



FIBER OPTIC CABLES

PRODUCT CATALOG

OPTIX[®]

2022 EDITION



OPTIX[®]

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FIBER OPTIC CABLES

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OPTIX Cable ADSS-XOTKtsdD AC105 2.7kN (up to 50m SPAN - NESC Heavy)

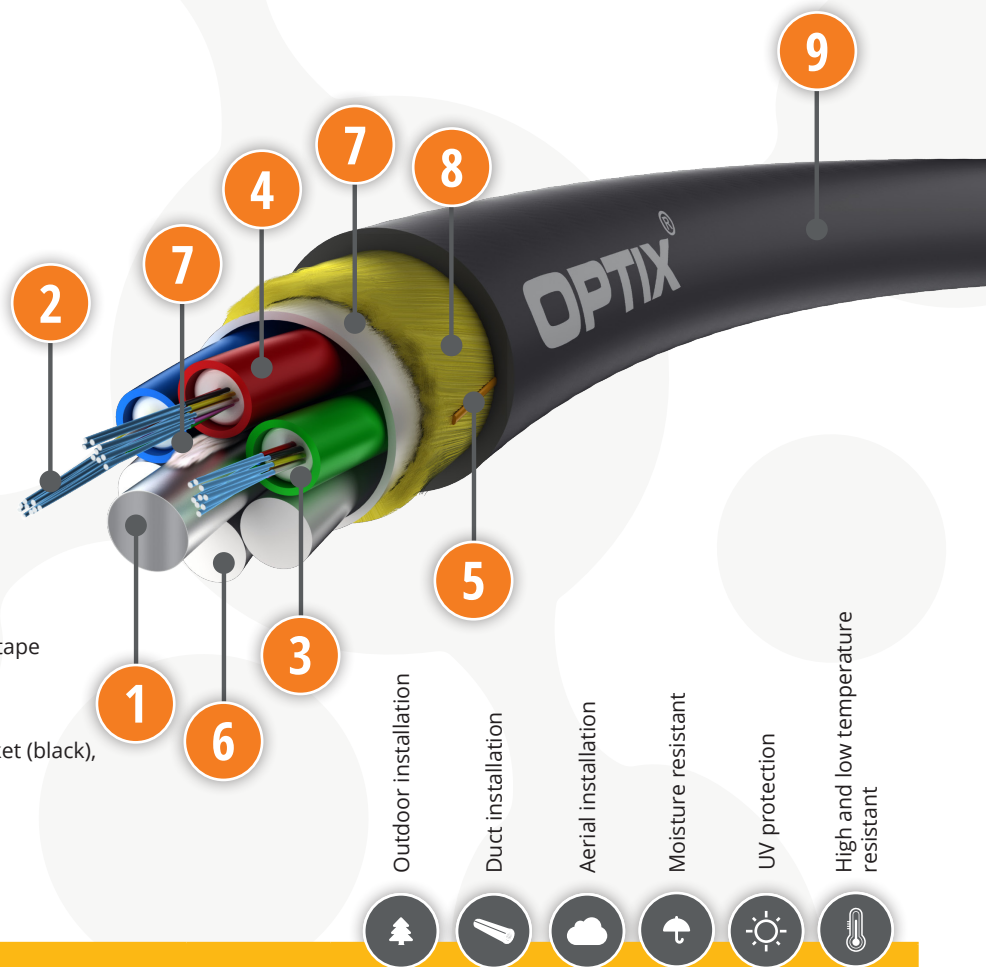
9/125 ITU-T G.652D

FEATURES:

- Cable for aerial installation
- Span (NESC Heavy) up to 50 meters (2.7kN)
- Fully dielectric construction
- Additional water blocking construction
- Resistance to high and low temperatures
- Enhanced by high quality aramid yarns
- Solid HDPE jacket

CABLE CONSTRUCTION

1. FRP rod
2. Optical fibers in 0.25mm coloured coating
3. Hydrophobic jelly
4. Loose tube
5. Ripcords to tear the outer jacket
6. Filler
7. Water blocking tape / yarns
8. Aramid yarns
9. HDPE outer jacket (black), UV stabilized



Product information

| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±5%) | Ø Tube [mm] (±0.1) | Supporting element / Peripheral reinforcement | Reinforcing element [mm] (±0.1) | Coating material & thickness [mm] (nom.) | Temp. range installation | Temp. range operating, transport | Minimum bending radius |
|---------------|----------------------------------|-----------------------|--------------------|--------------------|---|---------------------------------|--|--------------------------|----------------------------------|------------------------|
| 2T6F | 12 | 81 | 10.0 | 1.5/2.1 | Aramid yarns | FRP (2.25) | HDPE (1.5) | -30° to +60° C | -40° to +70° C | 20D/10D |
| 1T12F | 12 | 85 | 10.2 | 1.6/2.2 | Aramid yarns | FRP (2.30) | HDPE (1.5) | -30° to +60° C | -40° to +70° C | 20D/10D |
| 2T12F | 24 | 85 | 10.2 | 1.6/2.2 | Aramid yarns | FRP (2.30) | HDPE (1.5) | -30° to +60° C | -40° to +70° C | 20D/10D |
| 4T6F | 24 | 81 | 10.0 | 1.5/2.1 | Aramid yarns | FRP (2.25) | HDPE (1.5) | -30° to +60° C | -40° to +70° C | 20D/10D |
| 4T12F | 48 | 85 | 10.2 | 1.6/2.2 | Aramid yarns | FRP (2.30) | HDPE (1.5) | -30° to +60° C | -40° to +70° C | 20D/10D |
| 6T12F | 72 | 85 | 10.2 | 1.6/2.2 | Aramid yarns | FRP (2.30) | HDPE (1.5) | -30° to +60° C | -40° to +70° C | 20D/10D |
| 8T12F | 96 | 108 | 11.6 | 1.6/2.2 | Aramid yarns | FRP in PE coat (2.8/3.7) | HDPE (1.5) | -30° to +60° C | -40° to +70° C | 20D/10D |
| 12T12F | 144 | 166 | 14.6 | 1.6/2.2 | Aramid yarns | FRP in PE coat (3.5/6.7) | HDPE (1.5) | -30° to +60° C | -40° to +70° C | 20D/10D |
| 12T24F | 192 | 170 | 15.4 | 1.6/2.2 | Aramid yarns | FRP (2.50) | HDPE (1.5) | -30° to +60° C | -40° to +70° C | 20D/10D |
| 12T24F | 216 | 170 | 15.4 | 1.6/2.2 | Aramid yarns | FRP (2.50) | HDPE (1.5) | -30° to +60° C | -40° to +70° C | 20D/10D |
| 12T24F | 288 | 218 | 17.4 | 1.6/2.2 | Aramid yarns | FRP in PE coat (3.5/4.5) | HDPE (1.5) | -30° to +60° C | -40° to +70° C | 20D/10D |

| Mechanical parameters | EN standard | IEC standard | 12-24F | 48F | 72F | 96-288F |
|--|-------------------|------------------|-------------------------|-------|-------|---------|
| Tensile Strength Installation (NESC Heavy) | EN 187000 | IEC 60794-1-2-E1 | 2700N | 2700N | 2700N | 2700N |
| Tensile Strength Operation (NESC Heavy) | EN 187000 | IEC 60794-1-2-E1 | 1500N | 1500N | 1500N | 1500N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 1000N/10 cm | | | |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 30 cycles [(20xD), 1Kg] | | | |

OPTIX Cable ADSS-XOTKtsdD AC206 4.0kN (up to 100m SPAN - NESC Heavy)

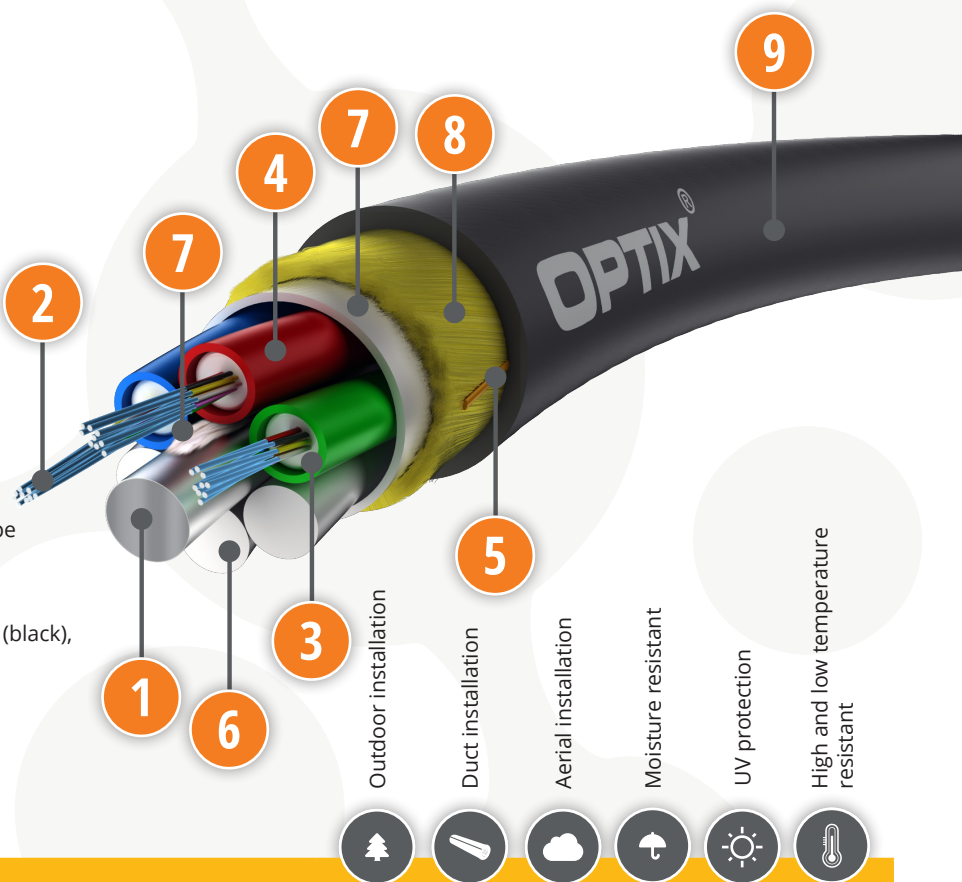
9/125 ITU-T G.652D

FEATURES:

- Cable for aerial installation
- Span (NESC Heavy) up to 100 meters (4kN)
- Fully dielectric construction
- Additional water blocking construction
- Resistance to high and low temperatures
- Enhanced by high quality aramid yarns
- Solid HDPE jacket

CABLE CONSTRUCTION

- FRP rod
- Optical fibers in 0.25mm coloured coating
- Hydrophobic jelly
- Loose tube
- Ripcords to tear the outer jacket
- Filler
- Water blocking tape / yarns
- Aramid yarns
- HDPE outer jacket (black), UV stabilized



Product information

| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±5%) | Ø Tube [mm] (±0.15) | Supporting element / Peripheral reinforcement | Reinforcing element [mm] (±0.1) | Coating material & thickness [mm] (min.) | Temp. range installation | Temp. range operating, transport | Minimum bending radius |
|---------------|----------------------------------|-----------------------|--------------------|---------------------|---|---------------------------------|--|--------------------------|----------------------------------|------------------------|
| 1T12F | 12 | 89 | 10.5 | 1.6/2.2 | Aramid yarns | FRP (2.5) | HDPE (1.5) | -20° to +60° C | -40° to +70° C | 20D/10D |
| 2T6F | 12 | 83 | 10.1 | 1.5/2.1 | Aramid yarns | FRP (2.25) | HDPE (1.5) | -20° to +60° C | -40° to +70° C | 20D/10D |
| 4T6F | 24 | 83 | 10.1 | 1.5/2.1 | Aramid yarns | FRP (2.25) | HDPE (1.5) | -20° to +60° C | -40° to +70° C | 20D/10D |
| 2T12F | 24 | 89 | 10.5 | 1.6/2.2 | Aramid yarns | FRP (2.5) | HDPE (1.5) | -20° to +60° C | -40° to +70° C | 20D/10D |
| 4T12F | 48 | 89 | 10.5 | 1.6/2.2 | Aramid yarns | FRP (2.5) | HDPE (1.5) | -20° to +60° C | -40° to +70° C | 20D/10D |
| 6T12F | 72 | 89 | 10.5 | 1.6/2.2 | Aramid yarns | FRP (2.5) | HDPE (1.5) | -20° to +60° C | -40° to +70° C | 20D/10D |
| 8T12F | 96 | 110 | 11.7 | 1.6/2.2 | Aramid yarns | FRP in PE coat (3.0/3.7) | HDPE (1.5) | -20° to +60° C | -40° to +70° C | 20D/10D |
| 12T12F | 144 | 170 | 14.7 | 1.6/2.2 | Aramid yarns | FRP in PE coat (3.5/6.7) | HDPE (1.5) | -20° to +60° C | -40° to +70° C | 20D/10D |
| 6T24F | 144 | 118 | 12.2 | 2.0/2.8 | Aramid yarns | FRP (3.0) | HDPE (1.5) | -20° to +60° C | -40° to +70° C | 20D/10D |
| 16T12F | 192 | 175 | 15.5 | 1.6/2.2 | Aramid yarns | FRP (2.5) | HDPE (1.5) | -20° to +60° C | -40° to +70° C | 20D/10D |
| 8T24F | 192 | 153 | 13.9 | 2.0/2.8 | Aramid yarns | FRP in PE coat (3.5/4.7) | HDPE (1.5) | -20° to +60° C | -40° to +70° C | 20D/10D |
| 18T12F | 216 | 175 | 15.5 | 1.6/2.2 | Aramid yarns | FRP (2.5) | HDPE (1.5) | -20° to +60° C | -40° to +70° C | 20D/10D |
| 24T12F | 288 | 223 | 17.5 | 1.6/2.2 | Aramid yarns | FRP in PE coat (3.5/4.5) | HDPE (1.5) | -20° to +60° C | -40° to +70° C | 20D/10D |

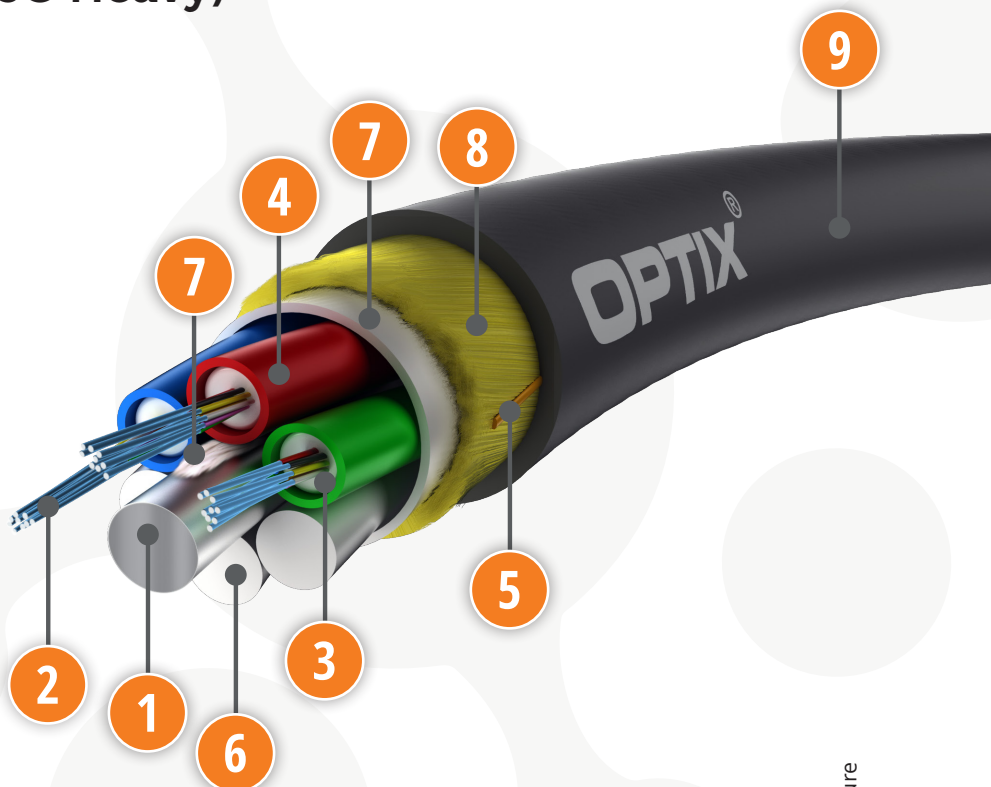
| Mechanical parameters | EN standard | IEC standard | 12-24F | 48F | 72F | 96-288F |
|--|-------------------|------------------|-------------------------|-------|-------|---------|
| Tensile Strength Installation (NESC Heavy) | EN 187000 | IEC 60794-1-2-E1 | 4000N | 4000N | 4000N | 4000N |
| Tensile Strength Operation (NESC Heavy) | EN 187000 | IEC 60794-1-2-E1 | 2400N | 2000N | 2000N | 2000N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 1000N | | | |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 25 cycles [(20xD), 1Kg] | | | |

OPTIX Cable ADSS-XOTKtsdD AC301 6.0kN (up to 150m SPAN - NESC Heavy)

9/125 ITU-T G.652D

FEATURES:

