on the approved production datasheet before mass production.

Fiber Options	Construction	Cable Classification	Typical Use
OS2 / OM3 / OM4 / OM5	900 µm Tight Buffer + Aramid Yarn + LSZH	All-Dielectric Non-Armored	Indoor Patch / Distribution Equipment & Telecom Rooms



2. Construction & General Specifications

Parameter	PLANET Enhanced Specification
Fiber Type	OS2 single mode; OM3 / OM4 / OM5 multimode available as approved options.
Single-Mode Options	ITU-T G.652.D standard option; G.657.A1 / G.657.A2 bend-insensitive option for tighter routing.
Fiber Count	1F and 2F standard family configurations; other counts subject to approved construction.
Tight Buffer	900 ± 50 µm, color-coded, easy-strip indoor grade.
Strength Member	Aramid yarn, dielectric, non-metallic.
Outer Jacket	Flame-retardant LSZH, virgin compound only; color according to fiber type / project.
Nominal Cable Size	Approx. 3.0 mm for standard compact 1F / 2F versions; final dimension per approved factory drawing.
Armor / Metallic Elements	None in standard construction.
Cable Marking	PLANET GJFJZ + fiber count + fiber type + sequential length marking + production traceability.

3. Key Performance Requirements

- All-dielectric construction with aramid-yarn reinforcement.
- Flame-retardant LSZH sheath with low smoke and halogen-free performance for the approved configuration.
- Easy stripping and direct termination for indoor fiber routing and equipment interconnection.
- 100% optical continuity and attenuation verification before shipment.
- Virgin jacket material only; recycled or reprocessed LSZH is not permitted.

4. Mechanical & Environmental Characteristics

Parameter	Requirement / Reference
Operating Temperature	-20°C to +70°C
Storage Temperature	-40°C to +70°C
Installation Temperature	-10°C to +50°C
Minimum Bend Radius - Installation	≥ 20 × cable O.D.
Minimum Bend Radius - Static	≥ 10 × cable O.D.
Tensile Load - Short Term	≥ 200 N for standard compact indoor configuration*
Tensile Load - Long Term	≥ 100 N for standard compact indoor configuration*
Crush Resistance - Short Term	≥ 1000 N/100 mm*
Crush Resistance - Long Term	≥ 300 N/100 mm*
Installation Environment	Dry / protected indoor routes, trays, conduits, racks, telecom rooms and equipment areas.

5. Optical Characteristics

Parameter	OS2	OM3	OM4	OM5
Attenuation @ 1310 nm	≤ 0.35 dB/km	—	—	—
Attenuation @ 1550 nm	≤ 0.21 dB/km	—	—	—
Attenuation @ 850 nm	—	≤ 3.0 dB/km	≤ 3.0 dB/km	≤ 3.0 dB/km
Attenuation @ 1300 nm	—	≤ 1.0 dB/km	≤ 1.0 dB/km	≤ 1.0 dB/km
Attenuation @ 953 nm	—	—	—	≤ 3.0 dB/km
EMB @ 850 nm	—	≥ 2000 MHz·km	≥ 4700 MHz·km	≥ 4700 MHz·km
EMB @ 953 nm	—	—	—	≥ 2470 MHz·km
Cladding Diameter	125.0 ± 0.7 µm	125 ± 1.0 µm	125 ± 1.0 µm	125 ± 1.0 µm
Coating Diameter	245 ± 10 µm	245 ± 10 µm	245 ± 10 µm	245 ± 10 µm

6. Fiber Standards

Fiber	Reference
OS2	ITU-T G.652.D; G.657.A1 / G.657.A2 optional; IEC 60793-2-50.
OM3	IEC 60793-2-10, A1a.2; ISO/IEC 11801 multimode class reference.
OM4	IEC 60793-2-10, A1a.3; ISO/IEC 11801 multimode class reference.
OM5	IEC 60793-2-10, A1a.4; wideband multimode fiber.

7. Standards & Compliance

Standard / Requirement	Scope / Requirement
IEC 60794-2 Series	Indoor optical fiber cable construction and applicable mechanical/environmental tests.
IEC 60793 Series	Optical fiber dimensional and transmission characteristics.
IEC 60332-1-2	Single-cable flame propagation for the approved flame-retardant LSZH construction.
IEC 60754-1 / IEC 60754-2	Halogen acid gas / acidity and conductivity requirements when LSZH compliance is claimed.
IEC 61034-2	Smoke density requirement for the approved low-smoke construction.
RoHS / REACH	Subject to applicable material declarations.
CPR / EN 50575	Optional project-specific classified version; Declaration of Performance required when claimed.

8. Recommended Applications

- Indoor telecom rooms, equipment rooms and optical distribution frames.
- Short indoor distribution and equipment-interconnection links.
- Patch-panel, rack and cabinet fiber routing.
- Protected conduit, tray and raceway installation.
- Indoor subscriber-side / FTTx connections where compact LSZH tight-buffered cable is preferred.
- Commercial, data-center, educational and industrial indoor communication networks.

9. Quality & Factory Requirements

Control Item	Binding Requirement
Raw Materials	Approved optical fiber, qualified tight-buffer compound, approved aramid yarn and virgin LSZH outer-jacket compound only.
Optical Testing	100% continuity and attenuation verification before shipment; OTDR / test records available on request.
Dimensional Control	Tight-buffer diameter, jacket thickness, concentricity and cable diameter controlled to approved factory drawing.
Flame / LSZH Evidence	Applicable flame, halogen and smoke claims shall be supported by valid test evidence for the supplied construction.
Traceability	Production lot / reel traceable by date, material batch, fiber batch and final inspection record.
Change Control	No change in design, materials, dimensions, performance or labeling without prior written PLANET approval.

10. Ordering Information

Part Number	Typical Configuration	Description
PL-GJFJZ-01S2	1F / OS2	Indoor LSZH flame-retardant tight-buffered cable, nominal 3 mm.
PL-GJFJZ-02S2	2F / OS2	Indoor LSZH flame-retardant tight-buffered cable, nominal 3 mm.
PL-GJFJZ-XXM3	OM3	Multimode OM3 project configuration; fiber count per order.
PL-GJFJZ-XXM4	OM4	Multimode OM4 project configuration; fiber count per order.
PL-GJFJZ-XXM5	OM5	Multimode OM5 project configuration; fiber count per order.

25-Year System Warranty	**Subject to proper installation and certified components usage.**

Part Number	Description
PL- GJFJZ-xxS2	Indoor Fiber Optic Cable **Single Mode OS2**
PL- GJFJZ-xxM3	Indoor Fiber Optic Cable **Multi Mode OM3**
PL- GJFJZ-xxM4	Indoor Fiber Optic Cable **Multi Mode OM4**
PL- GJFJZ-xxM5	Indoor Fiber Optic Cable **Multi Mode OM5**

XX: Number of Core