

1. General Description

PLANET GJFJV is an indoor tight-buffered distribution fiber optic cable designed for building backbone, telecom-room, riser, horizontal/vertical distribution, data-center and equipment-interconnection applications. The cable combines color-coded 900 µm tight-buffered fibers with aramid yarn tensile reinforcement for flexible handling and direct termination.

The standard PLANET GJFJV construction uses a high-grade flame-retardant PVC outer jacket. OS2 G.652.D is the standard single-mode fiber, while G.657.A1/A2 and OM3 / OM4 / OM5 fiber options are available for approved project requirements.

OS2 / OM3 / OM4 / OM5 Fiber Options	INDOOR Distribution	900 µm Tight Buffered	2F–24F Typical Range
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2. Construction

Parameter	Specification
Fiber Type	OS2 G.652.D standard. G.657.A1 / G.657.A2 approved single-mode options. OM3 / OM4 / OM5 50/125 µm multimode versions available upon project request.
Fiber Count	Typical range 2F to 24F. Common counts: 2F, 4F, 6F, 8F, 12F and 24F.
Tight Buffer	900 ± 50 µm, color coded for direct handling and termination.
Strength Members	Aramid yarn surrounding the tight-buffered fiber bundle; fully dielectric tensile reinforcement.
Outer Jacket	Premium flame-retardant PVC indoor outer jacket; virgin compound only. Standard color yellow for OS2 unless otherwise specified.
Classification	ALL-DIELECTRIC / NON-METALLIC / NON-ARMORED / INDOOR
Cable Identification	Sequential length marking and PLANET / GJFJV printing according to approved production artwork.

3. Mechanical & Environmental Characteristics

Parameter	Minimum / Typical Requirement
Operating Temperature	-20°C to +70°C
Installation Temperature	-10°C to +50°C
Storage / Transport Temperature	-40°C to +70°C
Minimum Bend Radius – Installation	20 × cable O.D.
Minimum Bend Radius – Static	10 × cable O.D.
Tensile Strength	≥ 800 N short term / ≥ 300 N long term
Crush Resistance	≥ 1000 N/100 mm short term / ≥ 300 N/100 mm long term

4. Optical Characteristics – OS2 / OM3 / OM4 / OM5

Parameter	OS2 (G.652.D)	OM3 (50/125)	OM4 (50/125)	OM5 (50/125)
Nominal	1310 / 1550 nm	850 / 1300 nm	850 / 1300 nm	850 / 1300 / 953 nm
Max. Attenuation @ 850nm	—	≤ 3.0 dB/km	≤ 3.0 dB/km	≤ 3.0 dB/km
Max. Attenuation 1300/1310 nm	≤ 0.35 dB/km @1310	≤ 1.0 dB/km	≤ 1.0 dB/km	≤ 1.0 dB/km
Max. Attenuation @ 1550nm	≤ 0.21 dB/km	—	—	—
EMB @ 850	—	≥ 2000 MHz·km	≥ 4700 MHz·km	≥ 4700 MHz·km
EMB @ 953	—	—	—	≥ 2470 MHz·km
Core Diameter	≈ 9 μ m mode field	50 ± 2.5 μ m	50 ± 2.5 μ m	50 ± 2.5 μ m
Cladding	125.0 ± 0.7 μ m	125 ± 1.0 μ m	125 ± 1.0 μ m	125 ± 1.0 μ m
Coating	245 ± 10 μ m	245 ± 10 μ m	245 ± 10 μ m	245 ± 10 μ m
Fiber Standard	ITU-T G.652.D / IEC 60793-2-50	IEC 60793-2-10 A1a.2	IEC 60793-2-10 A1a.3	IEC 60793-2-10 A1a.4

5. Typical Fiber Count and Dimensional Guide

The following values are selection guides only. Final outer diameter, weight and mechanical performance shall be confirmed for the approved production design.