- Cable for aerial installation
- Span (NESC Heavy) up to 150 meters (6kN)
- Fully dielectric construction
- Additional water blocking construction
- Resistance to high and low temperatures
- Enhanced by high quality aramid yarns
- Solid HDPE jacket



CABLE CONSTRUCTION

- | | |
|--|---|
| 1. FRP rod | 6. Filler |
| 2. Optical fibers in 0.25mm coloured coating | 7. Water blocking tape / yarns |
| 3. Hydrophobic jelly | 8. Aramid yarns |
| 4. Loose tube | 9. HDPE outer jacket (black), UV stabilized |
| 5. Ripcords to tear the outer jacket | |

- Outdoor installation
- Duct installation
- Aerial installation
- Moisture resistant
- UV protection
- High and low temperature resistant

Product information

| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±5%) | Ø Tube [mm] (±0.15) | Supporting element / Peripheral reinforcement | Reinforcing element [mm] (±0.1) | Coating material & thickness [mm] (nom.) | Temp. range installation | Temp. range operating, transport | Minimum bending radius |
|---------------|----------------------------------|-----------------------|--------------------|---------------------|---|---------------------------------|--|--------------------------|----------------------------------|------------------------|
| 2T6F | 12 | 106 | 11.3 | 1.8/2.5 | Aramid yarns | FRP (2.6) | HDPE (1.4) | -30° to +60° C | -40° to +70° C | 20D/10D |
| 4T6F | 24 | 106 | 11.3 | 1.8/2.5 | Aramid yarns | FRP (2.6) | HDPE (1.4) | -30° to +60° C | -40° to +70° C | 20D/10D |
| 2T12F | 24 | 106 | 11.3 | 1.8/2.5 | Aramid yarns | FRP (2.6) | HDPE (1.4) | -30° to +60° C | -40° to +70° C | 20D/10D |
| 4T12F | 48 | 106 | 11.3 | 1.8/2.5 | Aramid yarns | FRP (2.6) | HDPE (1.4) | -30° to +60° C | -40° to +70° C | 20D/10D |
| 6T12F | 72 | 106 | 11.3 | 1.8/2.5 | Aramid yarns | FRP (2.6) | HDPE (1.4) | -30° to +60° C | -40° to +70° C | 20D/10D |
| 8T12F | 96 | 140 | 12.9 | 1.8/2.5 | Aramid yarns | FRP in PE coat (3.5/4.3) | HDPE (1.4) | -30° to +60° C | -40° to +70° C | 20D/10D |
| 12T12F | 144 | 201 | 16.2 | 1.8/2.5 | Aramid yarns | FRP in PE coat (3.5/7.5) | HDPE (1.4) | -30° to +60° C | -40° to +70° C | 20D/10D |

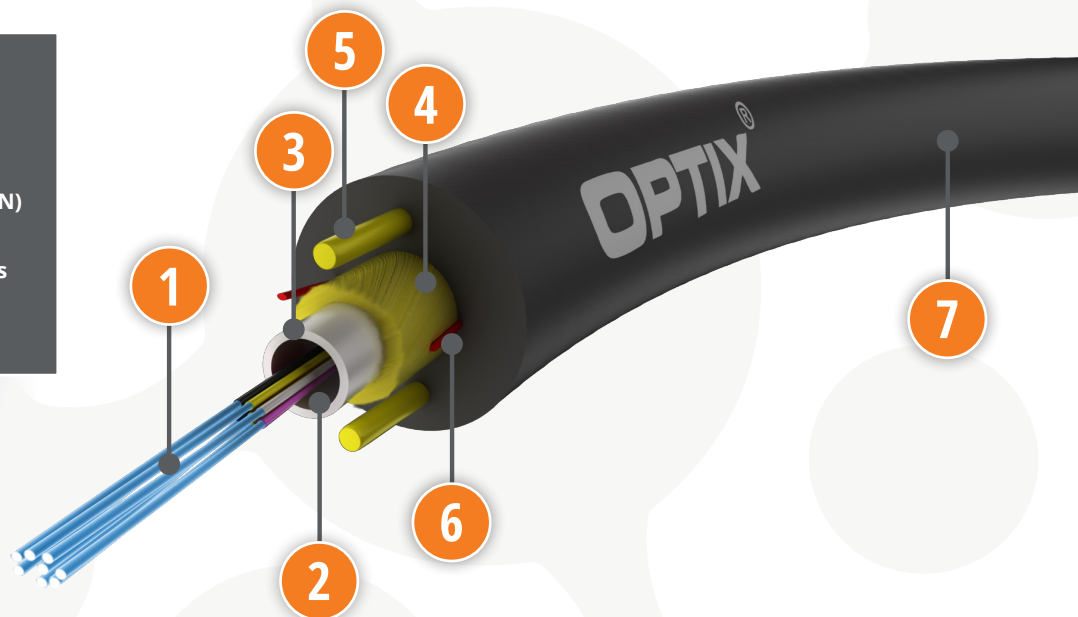
| Mechanical parameters | EN standard | IEC standard | 12-144F |
|--|-------------------|------------------|-------------------------|
| Tensile Strength Installation (NESC Heavy) | EN 187000 | IEC 60794-1-2-E1 | 6000N |
| Tensile Strength Operation (NESC Heavy) | EN 187000 | IEC 60794-1-2-E1 | 3000N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 1500N (100x100mm) |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 25 cycles [(20xD), 1Kg] |

OPTIX Cable ARAMID Z-XOTKtcdD 1.2kN (up to 80m SPAN - NESC Heavy)

9/125 ITU-T G.652D/G.657A1/G.657A2

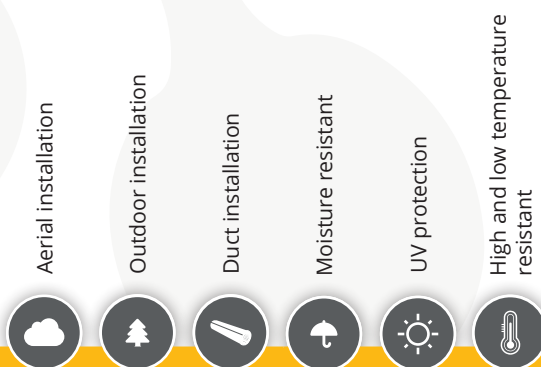
FEATURES:

- Universal cable for aerial / canalization installation
- Span (NESC Heavy) up to 80 meters (1.2kN)
- Fully dielectric construction
- Resistance to high and low temperatures
- Enhanced by high quality aramid yarns
- Solid HDPE jacket



CABLE CONSTRUCTION

- Optical fibers in 0.25mm coloured coating
- Hydrophobic jelly
- Loose tube
- Aramid yarns
- ARP rods / FRP rods
- Ripcords to tear the outer jacket
- HDPE outer jacket (black), UV stabilized



Product information

| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±0.4) | Ø Tube [mm] (±0.15) | Supporting element / Peripheral reinforcement | Reinforcing element [mm] (±0.1) | Coating material & thickness [mm] (±0.2) | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
|---------------|----------------------------------|-----------------------|---------------------|---------------------|---|---------------------------------|--|--------------------------|----------------------------------|--|
| 1T2F | 2 | 22 | 5.3 | 1.4/2.0 | Aramid yarns | ARP (2x0.5)/FRP (2x0.5) | HDPE (1.5) | -10° to +50° C | -40° to +70° C | 20D/10D |
| 1T4F | 4 | 22 | 5.3 | 1.4/2.0 | Aramid yarns | ARP (2x0.5)/FRP (2x0.5) | HDPE (1.5) | -10° to +50° C | -40° to +70° C | 20D/10D |
| 1T8F | 8 | 22 | 5.3 | 1.4/2.0 | Aramid yarns | ARP (2x0.5)/FRP (2x0.5) | HDPE (1.5) | -10° to +50° C | -40° to +70° C | 20D/10D |
| 1T12F | 12 | 22 | 5.3 | 1.4/2.0 | Aramid yarns | ARP (2x0.5)/FRP (2x0.5) | HDPE (1.5) | -10° to +50° C | -40° to +70° C | 20D/10D |
| 1T24F | 24 | 25 | 5.8 | 1.6/2.4 | Aramid yarns | ARP (2x0.5)/FRP (2x0.5) | HDPE (1.5) | -10° to +50° C | -40° to +70° C | 20D/10D |

| Mechanical parameters | EN standard | IEC standard | 1-8F | 12F | 24F |
|--|-------------------|------------------|------------------------------|-------|-------|
| Tensile Strength Installation (NESC Heavy) | EN 187000 | IEC 60794-1-2-E1 | 1200N | 1200N | 1200N |
| Tensile Strength Operation (NESC Heavy) | EN 187000 | IEC 60794-1-2-E1 | 600N | 600N | 600N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 500N (100x100mm) for 60 sec. | | |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 30 cycles [(20xD), 1Kg] | | |

OPTIX Cable STEEL Z-XOTKtc 1.2kN (up to 60m SPAN - NESC Heavy)

9/125 ITU-T G.652D

FEATURES:

- Universal cable for aerial / canalization installation
- Span (NESC Heavy) up to 60 meters (1.2kN)
- Better structural strength
- Resistance to high and low temperatures
- Water blocking construction
- Solid HDPE jacket



CABLE CONSTRUCTION

- | | |
|--|---|
| 1. Optical fibers in 0.25mm coloured coating | 5. Steel rods |
| 2. Hydrophobic jelly | 6. Ripcords to tear the outer jacket |
| 3. Loose tube | 7. HDPE outer jacket (black), UV stabilized |
| 4. Water blocking yarns | |

- Aerial installation
- Outdoor installation
- Duct installation
- Moisture resistant
- UV protection
- High and low temperature resistant

Product information

| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±0.4) | Ø Tube [mm] (±0.15) | Supporting element / Peripheral reinforcement | Reinforcing element [mm] (±0.1) | Coating material & thickness [mm] (±0.2) | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
|---------------|----------------------------------|-----------------------|---------------------|---------------------|---|---------------------------------|--|--------------------------|----------------------------------|--|
| 1T4F | 4 | 40 | 6.5 | 1.4/2.0 | None | Steel (2x0.9) | HDPE (2.0) | -10° to +50° C | -40° to +70° C | 20D/15D |
| 1T8F | 8 | 40 | 6.5 | 1.4/2.0 | None | Steel (2x0.9) | HDPE (2.0) | -10° to +50° C | -40° to +70° C | 20D/15D |
| 1T12F | 12 | 40 | 6.5 | 1.4/2.0 | None | Steel (2x0.9) | HDPE (2.0) | -10° to +50° C | -40° to +70° C | 20D/15D |
| 1T24F | 24 | 50 | 7.0 | 1.6/2.4 | None | Steel (2x0.9) | HDPE (2.0) | -10° to +50° C | -40° to +70° C | 20D/15D |

| Mechanical parameters | EN standard | IEC standard | 1-8F | 12F | 24F |
|--|-------------------|------------------|------------------------------|-------|-------|
| Tensile Strength Installation (NESC Heavy) | EN 187000 | IEC 60794-1-2-E1 | 1200N | 1200N | 1200N |
| Tensile Strength Operation (NESC Heavy) | EN 187000 | IEC 60794-1-2-E1 | 600N | 600N | 600N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 500N (100x100mm) for 60 sec. | | |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 30 cycles [(20xD), 1Kg] | | |

OPTIX Cable FRP Z-XOTKtcd UC501 1.2kN (up to 35m SPAN - NESC Heavy)

9/125 ITU-T G.652D, 62.5/125 ITU-T OM1, 50/125 ITU-T OM2/OM3/OM4/OM5

FEATURES:

- Universal cable for aerial / canalization installation
- Span (NESC Heavy) up to 35 meters (1.2kN)
- Fully dielectric construction
- Resistance to high and low temperatures
- Water blocking construction
- Solid HDPE jacket



CABLE CONSTRUCTION

- | | |
|--|---|
| 1. Optical fibers in 0.25mm coloured coating | 4. FRP rods |
| 2. Loose tube | 5. HDPE outer jacket (black), UV stabilized |
| 3. Ripcords to tear the outer jacket | 6. Water blocking yarns |

- Aerial installation
- Outdoor installation
- Duct installation
- Moisture resistant
- UV protection
- High and low temperature resistant

| Product information | | | | | | | | | | |
|---------------------|----------------------------------|-----------------------|---------------------|---------------------|---|---------------------------------|--|--------------------------|----------------------------------|--|
| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±0.5) | Ø Tube [mm] (±0.15) | Supporting element / Peripheral reinforcement | Reinforcing element [mm] (±0.1) | Coating material & thickness [mm] (±0.2) | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
| 1T4F | 4 | 40 | 6.5 | 1.4/2.0 | None | FRP (2x0.9) | HDPE (2.0) | -10° to +50° C | -40° to +70° C | 20D/15D |
| 1T8F | 8 | 40 | 6.5 | 1.4/2.0 | None | FRP (2x0.9) | HDPE (2.0) | -10° to +50° C | -40° to +70° C | 20D/15D |
| 1T12F | 12 | 40 | 6.5 | 1.4/2.0 | None | FRP (2x0.9) | HDPE (2.0) | -10° to +50° C | -40° to +70° C | 20D/15D |
| 1T24F | 24 | 50 | 7.0 | 1.6/2.4 | None | FRP (2x0.9) | HDPE (2.0) | -10° to +50° C | -40° to +70° C | 20D/15D |

| Mechanical parameters | EN standard | IEC standard | 1-8F | 12F | 24F |
|--|-------------------|------------------|------------------------------|-------|-------|
| Tensile Strength Installation (NESC Heavy) | EN 187000 | IEC 60794-1-2-E1 | 1200N | 1200N | 1200N |
| Tensile Strength Operation (NESC Heavy) | EN 187000 | IEC 60794-1-2-E1 | 600N | 600N | 600N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 500N (100x100mm) for 60 sec. | | |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 30 cycles [(20xD), 1Kg] | | |

OPTIX Cable GLASS Z-XOTKtcdDb 1.0kN (up to 40m SPAN - NESC Heavy)

9/125 ITU-T G.652D/G.657A1/G.657A2

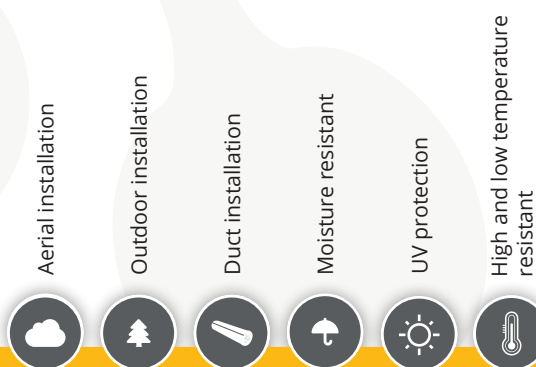
FEATURES:

- Universal cable for aerial / canalization installation
- Span (NESC Heavy) up to 40 meters (1kN)
- Fully dielectric construction
- Resistance to high and low temperatures
- Enhanced by high quality glass yarns
- Solid HDPE jacket



CABLE CONSTRUCTION

- | | |
|--|---|
| 1. Optical fibers in 0.25mm coloured coating | 4. ARP rods |
| 2. Loose tube | 5. HDPE outer jacket (black), UV stabilized |
| 3. Ripcords to tear the outer jacket | 6. Glass yarns |



Product information

| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±0.4) | Ø Tube [mm] (±0.15) | Supporting element / Peripheral reinforcement | Reinforcing element [mm] (±0.1) | Coating material & thickness [mm] (±0.2) | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
|---------------|----------------------------------|-----------------------|---------------------|---------------------|---|---------------------------------|--|--------------------------|----------------------------------|--|
| 1T2F | 2 | 25 | 5.5 | 1.4/2.0 | Glass yarns | ARP (2x0.5) | HDPE (1.5) | -20° to +70° C | -20° to +70° C | 20D/10D |
| 1T4F | 4 | 25 | 5.5 | 1.4/2.0 | Glass yarns | ARP (2x0.5) | HDPE (1.5) | -20° to +70° C | -20° to +70° C | 20D/10D |
| 1T8F | 8 | 25 | 5.5 | 1.4/2.0 | Glass yarns | ARP (2x0.5) | HDPE (1.5) | -20° to +70° C | -20° to +70° C | 20D/10D |
| 1T12F | 12 | 25 | 5.5 | 1.4/2.0 | Glass yarns | ARP (2x0.5) | HDPE (1.5) | -20° to +70° C | -20° to +70° C | 20D/10D |
| 1T24F | 24 | 30 | 6.0 | 1.9/2.5 | Glass yarns | ARP (2x0.5) | HDPE (1.5) | -20° to +70° C | -20° to +70° C | 20D/10D |

