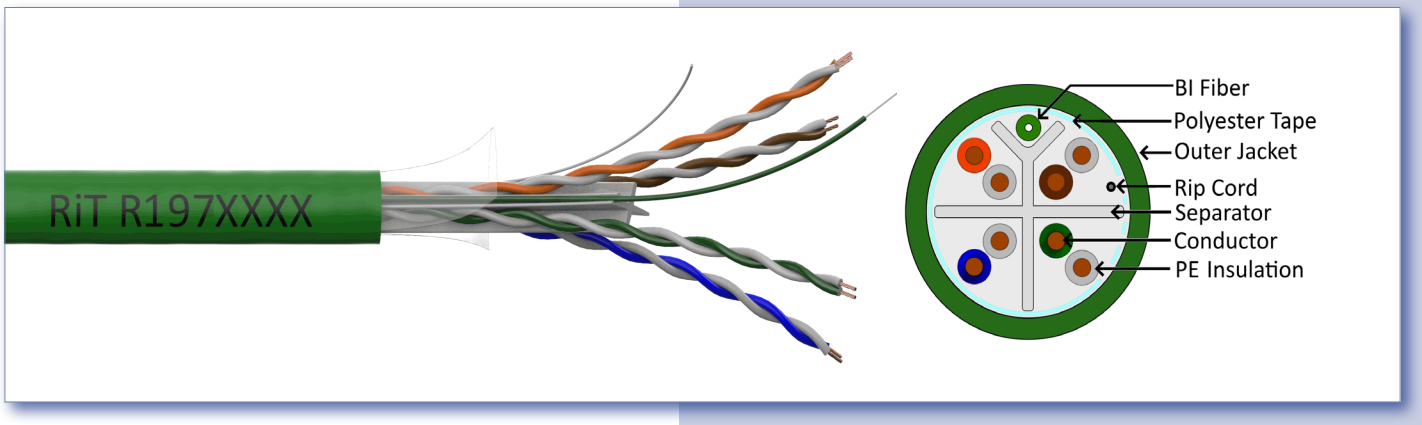
# RiT F5G Optical Network Horizontal Cable, CAT.6 UTP, 23AWG, SM G657, PVC/ LSZH

**Composite | Cables | Cat 6+SM**




RiT Fiber Optic Cat.6 UTP Composite Cable for LAN and G.657 FTTR Horizontal Cable, 23 AWG solid wires, innovative structural design and manufacture process.

## KEY APPLICATIONS

- 10/100/1000Base-T
- FTTR (Fiber To The Room)
- PoL (Passive Optical LAN)
- Power over Ethernet (PoE)

## STANDARDS COMPLIANCE

- ANSI/TIA-568-2.D
- PVC: IEC60332-1-2
- RoHS2: Directives 2011/65/EU, 2015/863/EU

## KEY FEATURES

- Either copper wires or optical fiber can be used for telecommunication
- Cat.6 electrical performance up to 250 MHz
- The cable core is overlapped and wrapped with polyester protective film, heat insulation and moisture-proof, stable structure, ensuring excellent transmission performance
- Specialty bending-resistance fiber with high strength is used



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| Copper Cable Construction | |
|---|---|
| Outer Jacket Diameter | Ø6.6 ± 0.3 mm |
| Outer Jacket Material | LSZH or PVC |
| Outer Jacket Thickness | ≥0.5mm |
| Conductor Material | Bare Annealed Copper |
| Conductor Size | 23 AWG |
| Conductor Construction | Solid |
| Conductor unit lay-up | Twisted Pairs |
| Number of conductors | 8 |
| Insulation Material | High Density Polyethylene |
| Color Code | Blue/White-Blue, Orange/White-Orange, Green/White-Green, Brown/White-Brown |
| Overall Insulation | Clear Polyester protective film |
| Rip Cord | Yes |
| Pairs Separator | PP/PE White Semi Transparent |

| Copper Electrical Characteristics at 20 °C | |
|---|---|
| Frequency Range | 1 - 250 MHz |
| Max. DC Resistance | ≤ 9.5 Ω/100 m |
| Max. Resistance Unbalance | ≤1% Between Conductors<br>≤4% Between Pairs |
| Propagation Delay Skew: | ≤45 ns/100m |
| Insulation Resistance | ≥5000 MΩ · km |
| Max. Mutual Capacitance | ≤5.6nF/100m @1kHz |
| Characteristic Impedance, Zc | 100 ± 15Ω (4-250MHz ) |

| Mechanical Properties | |
|---|---|
| Bending Radius | ≥ 8 X Cable Diameter |
| Maximum Pulling Force | 100N |
| Operating Temperature | -20°C to +70°C (PVC) |
| Installation Temperature | 0°C to +50°C (PVC) |



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| Fiber Construction and Performance | |
|---|---|
| Fiber Type | SM, BI, G657A2/G657B3 |
| Tight Buffer Protection Layer | Ø0.95±0.05mm, Green |
| Fiber Attenuation [dB/km] | ≤0.4@1310nm<br>≤0.3@1550nm |
| Zero Dispersion Wavelength [nm] | 1300~1324 |
| Zero Dispersion Slope [ps/(nm2·km)] | ≤ 0.092 |
| Cable Cut-off Wavelength λcc [nm] | ≤ 1260 |
| MFD@1310nm [µm] | 8.4~9.2 |
| MFD@1550nm [µm] | 9.3~10.3 |
| Group Index of Refraction at 1310 nm | 1.466 (Typical) |
| Group Index of Refraction at 1550 nm | 1.467 (Typical) |
| Macro-bend loss at 1550nm [dB] (1 turn, 7.5mm radius) | ≤ 0.2 |
| Macro-bend loss at 1550nm [dB] (1 turn, 10mm radius) | ≤ 0.1 |
| Macro-bend loss at 1550nm [dB] (10 turn, 15mm radius) | ≤ 0.03 |
| Cladding diameter [µm] | 125 ± 0.7 |
| Cladding non-circularity [%] | ≤ 0.7 |
| Coating diameter [µm] | 245 ± 5 |
| Coating/cladding concentricity error [µm] | ≤ 12.0 |
| Coating non-circularity [%] | ≤ 6.0 |
| Core/cladding concentricity error [µm] | ≤ 0.5 |

## ORDERING INFORMATION

| P/N | DESCRIPTION |
|---|---|
| R1971001 | F5G Optical Network Cable, CAT.6 UTP, SM G657A2, PVC, Green, 100m/box |
| R1971002 | F5G Optical Network Cable, CAT.6 UTP, SM G657A2, PVC, Green, 305m/box |
| R1971003 | F5G Optical Network Cable, CAT.6 UTP, SM G657A2, LSZH, Green, 100m/box |
| R1971004 | F5G Optical Network Cable, CAT.6 UTP, SM G657A2, LSZH, Green, 305m/box |
| R1979001 | F5G Optical Network Cable, CAT.6 UTP, SM G657B3, PVC, Green, 100m/box |
| R1979002 | F5G Optical Network Cable, CAT.6 UTP, SM G657B3, PVC, Green, 305m/box |
| R1979003 | F5G Optical Network Cable, CAT.6 UTP, SM G657B3, LSZH, Green, 100m/box |
| R1979004 | F5G Optical Network Cable, CAT.6 UTP, SM G657B3, LSZH, Green, 305m/box |

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