Fiber Count	Construction	Typical O.D.	Typical Weight	Typical Use
2–4F	Tight-buffered distribution	4.5–5.5 mm	≈ 20–28 kg/km	Indoor links / equipment rooms
6–8F	Tight-buffered distribution	5.5–6.5 mm	≈ 28–38 kg/km	LAN / building distribution
12F	Tight-buffered distribution	6.0–7.5 mm	≈ 35–50 kg/km	Backbone / riser
24F	Tight-buffered distribution	7.5–9.5 mm	≈ 55–80 kg/km	High-density indoor backbone

6. Standards & Compliance

- IEC 60794-2 series – indoor optical fiber cable construction and testing.
- IEC 60793-2-50 / ITU-T G.652.D – OS2 single-mode fiber.
- IEC 60793-2-10 – OM3 / OM4 / OM5 multimode fiber when supplied.
- IEC 60332-1-2 – single-cable flame propagation for the approved flame-retardant PVC construction.
- RoHS compliance according to applicable production declaration; REACH documentation available upon project request.
- CPR / EN 50575 classification only when separately tested and documented for the exact supplied construction.

7. Factory Tests & Verification

- 100% attenuation / OTDR test for each production drum at applicable wavelengths.
- Tensile, crush, impact, repeated bend and torsion type-test evidence to applicable IEC 60794 methods.
- Flame propagation test evidence for the approved flame-retardant PVC jacket construction.
- Visual inspection, dimensional verification, print quality and sequential meter-marking check.
- Certificate of Conformance, drum-wise test results and raw-material traceability records upon request.

8. Quality & Change Control

- Use only approved optical fiber, qualified tight-buffer compounds, aramid yarn and virgin flame-retardant PVC jacket compound; no recycled jacket material.
- Maintain tight-buffer diameter, fiber color sequence, yarn coverage, outer-jacket thickness, cable O.D. and print legend within the approved design tolerances.
- Each production drum / lot shall be traceable by production date, fiber batch and final-inspection record for minimum 15 years.
- No change to fiber manufacturer/type, buffer material, aramid yarn, jacket compound, dimensions or performance without prior written PLANET approval.
- PLANET reserves the right to request factory records, certificates and independent verification before or after production.

9. Available Project Options

- G.657.A1 / G.657.A2 bend-insensitive OS2 single-mode fiber.
- OM3, OM4 or OM5 50/125 µm multimode fiber.
- Custom fiber count and color sequence subject to approved construction.
- Custom jacket color and continuous sequential meter marking.
- Project-specific CPR / flame classification subject to certified test evidence.

10. Recommended Applications

- Indoor backbone and horizontal/vertical fiber distribution.
- Building riser and telecom-room distribution.
- Data centers, enterprise LAN and campus-building infrastructure.
- Equipment interconnection and optical distribution frames.
- Indoor FTTx / access-network distribution where direct termination is preferred.
- Commercial, educational and industrial indoor communication networks.

11. Selection Note

GJFJV is an indoor tight-buffered distribution cable. The standard PLANET GJFJV construction is all-dielectric and non-armored, with 900 µm tight-buffered fibers, aramid yarn reinforcement and a flame-retardant PVC outer jacket. For a dedicated LSZH family designation, use the applicable PLANET GJFJH construction rather than treating PVC and LSZH as interchangeable.

12. Ordering Description

Configuration	Typical Ordering Description
Part Number Family	PL-GJFJV
OS2	PLANET GJFJV – 12F – OS2 G.652.D – 900 µm Tight Buffered – Aramid Yarn – Flame-Retardant PVC Jacket
OM3	PLANET GJFJV – 12F – OM3 50/125 – 900 µm Tight Buffered – Aramid Yarn – Flame-Retardant PVC Jacket
OM4	PLANET GJFJV – 12F – OM4 50/125 – 900 µm Tight Buffered – Aramid Yarn – Flame-Retardant PVC Jacket
OM5	PLANET GJFJV – 12F – OM5 50/125 – 900 µm Tight Buffered – Aramid Yarn – Flame-Retardant PVC Jacket

25-Year System Warranty

Subject to proper installation and certified components usage.

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

XX: Number of Core