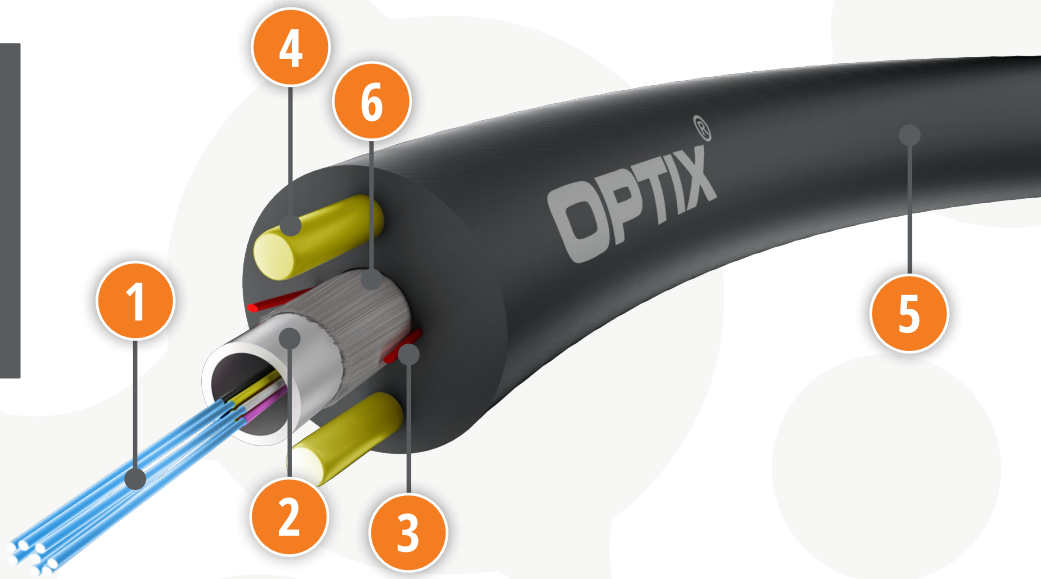
| Mechanical parameters | EN standard | IEC standard | 1-8F | 12F | 24F |
|--|-------------------|------------------|------------------------------|-------|-------|
| Tensile Strength Installation (NESC Heavy) | EN 187000 | IEC 60794-1-2-E1 | 1000N | 1000N | 1000N |
| Tensile Strength Operation (NESC Heavy) | EN 187000 | IEC 60794-1-2-E1 | 500N | 500N | 500N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 500N (100x100mm) for 60 sec. | | |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 30 cycles [(20xD), 1Kg] | | |

OPTIX Cable GLASS PLUS Z-XOTKtcdDb 1.2kN (up to 50m SPAN - NESC Heavy)

9/125 ITU-T G.652D

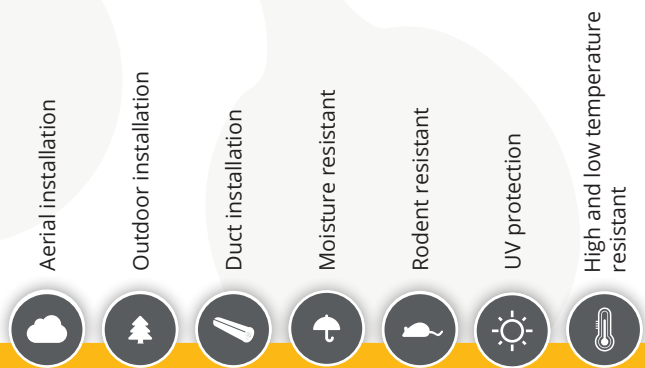
FEATURES:

- Universal cable for aerial / canalization installation
- Span (NESC Heavy) up to 50 meters (1.2kN)
- Fully dielectric construction
- Resistance to high and low temperatures
- Enhanced by high quality glass yarns
- Solid HDPE jacket



CABLE CONSTRUCTION

- | | |
|--|---|
| 1. Optical fibers in 0.25mm coloured coating | 4. ARP rods |
| 2. Loose tube | 5. HDPE outer jacket (black), UV stabilized |
| 3. Ripcords to tear the outer jacket | 6. Glass yarns |



Product information

| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±0.4) | Ø Tube [mm] (±0.15) | Supporting element / Peripheral reinforcement | Reinforcing element [mm] (±0.1) | Coating material & thickness [mm] (±0.2) | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
|---------------|----------------------------------|-----------------------|---------------------|---------------------|---|---------------------------------|--|--------------------------|----------------------------------|--|
| 1T1F | 1 | 28 | 6.0 | 1.4/2.0 | Glass yarns | ARP (2x0.5) | HDPE (1.5) | -20° to +70° C | -20° to +70° C | 20D/10D |
| 1T2F | 2 | 28 | 6.0 | 1.4/2.0 | Glass yarns | ARP (2x0.5) | HDPE (1.5) | -20° to +70° C | -20° to +70° C | 20D/10D |
| 1T4F | 4 | 28 | 6.0 | 1.4/2.0 | Glass yarns | ARP (2x0.5) | HDPE (1.5) | -20° to +70° C | -20° to +70° C | 20D/10D |
| 1T8F | 8 | 28 | 6.0 | 1.4/2.0 | Glass yarns | ARP (2x0.5) | HDPE (1.5) | -20° to +70° C | -20° to +70° C | 20D/10D |
| 1T12F | 12 | 28 | 6.0 | 1.4/2.0 | Glass yarns | ARP (2x0.5) | HDPE (1.5) | -20° to +70° C | -20° to +70° C | 20D/10D |
| 1T24F | 24 | 33 | 6.5 | 1.9/2.5 | Glass yarns | ARP (2x0.5) | HDPE (1.5) | -20° to +70° C | -20° to +70° C | 20D/10D |

| Mechanical parameters | EN standard | IEC standard | 1-8F | 12F | 24F |
|--|-------------------|------------------|------------------------------|-------|-------|
| Tensile Strength Installation (NESC Heavy) | EN 187000 | IEC 60794-1-2-E1 | 1200N | 1200N | 1200N |
| Tensile Strength Operation (NESC Heavy) | EN 187000 | IEC 60794-1-2-E1 | 600N | 600N | 600N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 500N (100x100mm) for 60 sec. | | |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 30 cycles [(20xD), 1Kg] | | |

OPTIX Cable FLAT Z-XOTKtcdp FC101 1.0kN (up to 70m SPAN - NESC Heavy)

9/125 ITU-T G.652D

FEATURES:

- Universal cable for aerial / canalization installation
- Span (NESC Heavy) up to 70 meters (1.0kN)
- Fully dielectric construction
- Resistance to high and low temperatures
- Practical, flat design
- Solid HDPE jacket



CABLE CONSTRUCTION

- Optical fibers in 0.25mm coloured coating
- Hydrophobic jelly
- Loose tube
- FRP rods
- HDPE outer jacket (black), UV stabilized

Aerial installation

Indoor installation

Duct installation

Crushproof

UV protection

High and low temperature resistant

Product information

| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±0.5) | Ø Tube [mm] (±0.15) | Supporting element / Peripheral reinforcement | Reinforcing element [mm] (±0.1) | Coating material | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
|---------------|----------------------------------|-----------------------|---------------------|---------------------|---|---------------------------------|------------------|--------------------------|----------------------------------|--|
| 1T8F | 8 | 35 | 8.1x4.1 | 1.7/2.5 | None | FRP (2x1.8) | HDPE | -30° to +70° C | -30° to +70° C | 20D/10D |
| 1T12F | 12 | 35 | 8.1x4.1 | 1.7/2.5 | None | FRP (2x1.8) | HDPE | -30° to +70° C | -30° to +70° C | 20D/10D |
| 1T24F | 24 | 45 | 8.6x4.6 | 2.0/3.0 | None | FRP (2x1.8) | HDPE | -30° to +70° C | -30° to +70° C | 20D/10D |

| Mechanical parameters | EN standard | IEC standard | 8F | 12F | 24F |
|--|-------------------|------------------|-------------------------------|-------|-------|
| Tensile Strength Installation (NESC Heavy) | EN 187000 | IEC 60794-1-2-E1 | 1000N | 1000N | 1000N |
| Tensile Strength Operation (NESC Heavy) | EN 187000 | IEC 60794-1-2-E1 | 600N | 600N | 600N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 1000N (100x100mm) for 60 sec. | | |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 30 cycles [(20xD), 1Kg] | | |

OPTIX Cable FLAT Z-XOTKtcdp FC102 1.0kN (up to 70m SPAN - NESC Heavy)

9/125 ITU-T G.652D

FEATURES:

- Universal cable for aerial / canalization installation
- Span (NESC Heavy) up to 70 meters (1.0kN)
- Fully dielectric construction
- Resistance to high and low temperatures
- Practical, flat design
- Solid HDPE jacket



CABLE CONSTRUCTION

1. Optical fibers in 0.25mm coloured coating
2. Hydrophobic jelly
3. Loose tube
4. FRP rods
5. HDPE outer jacket (black), UV stabilized

- Aerial installation
- Indoor installation
- Duct installation
- Crushproof
- UV protection
- High and low temperature resistant

Product information

| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10kg) | Ø Cable [mm] (±0.5) | Ø Tube [mm] (±0.15) | Supporting element / Peripheral reinforcement | Reinforcing element [mm] (±0.1) | Coating material | Temp. range installation | Temp. range operating, transport | Minimum bending radius |
|---------------|----------------------------------|------------------------|---------------------|---------------------|---|---------------------------------|------------------|--------------------------|----------------------------------|------------------------|
| 1T8F | 8 | 30 | 7.0x3.5 | 1.2/1.7 | None | FRP (2x1.8) | HDPE | -20° to +70° C | -20° to +70° C | 20D |
| 1T12F | 12 | 30 | 7.0x3.5 | 1.2/1.7 | None | FRP (2x1.8) | HDPE | -20° to +70° C | -20° to +70° C | 20D |
| 1T24F | 24 | 35 | 7.8x4.3 | 1.7/2.5 | None | FRP (2x1.8) | HDPE | -20° to +70° C | -20° to +70° C | 20D |

| Mechanical parameters | EN standard | IEC standard | 8F | 12F | 24F |
|--|-------------------|------------------|-------------------------|-------|-------|
| Tensile Strength Installation (NESC Heavy) | EN 187000 | IEC 60794-1-2-E1 | 1000N | 1000N | 1000N |
| Tensile Strength Operation (NESC Heavy) | EN 187000 | IEC 60794-1-2-E1 | 600N | 600N | 600N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 1000N | | |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 30 cycles [(20xD), 1Kg] | | |

OPTIX Cable FLAT Z-XOTKtsdp FC201 1.0kN (up to 70m SPAN - NESC Heavy)

9/125 ITU-T G.652D

FEATURES:

- Universal cable for aerial / canalization installation
- Span (NESC Heavy) up to 70 meters (1.0kN)
- Fully dielectric construction
- Resistance to high and low temperatures
- Practical, flat design
- Solid HDPE jacket



CABLE CONSTRUCTION

1. Optical fibers in 0.25mm coloured coating
2. Hydrophobic jelly
3. Loose tube
4. FRP rods
5. HDPE outer jacket (black), UV stabilized

Aerial installation

Indoor installation

Duct installation

Crushproof

UV protection

High and low temperature resistant

Product information

| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±0.5) | Ø Tube [mm] (±0.15) | Supporting element / Peripheral reinforcement | Reinforcing element [mm] (±0.1) | Coating material | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
|---------------|----------------------------------|-----------------------|---------------------|---------------------|---|---------------------------------|------------------|--------------------------|----------------------------------|--|
| 2T12F | 24 | 30 | 8.8x3.4 | 1.2/1.7 | None | FRP (2x1.8) | HDPE | -30° to +70° C | -30° to +70° C | 20D/10D |

| Mechanical parameters | EN standard | IEC standard | 24F |
|--|-------------------|------------------|-------------------------------|
| Tensile Strength Installation (NESC Heavy) | EN 187000 | IEC 60794-1-2-E1 | 1000N |
| Tensile Strength Operation (NESC Heavy) | EN 187000 | IEC 60794-1-2-E1 | 600N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 2000N (100x100mm) for 60 sec. |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 30 cycles [(20xD), 1Kg] |

OPTIX Cable FLAT Z-XOTKtsdp FC202 1.0kN (up to 70m SPAN - NESC Heavy)

9/125 ITU-T G.652D

FEATURES:

- Universal cable for aerial / canalization installation
- Span (NESC Heavy) up to 70 meters (1.0kN)
- Fully dielectric construction
- Resistance to high and low temperatures
- Practical, flat design
- Solid HDPE jacket



CABLE CONSTRUCTION

1. Optical fibers in 0.25mm coloured coating
2. Hydrophobic jelly
3. Loose tube
4. FRP rods
5. HDPE outer jacket (black), UV stabilized

- Aerial installation
- Indoor installation
- Duct installation
- Crushproof
- UV protection
- High and low temperature resistant

Product information

| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10kg) | Ø Cable [mm] (±0.5) | Ø Tube [mm] (±0.15) | Supporting element / Peripheral reinforcement | Reinforcing element [mm] (±0.1) | Coating material | Temp. range installation | Temp. range operating, transport | Minimum bending radius |
|---------------|----------------------------------|------------------------|---------------------|---------------------|---|---------------------------------|------------------|--------------------------|----------------------------------|------------------------|
| 2T12F | 24 | 38 | 8.7x3.5 | 1.2/1.7 | None | FRP (2x1.8) | HDPE | -20° to +70° C | -20° to +70° C | 20D |
| 2T24F | 48 | 55 | 10.3x4.3 | 1.7/2.5 | None | FRP (2x1.8) | HDPE | -20° to +70° C | -20° to +70° C | 20D |

Mechanical parameters

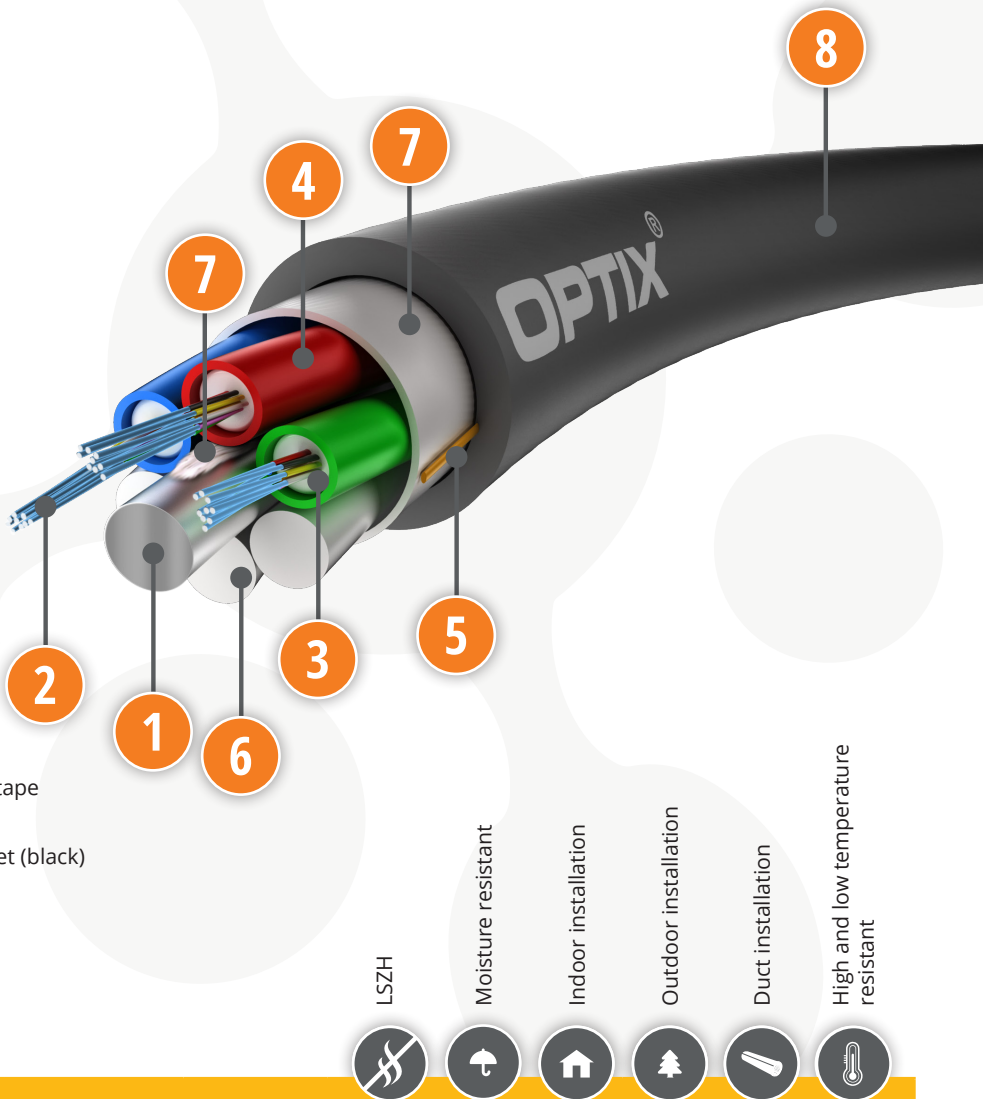
| Mechanical parameters | EN standard | IEC standard | 24-48F |
|--|-------------------|------------------|-------------------------|
| Tensile Strength Installation (NESC Heavy) | EN 187000 | IEC 60794-1-2-E1 | 1000N |
| Tensile Strength Operation (NESC Heavy) | EN 187000 | IEC 60794-1-2-E1 | 600N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 1000N |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 30 cycles [(20xD), 1Kg] |

OPTIX Cable LSZH ZW-NOTKtsd 1.2kN

9/125 ITU-T G.652D

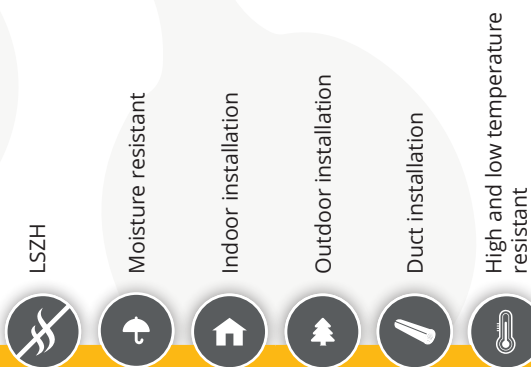
FEATURES:

- Fully dielectric construction
- Solid LSZH jacket
- Additional water blocking construction
- Resistance to high and low temperatures
- Practical and thin Ripcord



CABLE CONSTRUCTION

1. FRP rod
2. Optical fibers in 0.25mm coloured coating
3. Hydrophobic jelly
4. Loose tube
5. Ripcords to tear the outer jacket
6. Filler
7. Water blocking tape / yarns
8. LSZH outer jacket (black)



| Product information | | | | | | | | | | |
|---------------------|----------------------------------|-----------------------|---------------------|--------------------|---|---------------------------------|--|--------------------------|----------------------------------|--|
| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±0.5) | Ø Tube [mm] (±0.2) | Supporting element / Peripheral reinforcement | Reinforcing element [mm] (±0.1) | Coating material & thickness [mm] (±0.2) | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
| 2T6F | 12 | 105 | 10.2 | 1.4/2.0 | None | FRP (2.0) | LSZH (1.6) | -40° to +60° C | -40° to +70° C | 20D/10D |
| 2T12F | 24 | 105 | 10.2 | 1.4/2.0 | None | FRP (2.0) | LSZH (1.6) | -40° to +60° C | -40° to +70° C | 20D/10D |
| 4T6F | 24 | 105 | 10.2 | 1.4/2.0 | None | FRP (2.0) | LSZH (1.6) | -40° to +60° C | -40° to +70° C | 20D/10D |
| 4T12F | 48 | 105 | 10.2 | 1.4/2.0 | None | FRP (2.0) | LSZH (1.6) | -40° to +60° C | -40° to +70° C | 20D/10D |
| 6T12F | 72 | 105 | 10.2 | 1.4/2.0 | None | FRP (2.0) | LSZH (1.6) | -40° to +60° C | -40° to +70° C | 20D/10D |
| 8T12F | 96 | 130 | 11.5 | 1.4/2.0 | None | FRP (2.0) | LSZH (1.6) | -40° to +60° C | -40° to +70° C | 20D/10D |
| 12T12F | 144 | 195 | 14.2 | 1.4/2.0 | None | FRP (2.0) | LSZH (1.6) | -40° to +60° C | -40° to +70° C | 20D/10D |
| 12T24F | 288 | 250 | 16.5 (±1.0) | 1.4/2.0 | None | FRP (2.0) | LSZH (1.6) | -40° to +60° C | -40° to +70° C | 20D/10D |

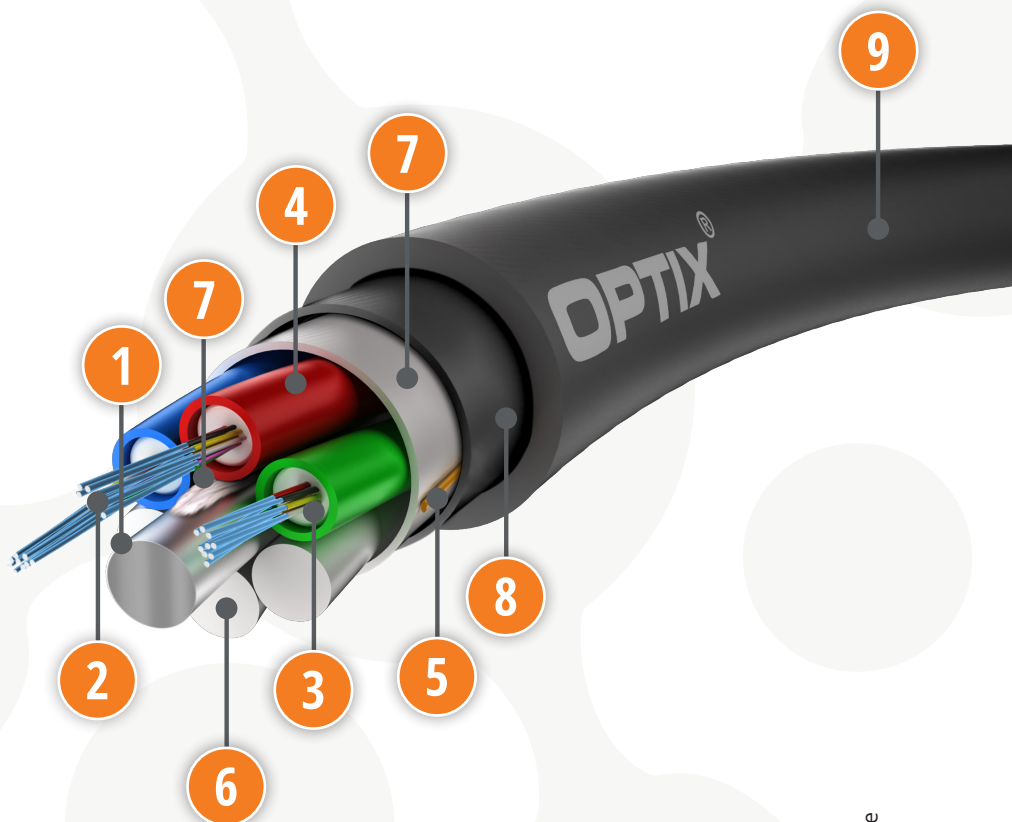
| Mechanical parameters | EN standard | IEC standard | 12-24F | 48F | 72F | 96-288F |
|-------------------------------|-------------------|------------------|-------------------------------|-------|-------|---------|
| Tensile Strength Installation | EN 187000 | IEC 60794-1-2-E1 | 1200N | 1200N | 1200N | 1200N |
| Tensile Strength Operation | EN 187000 | IEC 60794-1-2-E1 | 500N | 500N | 500N | 500N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 2000N (100x100mm) for 60 sec. | | | |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 25 cycles (20xD) | | | |

OPTIX Cable ZW-(NV)OTKtsd 1.2kN

9/125 ITU-T G.652D

FEATURES:

- Fully dielectric construction
- solid LSZH outer jacket and nylon (PA) inner jacket
- Additional water blocking construction
- Resistance to high and low temperatures
- Practical and thin Ripcord



CABLE CONSTRUCTION

- | | |
|--|------------------------------------|
| 1. FRP rod | 6. Filler |
| 2. Optical fibers in 0.25mm coloured coating | 7. Water blocking tape / yarns |
| 3. Hydrophobic jelly | 8. Nylon (PA) inner jacket (black) |
| 4. Loose tube | 9. LSZH outer jacket (black) |
| 5. Ripcords to tear the outer jacket | |

- Indoor installation
- Outdoor installation
- Duct installation
- LSZH
- Moisture resistant
- Rodent resistant
- High and low temperature resistant

Product information

| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±0.5) | Ø Tube [mm] (±0.15) | Supporting element / Peripheral reinforcement | Reinforcing element [mm] (±0.1) | Coating material & thickness [mm] (±0.2) | Temp. range installation | Temp. range operating, transport | Minimum bending radius |
|---------------|----------------------------------|-----------------------|---------------------|---------------------|---|---------------------------------|--|--------------------------|----------------------------------|------------------------|
| 1T12F | 12 | 120 | 11.2 | 1.4/2.0 | None | FRP (2.0) | LSZH (1.6) + PA (0.5) | -15° to +60° C | -40° to +70° C | 20D |
| 2T12F | 24 | 120 | 11.2 | 1.4/2.0 | None | FRP (2.0) | LSZH (1.6) + PA (0.5) | -15° to +60° C | -40° to +70° C | 20D |
| 3T12F | 36 | 120 | 11.2 | 1.4/2.0 | None | FRP (2.0) | LSZH (1.6) + PA (0.5) | -15° to +60° C | -40° to +70° C | 20D |
| 4T12F | 48 | 120 | 11.2 | 1.4/2.0 | None | FRP (2.0) | LSZH (1.6) + PA (0.5) | -15° to +60° C | -40° to +70° C | 20D |
| 6T12F | 72 | 120 | 11.2 | 1.4/2.0 | None | FRP (2.0) | LSZH (1.6) + PA (0.5) | -15° to +60° C | -40° to +70° C | 20D |
| 8T12F | 96 | 150 | 12.5 | 1.4/2.0 | None | FRP (2.0) | LSZH (1.6) + PA (0.5) | -15° to +60° C | -40° to +70° C | 20D |
| 12T12F | 144 | 220 | 15.2 | 1.4/2.0 | None | FRP (2.0) | LSZH (1.6) + PA (0.5) | -15° to +60° C | -40° to +70° C | 20D |
| 24T12F | 288 | 280 | 17.5 (±1.0) | 1.4/2.0 | None | FRP (2.0) | LSZH (1.6) + PA (0.5) | -15° to +60° C | -40° to +70° C | 20D |

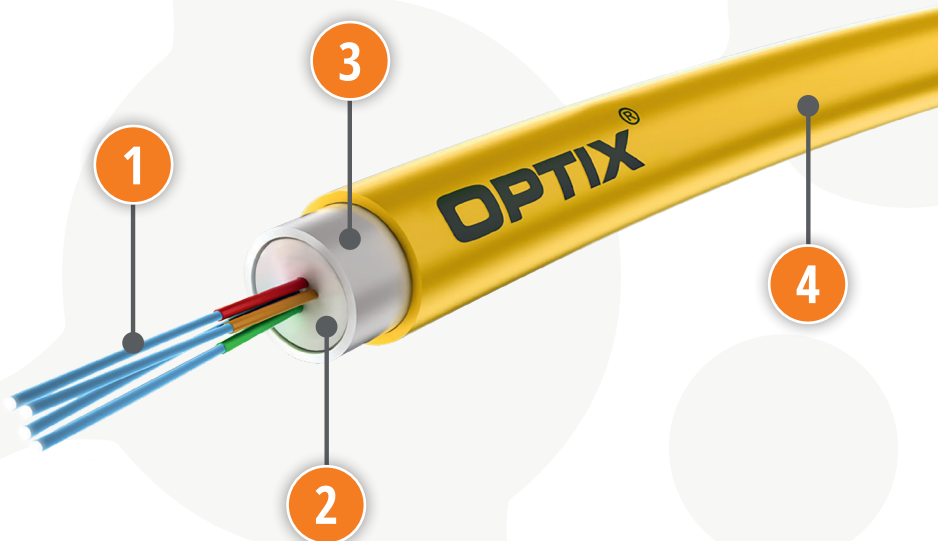
| Mechanical parameters | EN standard | IEC standard | 12-24F | 36-48F | 72F | 96-288F |
|-------------------------------|-------------------|------------------|-------------------------------|--------|-------|---------|
| Tensile Strength Installation | EN 187000 | IEC 60794-1-2-E1 | 1200N | 1200N | 1200N | 1200N |
| Tensile Strength Operation | EN 187000 | IEC 60794-1-2-E1 | 500N | 500N | 500N | 500N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 2000N (100x100mm) for 60 sec. | | | |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 30 cycles [(20xD), 5Kg] | | | |

OPTIX Cable MICRO EPFU ZW-XOTKtcd MC101 0.05kN

9/125 ITU-T G.657A2

FEATURES:

- Cable for microduct installation
- Solid yellow outer jacket
- Small reduced diameter
- Designed for cable blowing
- Resistance to high and low temperatures
- Fully dielectric construction



CABLE CONSTRUCTION

1. Optical fibers in 0.25mm coloured coating
2. Resin
3. Loose tube
4. Outer jacket (yellow)

- Microduct installation
- Outdoor installation
- Indoor installation
- Reduced diameter
- Blowing installation
- High and low temperature resistant



Product information

| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±0.5) | Ø Cable [mm] (±0.1) | Ø Tube [mm] (±0.15) | Supporting element / Peripheral reinforcement | Reinforcing element [mm] (±0.1) | Coating thickness [mm] (±0.1) | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
|---------------|----------------------------------|-----------------------|---------------------|---------------------|---|---------------------------------|-------------------------------|--------------------------|----------------------------------|--|
| 1T2F | 2 | 1.0 | 1.10 | 0.75 | None | None | 0.15 | -10° to +50° C | -40° to +70° C | 20D/10D |
| 1T4F | 4 | 1.0 | 1.10 | 0.75 | None | None | 0.15 | -10° to +50° C | -40° to +70° C | 20D/10D |
| 1T6F | 6 | 1.6 | 1.35 | 0.75 | None | None | 0.15 | -10° to +50° C | -40° to +70° C | 20D/10D |
| 1T8F | 8 | 1.6 | 1.35 | 0.75 | None | None | 0.15 | -10° to +50° C | -40° to +70° C | 20D/10D |
| 1T12F | 12 | 2.2 | 1.60 | 0.75 | None | None | 0.15 (±0.05) | -10° to +50° C | -40° to +70° C | 20D/10D |

| Mechanical parameters | EN standard | IEC standard | 2-12F |
|-------------------------------|-------------------|------------------|------------------|
| Tensile Strength Installation | EN 187000 | IEC 60794-1-2-E1 | 50N |
| Tensile Strength Operation | EN 187000 | IEC 60794-1-2-E1 | 25N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 100N (100x100mm) |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 30 cycles (20xD) |

OPTIX Cable MICRO ZW-XOTKtcdD MC201 0.15kN

9/125 ITU-T G.652D

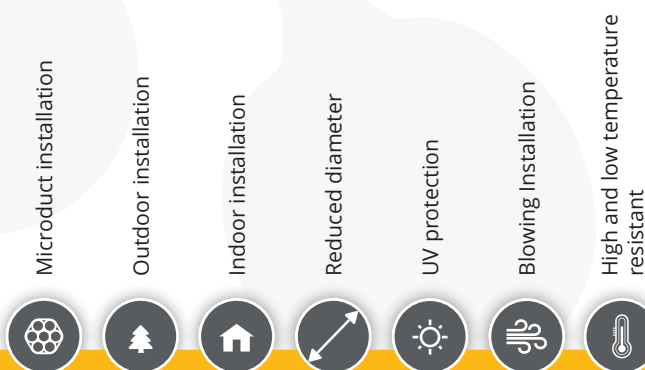
FEATURES:

- Cable for microduct installation
- Solid HDPE jacket
- Small reduced diameter
- Designed for cable blowing
- Reinforced by aramid yarns
- Resistance to high and low temperatures
- Fully dielectric construction



CABLE CONSTRUCTION

1. Optical fibers in 0.25mm coloured coating
2. Thixotropic jelly
3. Loose tube
4. Aramid yarns
5. Ripcords to tear the outer jacket
6. HDPE outer jacket (black), UV stabilized



Product information

| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±0.2) | Ø Tube [mm] (±0.1) | Supporting element / Peripheral reinforcement | Reinforcing element | Coating material & thickness [mm] (±5%) | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
|---------------|----------------------------------|-----------------------|---------------------|--------------------|---|---------------------|---|--------------------------|----------------------------------|--|
| 1T2F | 2 | 5.2 | 2.5 | 1.1/1.6 | Aramid yarns | | HDPE (0.3) | -20° to +70° C | -20° to +70° C | 20D/15D |
| 1T4F | 4 | 5.2 | 2.5 | 1.1/1.6 | Aramid yarns | | HDPE (0.3) | -20° to +70° C | -20° to +70° C | 20D/15D |
| 1T6F | 6 | 5.2 | 2.5 | 1.1/1.6 | Aramid yarns | | HDPE (0.3) | -20° to +70° C | -20° to +70° C | 20D/15D |
| 1T8F | 8 | 5.2 | 2.5 | 1.1/1.6 | Aramid yarns | | HDPE (0.3) | -20° to +70° C | -20° to +70° C | 20D/15D |
| 1T12F | 12 | 5.2 | 2.5 | 1.1/1.6 | Aramid yarns | | HDPE (0.3) | -20° to +70° C | -20° to +70° C | 20D/15D |

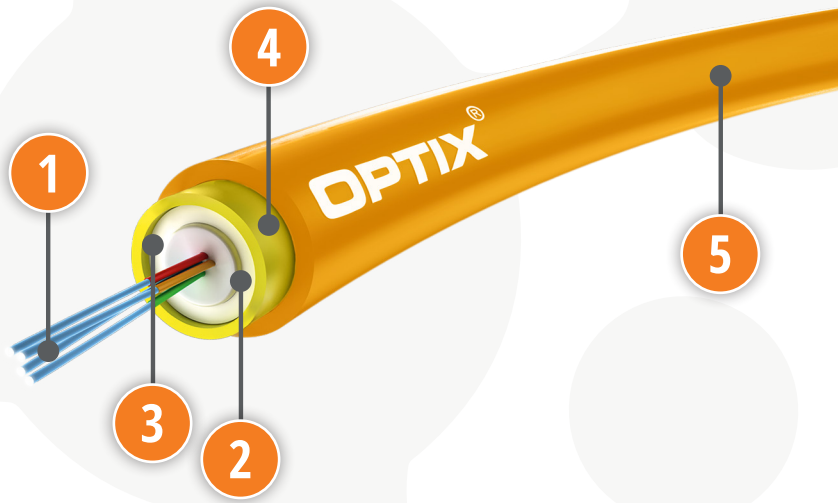
| Mechanical parameters | EN standard | IEC standard | 2-12F |
|-------------------------------|-------------------|------------------|-----------------------------|
| Tensile Strength Installation | EN 187000 | IEC 60794-1-2-E1 | 150N |
| Tensile Strength Operation | EN 187000 | IEC 60794-1-2-E1 | 75N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 50N (100x100mm) for 60 sec. |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 30 cycles [(20xD), 0.5Kg] |

OPTIX Cable MICRO ZW-VOTKtcdD MC205 0.25kN

9/125 ITU-T G.657A1

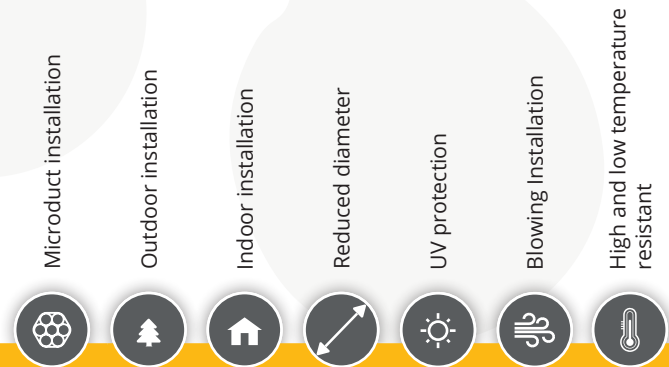
FEATURES:

- Cable for microduct installation
- Solid PA-12 jacket
- Small reduced diameter
- Designed for cable blowing
- Reinforced by aramid yarns
- Resistance to high and low temperatures
- Fully dielectric construction



CABLE CONSTRUCTION

1. Optical fibers in 0.25mm coloured coating
2. Thixotropic jelly
3. Loose tube
4. Aramid yarns
5. PA-12 outer jacket (orange)



Product information

| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±0.1) | Ø Tube [mm] (±0.2) | Supporting element / Peripheral reinforcement | Reinforcing element | Coating material & thickness [mm] (±0.1) | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
|---------------|----------------------------------|-----------------------|---------------------|--------------------|---|---------------------|--|--------------------------|----------------------------------|--|
| 1T2F | 2 | 5.5 | 2.5 | 1.8 | Aramid yarns | | PA-12 (0.3) | -10° to +60° C | -20° to +70° C | 15D |
| 1T4F | 4 | 5.5 | 2.5 | 1.8 | Aramid yarns | | PA-12 (0.3) | -10° to +60° C | -20° to +70° C | 15D |
| 1T6F | 6 | 5.5 | 2.5 | 1.8 | Aramid yarns | | PA-12 (0.3) | -10° to +60° C | -20° to +70° C | 15D |
| 1T8F | 8 | 5.5 | 2.5 | 1.8 | Aramid yarns | | PA-12 (0.3) | -10° to +60° C | -20° to +70° C | 15D |
| 1T12F | 12 | 5.5 | 2.5 | 1.8 | Aramid yarns | | PA-12 (0.3) | -10° to +60° C | -20° to +70° C | 15D |
| 1T24F | 24 | 11.0 | 3.5 | 2.1 | Aramid yarns | | PA-12 (0.3) | -10° to +60° C | -20° to +70° C | 15D |

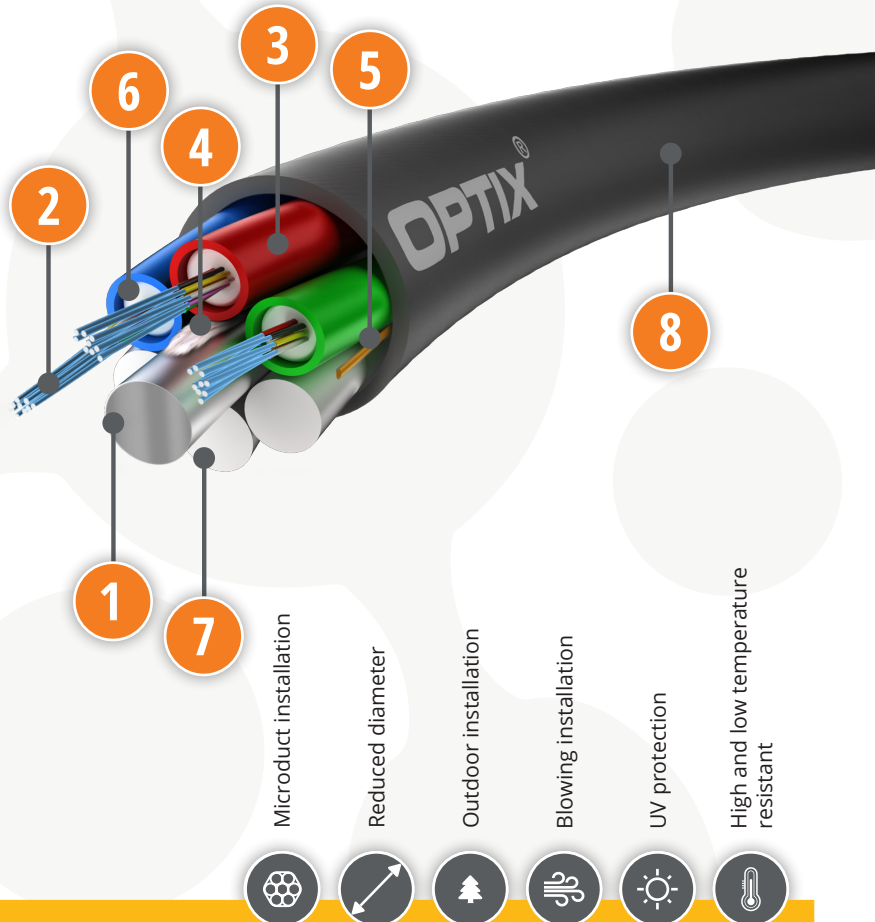
| Mechanical parameters | EN standard | IEC standard | 2-24F |
|-------------------------------|-------------------|------------------|------------------|
| Tensile Strength Installation | EN 187000 | IEC 60794-1-2-E1 | 250N |
| Tensile Strength Operation | EN 187000 | IEC 60794-1-2-E1 | 150N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 100N (100x100mm) |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 25 cycles (20xD) |

OPTIX Cable MICRO Z-XOTKtmd MC301 0.65 - 1.0kN

9/125 ITU-T G.652D

FEATURES:

- Cable for microduct installation
- Solid HDPE jacket
- Small reduced diameter
- Designed for cable blowing
- Water blocking construction
- Reinforced with FRP central strengthening element
- Resistance to high and low temperatures
- Fully dielectric construction



CABLE CONSTRUCTION

1. FRP rod
2. Optical fibers in 0.25mm coloured coating
3. Loose tube
4. Water blocking yarns
5. Ripcord to tear the outer jacket
6. Hydrophobic jelly
7. Filler
8. HDPE outer jacket (black), UV stabilized



Product information

| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±0.3) | Ø Tube [mm] (±0.1) | Supporting element / Peripheral reinforcement | Reinforcing element [mm] (±0.1) | Coating material & thickness [mm] (±0.1) | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
|---------------|----------------------------------|-----------------------|---------------------|--------------------|---|---------------------------------|--|--------------------------|----------------------------------|--|
| 2T6F | 12 | 26 | 5.4 | 1.15/1.45 | None | FRP 1.60 | HDPE (0.5) | -10° to +50° C | -30° to +70° C | 20D/10D |
| 1T12F | 12 | 26 | 5.4 | 1.15/1.45 | None | FRP 1.60 | HDPE (0.5) | -10° to +50° C | -30° to +70° C | 20D/10D |
| 2T12F | 24 | 26 | 5.4 | 1.15/1.45 | None | FRP 1.60 | HDPE (0.5) | -10° to +50° C | -30° to +70° C | 20D/10D |
| 4T6F | 24 | 26 | 5.4 | 1.15/1.45 | None | FRP 1.60 | HDPE (0.5) | -10° to +50° C | -30° to +70° C | 20D/10D |
| 3T12F | 36 | 26 | 5.4 | 1.15/1.45 | None | FRP 1.60 | HDPE (0.5) | -10° to +50° C | -30° to +70° C | 20D/10D |
| 4T12F | 48 | 26 | 5.4 | 1.15/1.45 | None | FRP 1.60 | HDPE (0.5) | -10° to +50° C | -30° to +70° C | 20D/10D |
| 6T12F | 72 | 26 | 5.4 | 1.15/1.45 | None | FRP 1.60 | HDPE (0.5) | -10° to +50° C | -30° to +70° C | 20D/10D |
| 8T12F | 96 | 36 | 6.1 | 1.15/1.45 | None | FRP 2.4 | HDPE (0.5) | -10° to +50° C | -30° to +70° C | 20D/10D |
| 12T12F | 144 | 52 | 7.9 | 1.15/1.45 | None | FRP in PE coat (2.4/4.1) | HDPE (0.5) | -10° to +50° C | -30° to +70° C | 20D/10D |
| 24T6F | 144 | 80 | 9.3 | 1.15/1.45 | None | FRP 2.80 | HDPE (0.5) | -10° to +50° C | -30° to +70° C | 20D/10D |
| 16T12F | 192 | 52 | 7.9 | 1.15/1.45 | None | FRP 1.60 | HDPE (0.5) | -10° to +50° C | -30° to +70° C | 20D/10D |
| 18T12F | 216 | 52 | 7.9 | 1.15/1.45 | None | FRP 1.60 | HDPE (0.5) | -10° to +50° C | -30° to +70° C | 20D/10D |
| 24T12F | 288 | 80 | 9.3 | 1.15/1.45 | None | FRP 2.80 | HDPE (0.5) | -10° to +50° C | -30° to +70° C | 20D/10D |

| Mechanical parameters | EN standard | IEC standard | 12-72F | 96-144F | 192-216F | 288F |
|-------------------------------|-------------------|------------------|-------------------------------|---------|----------|-------|
| Tensile Strength Installation | EN 187000 | IEC 60794-1-2-E1 | 650N | 800N | 650N | 1000N |
| Tensile Strength Operation | EN 187000 | IEC 60794-1-2-E1 | 450N | 550N | 450N | 700N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 500N (100x100mm) for 60 sec.. | | | |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 25 cycles (20xD) | | | |

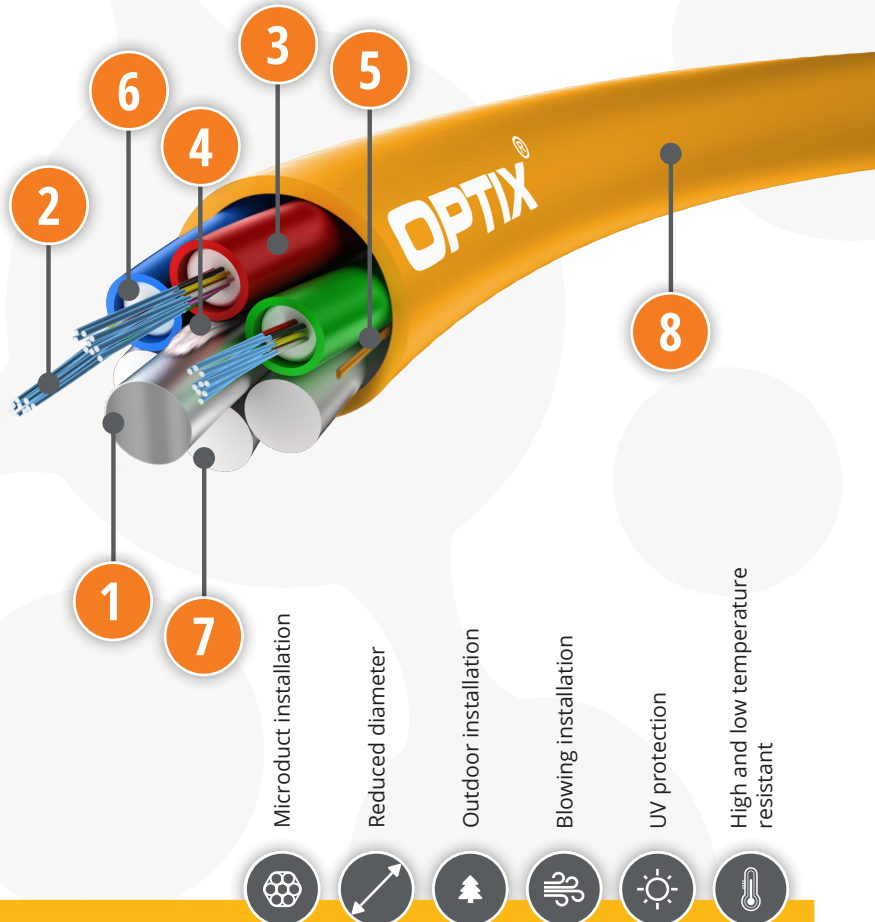


OPTIX Cable MICRO Z-VOTKtmd MC302 0.65 - 1.0kN

9/125 ITU-T G.652D

FEATURES:

- Cable for microduct installation
- Solid PA-12 jacket
- Small reduced diameter
- Designed for cable blowing
- Water blocking construction
- Reinforced with FRP central strengthening element
- Resistance to high and low temperatures
- Fully dielectric construction



CABLE CONSTRUCTION

1. FRP rod
2. Optical fibers in 0.25mm coloured coating
3. Loose tube
4. Water blocking yarns
5. Ripcord to tear the outer jacket
6. Hydrophobic jelly
7. Filler
8. PA-12 outer jacket (orange)



Product information

| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±0.3) | Ø Tube [mm] (±0.1) | Supporting element / Peripheral reinforcement | Reinforcing element [mm] (±0.1) | Coating material & thickness [mm] (±0.1) | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
|---------------|----------------------------------|-----------------------|---------------------|--------------------|---|---------------------------------|--|--------------------------|----------------------------------|--|
| 2T6F | 12 | 26 | 5.4 | 1.15/1.45 | None | FRP 1.60 | PA-12 (0.5) | -10° to +50° C | -30° to +70° C | 20D/10D |
| 1T12F | 12 | 26 | 5.4 | 1.15/1.45 | None | FRP 1.60 | PA-12 (0.5) | -10° to +50° C | -30° to +70° C | 20D/10D |
| 2T12F | 24 | 26 | 5.4 | 1.15/1.45 | None | FRP 1.60 | PA-12 (0.5) | -10° to +50° C | -30° to +70° C | 20D/10D |
| 4T6F | 24 | 26 | 5.4 | 1.15/1.45 | None | FRP 1.60 | PA-12 (0.5) | -10° to +50° C | -30° to +70° C | 20D/10D |
| 3T12F | 36 | 26 | 5.4 | 1.15/1.45 | None | FRP 1.60 | PA-12 (0.5) | -10° to +50° C | -30° to +70° C | 20D/10D |
| 4T12F | 48 | 26 | 5.4 | 1.15/1.45 | None | FRP 1.60 | PA-12 (0.5) | -10° to +50° C | -30° to +70° C | 20D/10D |
| 6T12F | 72 | 26 | 5.4 | 1.15/1.45 | None | FRP 1.60 | PA-12 (0.5) | -10° to +50° C | -30° to +70° C | 20D/10D |
| 8T12F | 96 | 36 | 6.1 | 1.15/1.45 | None | FRP 2.4 | PA-12 (0.5) | -10° to +50° C | -30° to +70° C | 20D/10D |
| 12T12F | 144 | 52 | 7.9 | 1.15/1.45 | None | FRP in PE coat (2.4/4.1) | PA-12 (0.5±0.2) | -10° to +50° C | -30° to +70° C | 20D/10D |
| 24T6F | 144 | 80 | 9.3 | 1.15/1.45 | None | FRP 2.80 | PA-12 (0.5) | -10° to +50° C | -30° to +70° C | 20D/10D |
| 16T12F | 192 | 52 | 7.9 | 1.15/1.45 | None | FRP 1.60 | PA-12 (0.5) | -10° to +50° C | -30° to +70° C | 20D/10D |
| 18T12F | 216 | 52 | 7.9 | 1.15/1.45 | None | FRP 1.60 | PA-12 (0.5) | -10° to +50° C | -30° to +70° C | 20D/10D |
| 24T12F | 288 | 80 | 9.3 | 1.15/1.45 | None | FRP 2.80 | PA-12 (0.5±0.2) | -10° to +50° C | -30° to +70° C | 20D/10D |

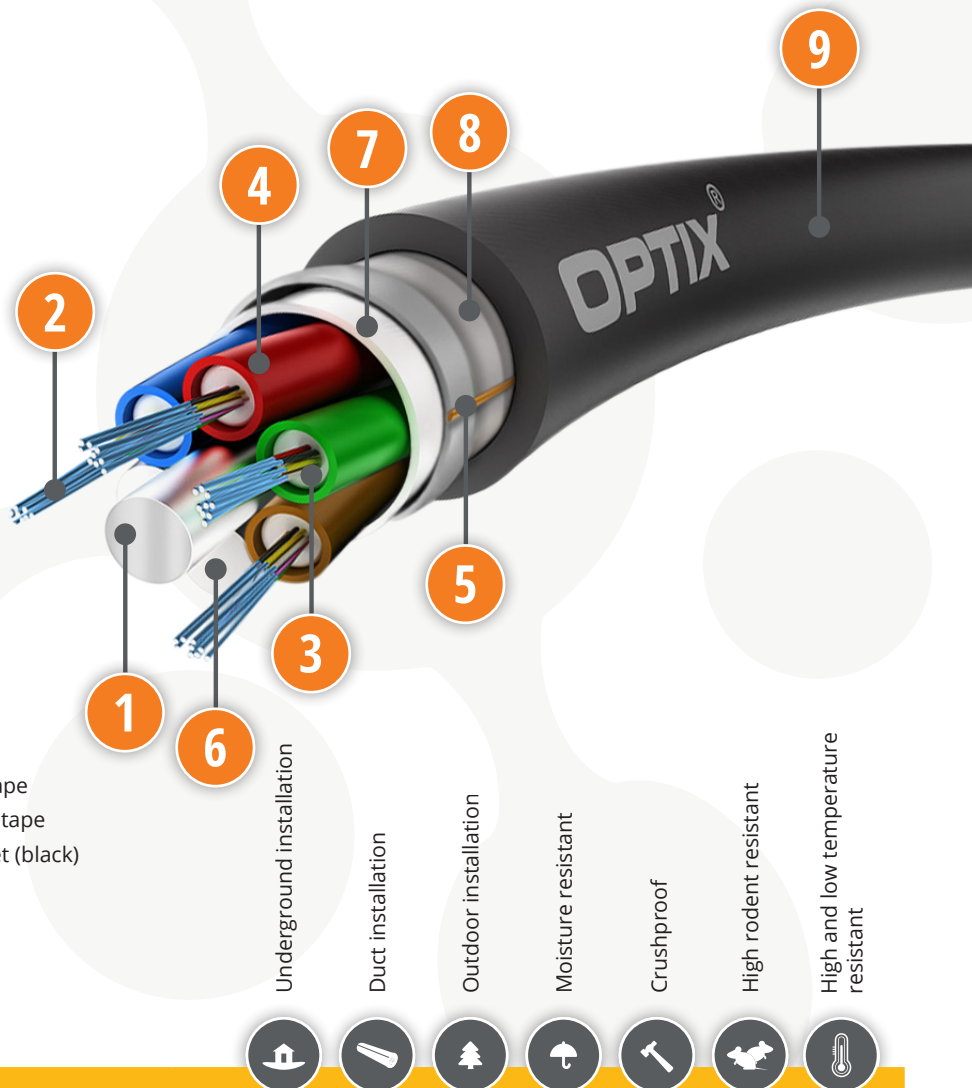
| Mechanical parameters | EN standard | IEC standard | 12-72F | 96-144F | 192-216F | 288F |
|-------------------------------|-------------------|------------------|-------------------------------|---------|----------|-------|
| Tensile Strength Installation | EN 187000 | IEC 60794-1-2-E1 | 650N | 800N | 650N | 1000N |
| Tensile Strength Operation | EN 187000 | IEC 60794-1-2-E1 | 450N | 550N | 450N | 700N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 500N (100x100mm) for 60 sec.. | | | |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 25 cycles (20xD) | | | |

OPTIX Cable STRONG ZKS-XOTKtsFf 2.5kN

9/125 ITU-T G.652D

FEATURES:

- Improved rodent protection
- Solid HDPE jacket
- Water blocking construction
- Designed for direct access in the ground
- Resistance to high and low temperatures
- Enhanced by corrugated steel tape
- Practical and thin Ripcord



CABLE CONSTRUCTION

- FRP rod
- Optical fibers in 0.25mm coloured coating
- Hydrophobic jelly
- Loose tube
- Ripcords to tear the outer jacket
- Filler
- Water blocking tape
- Corrugated steel tape
- HDPE outer jacket (black)

- Underground installation
- Duct installation
- Outdoor installation
- Moisture resistant
- Crushproof
- High rodent resistant
- High and low temperature resistant

Product information

| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±0.5) | Ø Tube [mm] (±0.15) | Supporting element / Peripheral reinforcement | Reinforcing element [mm] (±0.1) | Coating material & thickness [mm] (±0.2) | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
|---------------|----------------------------------|-----------------------|---------------------|---------------------|---|---------------------------------|--|--------------------------|----------------------------------|--|
| 1T12F | 12 | 150 | 11.3 | 1.5/2.1 | Steel tape | FRP 2.3 | HDPE (1.5) | -30° to +70° C | -20° to +70° C | 20D/10D |
| 2T6F | 12 | 150 | 11.3 | 1.5/2.1 | Steel tape | FRP 2.3 | HDPE (1.5) | -30° to +70° C | -20° to +70° C | 20D/10D |
| 2T12F | 24 | 150 | 11.3 | 1.5/2.1 | Steel tape | FRP 2.3 | HDPE (1.5) | -30° to +70° C | -20° to +70° C | 20D/10D |
| 4T6F | 24 | 150 | 11.3 | 1.5/2.1 | Steel tape | FRP 2.3 | HDPE (1.5) | -30° to +70° C | -20° to +70° C | 20D/10D |
| 4T12F | 48 | 150 | 11.3 | 1.5/2.1 | Steel tape | FRP 2.3 | HDPE (1.5) | -30° to +70° C | -20° to +70° C | 20D/10D |
| 6T12F | 72 | 150 | 11.3 | 1.5/2.1 | Steel tape | FRP 2.3 | HDPE (1.5) | -30° to +70° C | -20° to +70° C | 20D/10D |
| 8T12F | 96 | 185 | 12.5 | 1.5/2.1 | Steel tape | FRP in PE coat (2.5/3.5) | HDPE (1.5) | -30° to +70° C | -20° to +70° C | 20D/10D |
| 12T12F | 144 | 260 | 15.0 | 1.5/2.1 | Steel tape | FRP in PE coat (2.5/6.3) | HDPE (1.5) | -30° to +70° C | -20° to +70° C | 20D/10D |

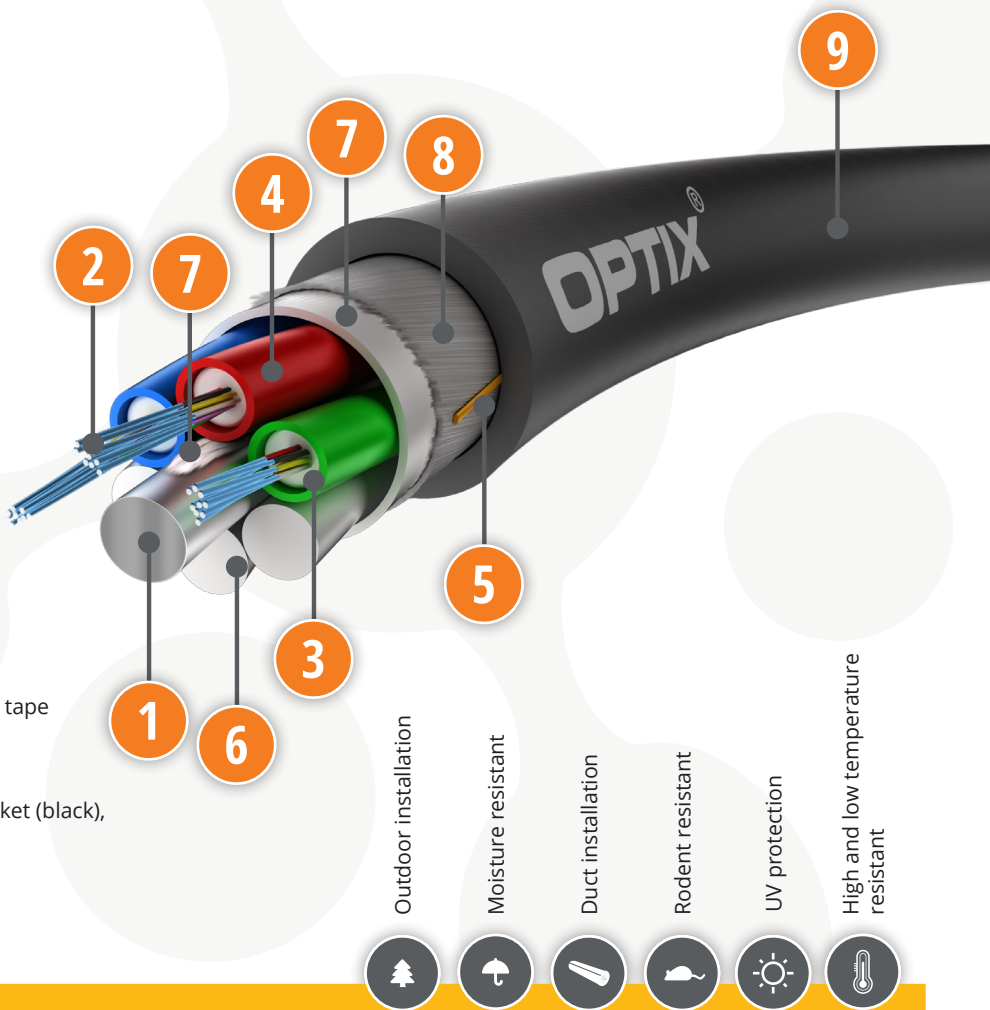
| Mechanical parameters | EN standard | IEC standard | 12-144F |
|-------------------------------|-------------------|------------------|-------------------------------|
| Tensile Strength Installation | EN 187000 | IEC 60794-1-2-E1 | 2500N |
| Tensile Strength Operation | EN 187000 | IEC 60794-1-2-E1 | 1250N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 3000N (100x100mm) for 60 sec. |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 30 cycles [(20xD), 1Kg] |

OPTIX Cable DUCT Z-XOTKtsdDb 3.0kN

9/125 ITU-T G.652D

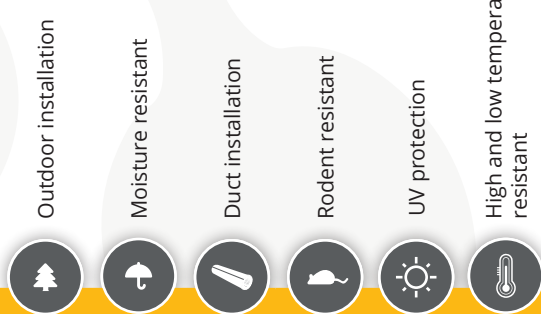
FEATURES:

- Fully dielectric construction
- Solid HDPE jacket
- Additional water blocking construction
- Resistance to high and low temperatures
- Enhanced by high quality glass yarns
- Practical and thin Ripcord



CABLE CONSTRUCTION

- | | |
|--|---|
| 1. FRP rod | 6. Filler |
| 2. Optical fibers in 0.25mm coloured coating | 7. Water blocking tape / yarns |
| 3. Hydrophobic jelly | 8. Glass yarns |
| 4. Loose tube | 9. HDPE outer jacket (black), UV stabilized |
| 5. Ripcords to tear the outer jacket | |



Product information

| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±0.5) | Ø Tube [mm] (±0.15) | Supporting element / Peripheral reinforcement | Reinforcing element [mm] (±0.1) | Coating material & thickness [mm] (±0.2) | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
|---------------|----------------------------------|-----------------------|---------------------|---------------------|---|---------------------------------|--|--------------------------|----------------------------------|--|
| 1T12F | 12 | 85 | 10.1 | 1.4/2.0 | Glass yarns | FRP (2.25) | HDPE (1.5) | -5° to +40° C | -40° to +70° C | 20D/15D |
| 2T6F | 12 | 85 | 10.1 | 1.4/2.0 | Glass yarns | FRP (2.25) | HDPE (1.5) | -5° to +40° C | -40° to +70° C | 20D/15D |
| 2T12F | 24 | 85 | 10.1 | 1.4/2.0 | Glass yarns | FRP (2.25) | HDPE (1.5) | -5° to +40° C | -40° to +70° C | 20D/15D |
| 4T6F | 24 | 85 | 10.1 | 1.4/2.0 | Glass yarns | FRP (2.25) | HDPE (1.5) | -5° to +40° C | -40° to +70° C | 20D/15D |
| 4T12F | 48 | 85 | 10.1 | 1.4/2.0 | Glass yarns | FRP (2.25) | HDPE (1.5) | -5° to +40° C | -40° to +70° C | 20D/15D |
| 6T12F | 72 | 85 | 10.1 | 1.4/2.0 | Glass yarns | FRP (2.25) | HDPE (1.5) | -5° to +40° C | -40° to +70° C | 20D/15D |
| 8T12F | 96 | 110 | 11.4 | 1.4/2.0 | Glass yarns | FRP in PE coat (2.5/3.5) | HDPE (1.5) | -5° to +40° C | -40° to +70° C | 20D/15D |
| 12T12F | 144 | 160 | 14.0 | 1.4/2.0 | Glass yarns | FRP in PE coat (3.5/6.0) | HDPE (1.5) | -5° to +40° C | -40° to +70° C | 20D/15D |
| 16T12F | 192 | 160 | 14.0 | 1.4/2.0 | Glass yarns | FRP (2.25) | HDPE (1.5) | -5° to +40° C | -40° to +70° C | 20D/15D |
| 18T12F | 216 | 160 | 14.0 | 1.4/2.0 | Glass yarns | FRP (2.25) | HDPE (1.5) | -5° to +40° C | -40° to +70° C | 20D/15D |
| 24T12F | 288 | 210 | 15.8 | 1.4/2.0 | Glass yarns | FRP in PE coat (3.0/4.0) | HDPE (1.5) | -5° to +40° C | -40° to +70° C | 20D/15D |

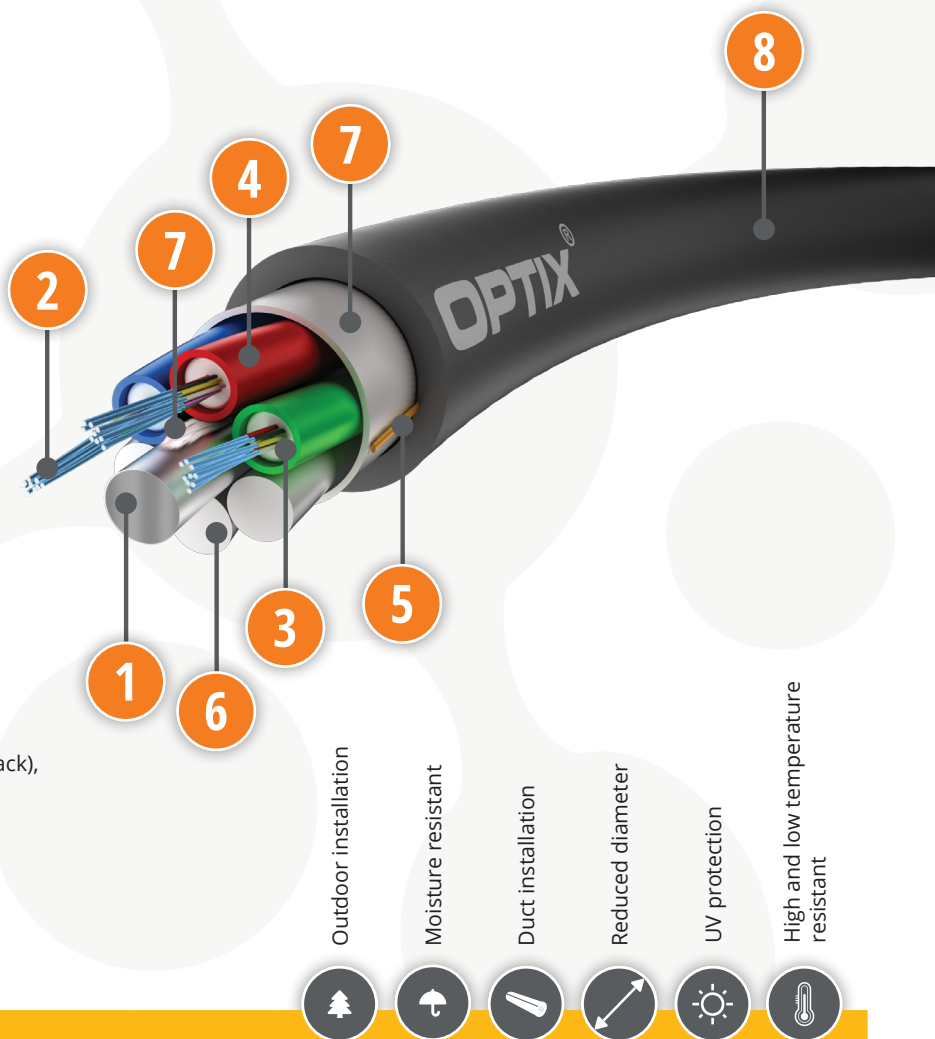
| Mechanical parameters | EN standard | IEC standard | 12-24F | 48F | 72F | 96-288F |
|-------------------------------|-------------------|------------------|-------------------------------|-------|-------|---------|
| Tensile Strength Installation | EN 187000 | IEC 60794-1-2-E1 | 3000N | 3000N | 3000N | 3000N |
| Tensile Strength Operation | EN 187000 | IEC 60794-1-2-E1 | 2000N | 2000N | 2000N | 2000N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 2000N (100x100mm) for 60 sec. | | | |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 30 cycles [(20xD), 1Kg] | | | |

OPTIX Cable LIGHT Z-XOTKtsd 1.5kN

9/125 ITU-T G.652D

FEATURES:

- Reduced diameter 8mm
- Fully dielectric construction
- Solid HDPE Jacket
- Additional water blocking construction
- Resistance to high and low temperatures
- Practical and thin Ripcord



CABLE CONSTRUCTION

1. FRP rod
2. Optical fibers in 0.25mm coloured coating
3. Hydrophobic jelly
4. Loose tube
5. Ripcords to tear the outer jacket
6. Filler
7. Water blocking tape / yarns
8. HDPE outer jacket (black), UV stabilized

- Outdoor installation
- Moisture resistant
- Duct installation
- Reduced diameter
- UV protection
- High and low temperature resistant

Product information

| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±0.5) | Ø Tube [mm] (±0.1) | Supporting element / Peripheral reinforcement | Reinforcing element [mm] (±0.1) | Coating material & thickness [mm] | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
|---------------|----------------------------------|-----------------------|---------------------|--------------------|---|---------------------------------|-----------------------------------|--------------------------|----------------------------------|--|
| 2T6F | 12 | 50 | 8.3 | 1.3/1.8 | None | FRP (1.8) | HDPE (min. 1.1) | -10° to +70° C | -20° to +70° C | 20D/10D |
| 1T12F | 12 | 50 | 8.3 | 1.3/1.80 | None | FRP (1.8) | HDPE (min. 1.1) | -10° to +70° C | -20° to +70° C | 20D/10D |
| 2T12F | 24 | 50 | 8.3 | 1.3/1.8 | None | FRP (1.8) | HDPE (min. 1.1) | -10° to +70° C | -20° to +70° C | 20D/10D |
| 4T6F | 24 | 50 | 8.3 | 1.3/1.8 | None | FRP (1.8) | HDPE (min. 1.1) | -10° to +70° C | -20° to +70° C | 20D/10D |
| 3T12F | 36 | 50 | 8.3 | 1.3/1.8 | None | FRP (1.8) | HDPE (min. 1.1) | -10° to +70° C | -20° to +70° C | 20D/10D |
| 6T6F | 36 | 50 | 8.3 | 1.3/1.8 | None | FRP (1.8) | HDPE (min. 1.1) | -10° to +70° C | -20° to +70° C | 20D/10D |
| 4T12F | 48 | 50 | 8.3 | 1.3/1.8 | None | FRP (1.8) | HDPE (min. 1.1) | -10° to +70° C | -20° to +70° C | 20D/10D |
| 6T12F | 72 | 50 | 8.3 | 1.3/1.8 | None | FRP (1.8) | HDPE (min. 1.1) | -10° to +70° C | -20° to +70° C | 20D/10D |
| 8T12F | 96 | 72 | 9.2 | 1.3/1.8 | None | FRP (3.0) | HDPE (min. 1.1) | -10° to +70° C | -20° to +70° C | 20D/10D |
| 12T12F | 144 | 105 | 11.5 | 1.3/1.8 | None | FRP in PE coat (2.5/5.4) | HDPE (min. 1.1) | -10° to +70° C | -20° to +70° C | 20D/10D |
| 12T24F | 288 | 165 | 14.8 | 1.6/2.0 | None | FRP in PE coat (3.0/4.0) | HDPE (min. 1.0) | -10° to +70° C | -20° to +70° C | 20D/10D |

| Mechanical parameters | EN standard | IEC standard | 12-72F | 96-288F |
|-------------------------------|-------------------|------------------|-------------------------------|---------|
| Tensile Strength Installation | EN 187000 | IEC 60794-1-2-E1 | 1500N | 1500N |
| Tensile Strength Operation | EN 187000 | IEC 60794-1-2-E1 | 1000N | 1000N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 1000N (100x100mm) for 60 sec. | |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 30 cycles [(20xD), 1Kg] | |

OPTIX Cable SAVER Z-XOTKtsdDb 1.8kN

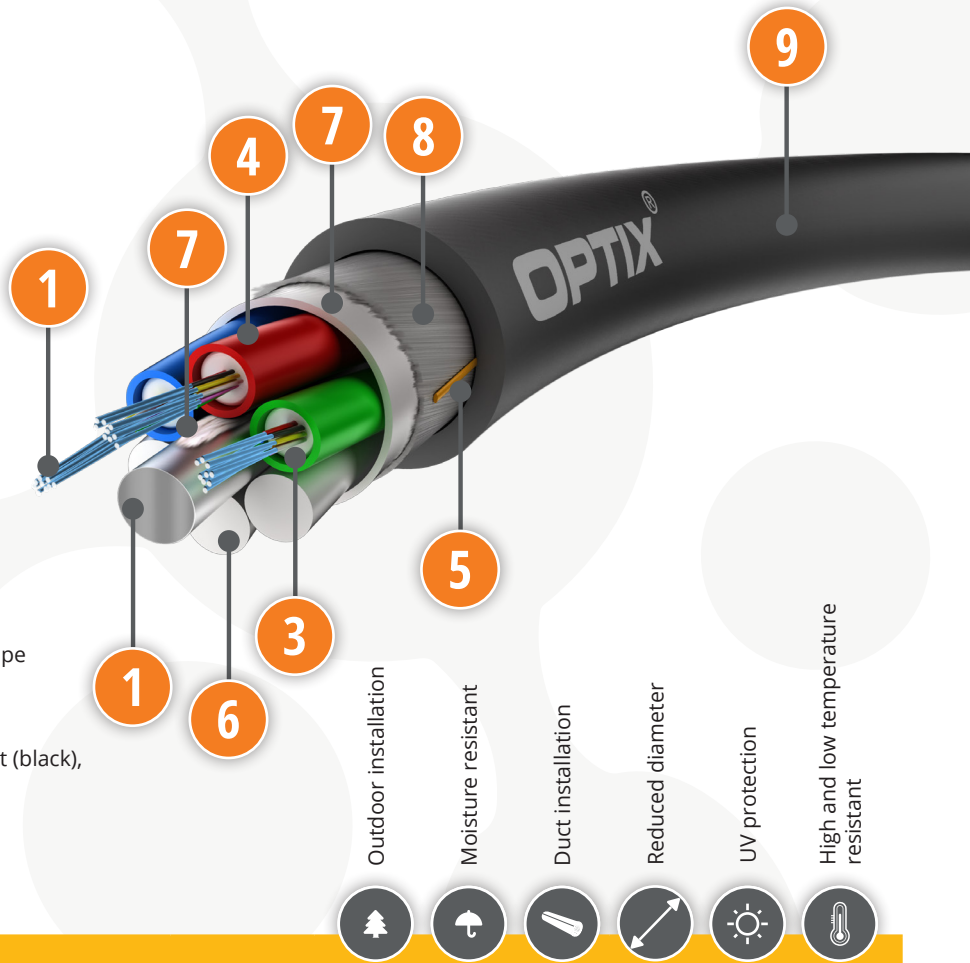
9/125 ITU-T G.652D

FEATURES:

- Fully dielectric construction
- Solid HDPE Jacket
- Additional water blocking construction
- Resistance to high and low temperatures
- Enhanced by high quality glass yarns
- Practical and thin Ripcord

CABLE CONSTRUCTION

- | | |
|---|---|
| 1. FRP rod | 6. Filler |
| 2. Optical fibers in 0.25mm colored coating | 7. Water blocking tape / yarns |
| 3. Hydrophobic jelly | 8. Glass yarns |
| 4. Loose tube | 9. HDPE outer jacket (black), UV stabilized |
| 5. Ripcords for tear the outer-sheath | |



- Outdoor installation
- Moisture resistant
- Duct installation
- Reduced diameter
- UV protection
- High and low temperature resistant

Product information

| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±0.5) | Ø Tube [mm] (±0.15) | Supporting element / Peripheral reinforcement | Reinforcing element [mm] (±0.1) | Coating material & thickness [mm] (min.) | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
|---------------|----------------------------------|-----------------------|---------------------|---------------------|---|---------------------------------|--|--------------------------|----------------------------------|--|
| 2T6F | 12 | 65 | 8.5 | 1.4/1.8 | Glass yarns | FRP 1.8 | HDPE (1.0) | -30° to +60° C | -40° to +70° C | 20D/10D |
| 1T12F | 12 | 65 | 8.5 | 1.4/1.8 | Glass yarns | FRP 1.8 | HDPE (1.0) | -30° to +60° C | -40° to +70° C | 20D/10D |
| 2T12F | 24 | 65 | 8.5 | 1.4/1.8 | Glass yarns | FRP 1.8 | HDPE (1.0) | -30° to +60° C | -40° to +70° C | 20D/10D |
| 4T6F | 24 | 65 | 8.5 | 1.4/1.8 | Glass yarns | FRP 1.8 | HDPE (1.0) | -30° to +60° C | -40° to +70° C | 20D/10D |
| 4T12F | 48 | 65 | 8.5 | 1.4/1.8 | Glass yarns | FRP 1.8 | HDPE (1.0) | -30° to +60° C | -40° to +70° C | 20D/10D |
| 6T12F | 72 | 65 | 8.5 | 1.4/1.8 | Glass yarns | FRP 1.8 | HDPE (1.0) | -30° to +60° C | -40° to +70° C | 20D/10D |
| 8T12F | 96 | 78 | 9.6 | 1.4/1.8 | Glass yarns | FRP in PE coat (2.25/3.0) | HDPE (1.0) | -30° to +60° C | -40° to +70° C | 20D/10D |
| 12T12F | 144 | 115 | 11.9 | 1.4/1.8 | Glass yarns | FRP in PE coat (2.8/5.4) | HDPE (1.0) | -30° to +60° C | -40° to +70° C | 20D/10D |
| 16T12F | 192 | 130 | 13.2 | 1.4/2.0 | Glass yarns | FRP 2.25 | HDPE (1.0) | -30° to +60° C | -40° to +70° C | 20D/10D |
| 18T12F | 216 | 130 | 13.2 | 1.4/2.0 | Glass yarns | FRP 2.25 | HDPE (1.0) | -30° to +60° C | -40° to +70° C | 20D/10D |
| 24T12F | 288 | 165 | 14.8 | 1.4/2.0 | Glass yarns | FRP in PE coat (3.0/4.0) | HDPE (1.0) | -30° to +60° C | -40° to +70° C | 20D/10D |
| 12T24F | 288 | 185 | 15.4 | 1.7/2.5 | Glass yarns | FRP in PE coat (3.0/7.5) | HDPE (1.0) | -30° to +60° C | -40° to +70° C | 20D/10D |

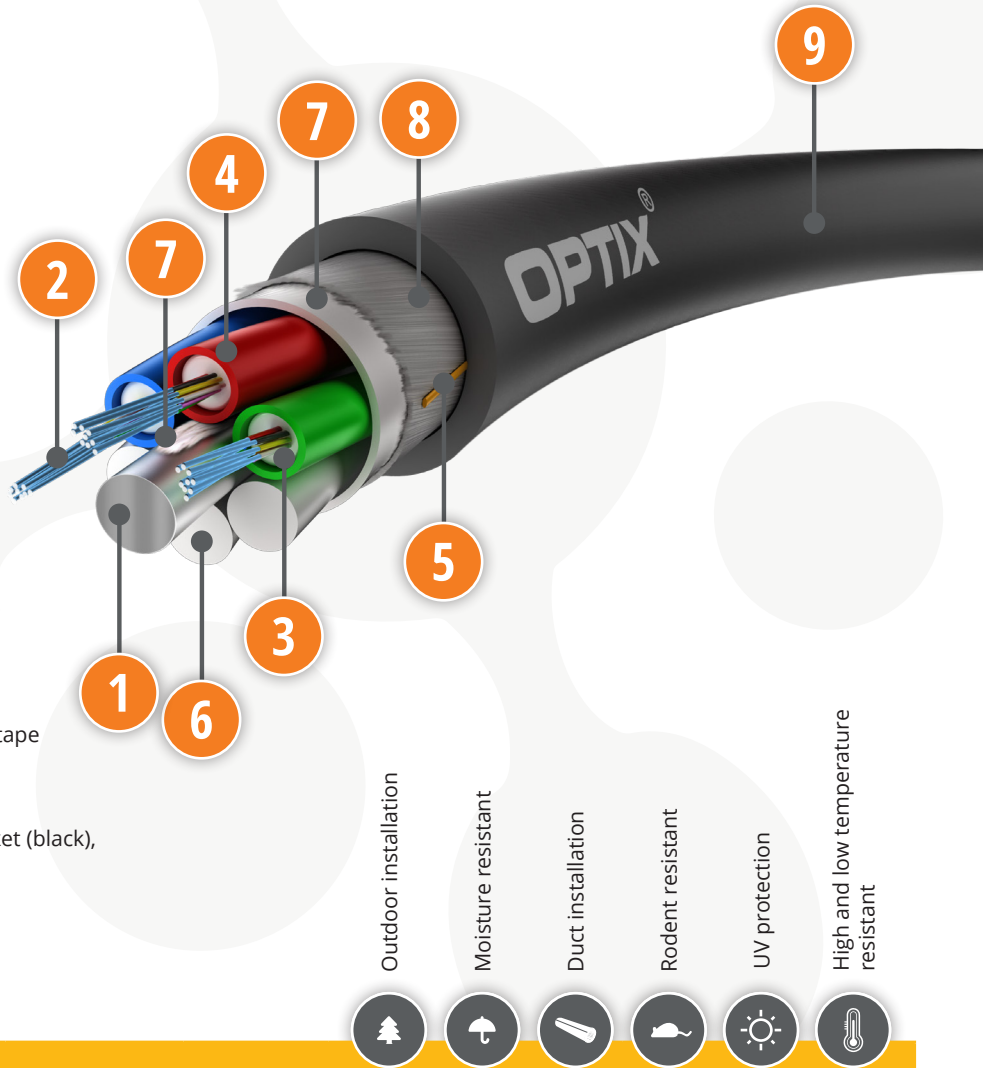
| Mechanical parameters | EN standard | IEC standard | 12-24F | 48F | 72F | 96-288F |
|-------------------------------|-------------------|------------------|-------------------------------|-------|-------|---------|
| Tensile Strength Installation | EN 187000 | IEC 60794-1-2-E1 | 1800N | 1800N | 1800N | 1800N |
| Tensile Strength Operation | EN 187000 | IEC 60794-1-2-E1 | 1200N | 1200N | 1200N | 1200N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 1000N (100x100mm) for 60 sec. | | | |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 25 cycles [(20xD), 1Kg] | | | |

OPTIX Cable SAVER PLUS Z-XOTKtsdDb 2.7kN

9/125 ITU-T G.652D

FEATURES:

- Fully dielectric construction
- Solid HDPE jacket
- Additional water blocking construction
- Resistance to high and low temperatures
- Enhanced by high quality glass yarns
- Practical and thin Ripcord



CABLE CONSTRUCTION

- FRP rod
- Optical fibers in 0.25mm coloured coating
- Hydrophobic jelly
- Loose tube
- Ripcords to tear the outer jacket
- Filler
- Water blocking tape / yarns
- Glass yarns
- HDPE outer jacket (black), UV stabilized

- Outdoor installation
- Moisture resistant
- Duct installation
- Rodent resistant
- UV protection
- High and low temperature resistant

Product information

| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±0.5) | Ø Tube [mm] (±0.15) | Supporting element / Peripheral reinforcement | Reinforcing element [mm] (±0.1) | Coating material & thickness [mm] (±0.2) | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
|---------------|----------------------------------|-----------------------|---------------------|---------------------|---|---------------------------------|--|--------------------------|----------------------------------|--|
| 2T6F | 12 | 75 | 9.0 | 1.1/1.7 | Glass yarns | FRP (1.8) | HDPE (1.2) | -10° to +50° C | -40° to +70° C | 20D/15D |
| 4T6F | 24 | 75 | 9.0 | 1.1/1.7 | Glass yarns | FRP (1.8) | HDPE (1.2) | -10° to +50° C | -40° to +70° C | 20D/15D |
| 2T12F | 24 | 75 | 9.0 | 1.1/1.7 | Glass yarns | FRP (1.8) | HDPE (1.2) | -10° to +50° C | -40° to +70° C | 20D/15D |
| 4T12F | 48 | 75 | 9.0 | 1.1/1.7 | Glass yarns | FRP (1.8) | HDPE (1.2) | -10° to +50° C | -40° to +70° C | 20D/15D |
| 6T12F | 72 | 75 | 9.0 | 1.1/1.7 | Glass yarns | FRP (1.8) | HDPE (1.2) | -10° to +50° C | -40° to +70° C | 20D/15D |
| 8T12F | 96 | 85 | 9.5 | 1.1/1.7 | Glass yarns | FRP (1.8) | HDPE (1.2) | -10° to +50° C | -40° to +70° C | 20D/15D |
| 12T12F | 144 | 115 | 11.7 | 1.1/1.7 | Glass yarns | FRP in PE coat (2.8/5.0) | HDPE (1.2) | -10° to +50° C | -40° to +70° C | 20D/15D |
| 8T24F | 192 | 145 | 12.5 | 1.6/2.4 | Glass yarns | FRP in PE coat (3.5/6.0) | HDPE (1.2) | -10° to +50° C | -40° to +70° C | 20D/15D |
| 12T24F | 288 | 165 | 15.5 | 1.6/2.4 | Glass yarns | FRP in PE coat (3.5/6.0) | HDPE (1.2) | -10° to +50° C | -40° to +70° C | 20D/15D |

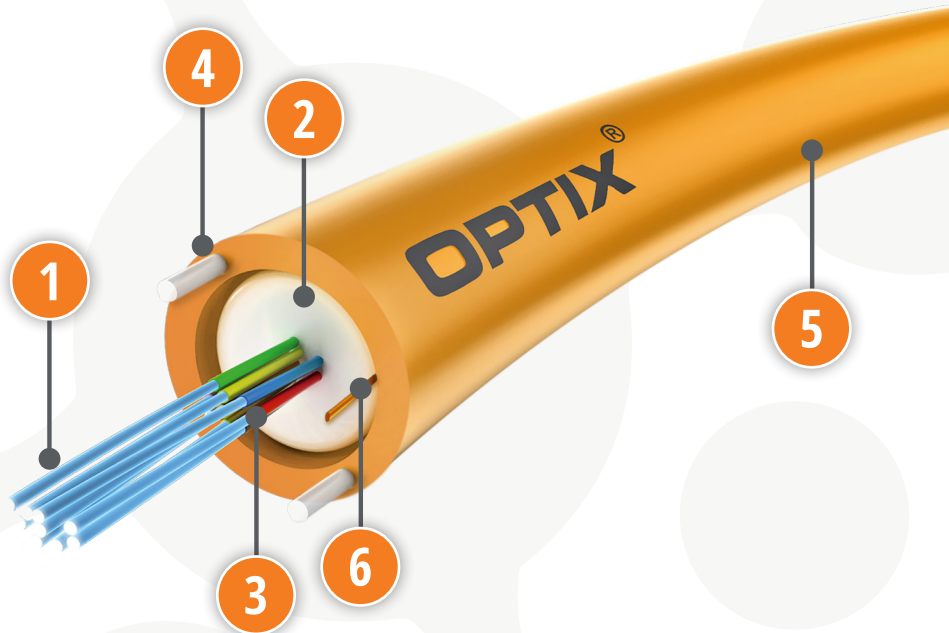
| Mechanical parameters | EN standard | IEC standard | 12-24F | 48F | 72F | 96-288F |
|-------------------------------|-------------------|------------------|------------------------------|-------|-------|---------|
| Tensile Strength Installation | EN 187000 | IEC 60794-1-2-E1 | 2700N | 2700N | 2700N | 2700N |
| Tensile Strength Operation | EN 187000 | IEC 60794-1-2-E1 | 1250N | 1250N | 1250N | 1250N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 500N (100x100mm) for 60 sec. | | | |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 30 cycles [(20xD), 1Kg] | | | |

OPTIX Cable DAC (Direct Access Cable) Z-XOTKtcd 1.2kN

9/125 ITU-T G.652D/G.657A1/G.657A2

FEATURES:

- Designed for direct access in the ground
- Fully dielectric construction
- Resistance to high and low temperatures
- Solid HDPE jacket (orange)



CABLE CONSTRUCTION

1. Optical fibers in 0.25mm coloured coating
2. Hydrophobic jelly
3. Loose tube
4. FRP rods
5. HDPE outer jacket (orange)
6. Ripcords to tear the outer jacket

- Underground installation
- Outdoor installation
- Duct installation
- Crushproof
- High and low temperature resistant

| Product information | | | | | | | | | | |
|---------------------|----------------------------------|-----------------------|---------------------|---------------------|---|---------------------------------|--|--------------------------|----------------------------------|--|
| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±0.5) | Ø Tube [mm] (±0.15) | Supporting element / Peripheral reinforcement | Reinforcing element [mm] (±0.1) | Coating material & thickness [mm] (±0.2) | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
| 1T2F | 2 | 30 | 6.0 | 1.4/2.0 | None | FRP (2x0.9) | HDPE (1.8) | -20° to +70° C | -20° to +70° C | 20D/15D |
| 1T4F | 4 | 30 | 6.0 | 1.4/2.0 | None | FRP (2x0.9) | HDPE (1.8) | -20° to +70° C | -20° to +70° C | 20D/15D |
| 1T8F | 8 | 30 | 6.0 | 1.4/2.0 | None | FRP (2x0.9) | HDPE (1.8) | -20° to +70° C | -20° to +70° C | 20D/15D |
| 1T12F | 12 | 30 | 6.0 | 1.4/2.0 | None | FRP (2x0.9) | HDPE (1.8) | -20° to +70° C | -20° to +70° C | 20D/15D |
| 1T24F | 24 | 32 | 6.5 | 1.6/2.4 | None | FRP (2x0.9) | HDPE (1.8) | -20° to +70° C | -20° to +70° C | 20D/15D |

| Mechanical parameters | EN standard | IEC standard | 1-8F | 12F | 24F |
|-------------------------------|-------------------|------------------|-------------------------------|-------|-------|
| Tensile Strength Installation | EN 187000 | IEC 60794-1-2-E1 | 1200N | 1200N | 1200N |
| Tensile Strength Operation | EN 187000 | IEC 60794-1-2-E1 | 600N | 600N | 600N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 1000N (100x100mm) for 60 sec. | | |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 30 cycles (20xD) | | |

OPTIX Cable AIRFLOW S-QOTKSdD 0.8kN (up to 80m SPAN - NESC Heavy)

9/125 ITU-T G.657A2

FEATURES:

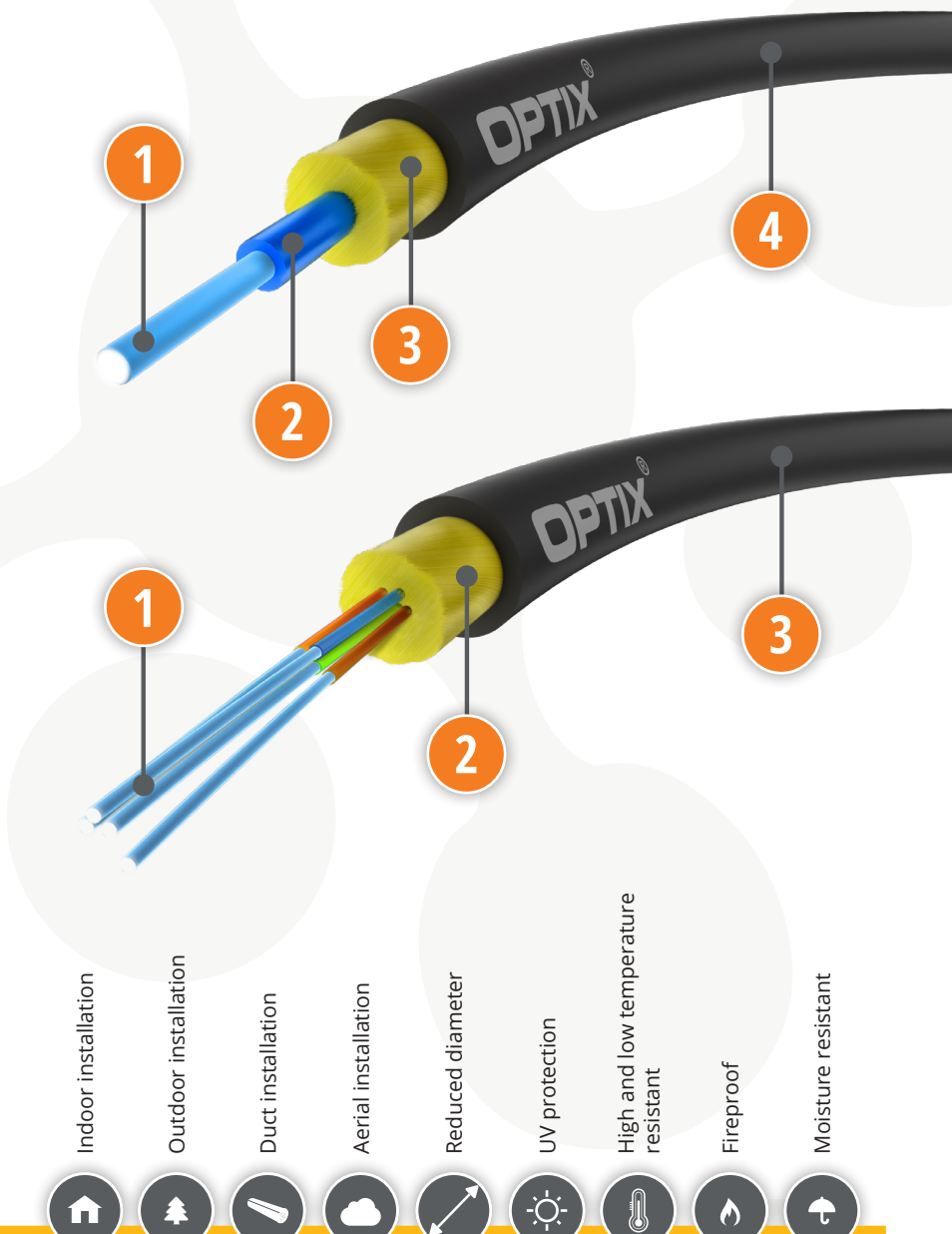
- Cable for outdoor / indoor installation
- Span (NESC Heavy) up to 80 meters (0.8kN)
- Fully dielectric construction
- Resistance to high and low temperatures
- Enhanced by high quality aramid yarns
- Small diameter ~3mm
- Reduced bend radius - G.657A2 fibers
- Solid flame retardant polyurethane jacket with UV protection

CABLE CONSTRUCTION 1F

1. Optical fibers in 0.25mm coating
2. Coloured buffer 0.9mm (semi-tight buffer)
3. Aramid yarns
4. FR PU outer jacket, UV Stabilized

CABLE CONSTRUCTION 2-12F

1. Optical fibers in 0.25mm coloured coating
2. Aramid yarns
3. FR PU outer jacket, UV Stabilized



| Product information | | | | | | | | | | |
|---------------------|----------------------------------|-----------------------|---------------------|--------|---|---------------------|--|--------------------------|----------------------------------|--|
| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±0.1) | Ø Tube | Supporting element / Peripheral reinforcement | Reinforcing element | Coating material & thickness [mm] (±0.1) | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
| OT1F | 1 | 8.7 | 3.05 | None | Aramid yarns | | FR PU (0.75) | -30° to +70° C | -30° to +70° C | 15D/10D |
| OT2F | 2 | 7.5 | 3.00 | None | Aramid yarns | | FR PU (0.75) | -30° to +70° C | -30° to +70° C | 15D/10D |
| OT4F | 4 | 7.5 | 3.00 | None | Aramid yarns | | FR PU (0.75) | -30° to +70° C | -30° to +70° C | 15D/10D |
| OT6F | 6 | 8.0 | 3.20 | None | Aramid yarns | | FR PU (0.75) | -30° to +70° C | -30° to +70° C | 15D/10D |
| OT8F | 8 | 8.3 | 3.40 | None | Aramid yarns | | FR PU (0.70) | -30° to +70° C | -30° to +70° C | 15D/10D |
| OT12F | 12 | 8.5 | 3.40 | None | Aramid yarns | | FR PU (0.70) | -30° to +70° C | -30° to +70° C | 15D/10D |

| Mechanical parameters | EN standard | IEC standard | 1F | 2-4F | 6-12F |
|--|-------------------|------------------|------------------------------|------|-------|
| Tensile Strength Installation (NESC Heavy) | EN 187000 | IEC 60794-1-2-E1 | 800N | 800N | 800N |
| Tensile Strength Operation (NESC Heavy) | EN 187000 | IEC 60794-1-2-E1 | 250N | 250N | 250N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 500N (100x100mm) for 60 sec. | | |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 25 cycles [(20xD), 1Kg] | | |

OPTIX Cable AIRFLOW S-QOTKSdD 2F (2x 0.9mm) 0.8kN (up to 80m SPAN - NESC Heavy)

9/125 ITU-T G.657A2

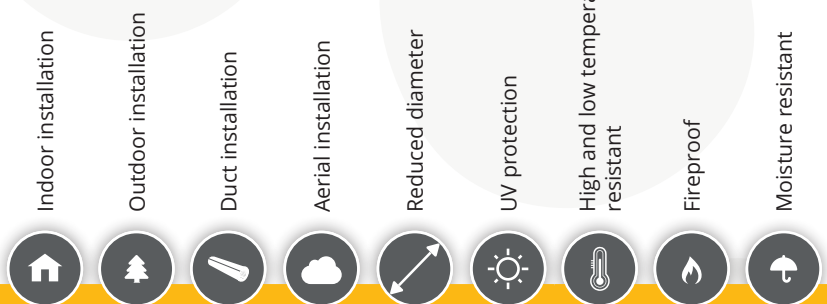
FEATURES:

- Cable for outdoor / indoor installation
- Span (NESC Heavy) up to 80 meters (0.8kN)
- Fully dielectric construction
- Resistance to high and low temperatures
- Enhanced by high quality aramid yarns
- Solid PU jacket
- Small diameter ~3.7mm
- Reduced bend radius - G.657A2 fibers



CABLE CONSTRUCTION 2F

1. Optical fibers in 0.25mm coating
2. Coloured buffer 0.9mm (semi-tight buffer)
3. Aramid yarns
4. FR Polyurethane, UV Stabilized



| Product information | | | | | | | | | | |
|---------------------|----------------------------------|-----------------------|--------------------|--------|---|---------------------|---|--------------------------|----------------------------------|--|
| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±5%) | Ø Tube | Supporting element / Peripheral reinforcement | Reinforcing element | Coating material & thickness [mm] (±5%) | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
| OT2F | 2 | 11.0 | 3.7 | None | Aramid yarns | | PU (0.75) | -10° to +50° C | -40° to +70° C | 20D/15D |

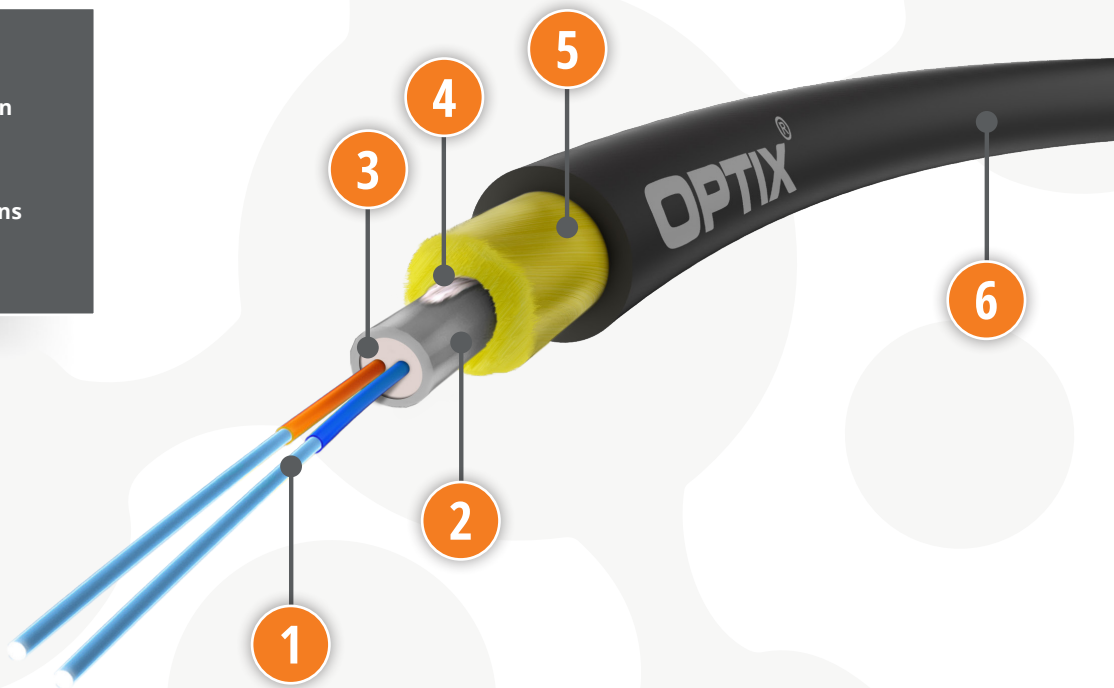
| Mechanical parameters | EN standard | IEC standard | 2F |
|-------------------------------|-------------------|--------------|------------------------------|
| Tensile Strength Installation | EN 187000 | IEC 794-1-E1 | 800N |
| Tensile Strength Operation | EN 187000 | IEC 794-1-E1 | 500N |
| Crushing resistance | EN 187000, m. 504 | IEC 794-1-E3 | 500N (100x100mm) for 60 sec. |
| Repeated bending | EN 187000, m. 507 | IEC 794-1-E6 | 30 [cycles (20xD)] |

OPTIX Cable AirTube S-XOTKtmdD 0.6kN (up to 50m SPAN - NESc Heavy)

9/125 ITU-T G.657A2

FEATURES:

- Cable for outdoor / indoor installation
- Span (NESc Heavy) up to 50 meters
- Fully dielectric construction
- Enhanced by high quality aramid yarns
- Solid HDPE jacket
- Water blocking construction



CABLE CONSTRUCTION

1. Optical fibers in 0.25mm coloured coating
2. Loose tube PBT
3. Hydrophobic jelly
4. Water blocking yarns
5. Aramid yarns
6. HDPE outer jacket (black), UV stabilized

- Indoor installation
- Outdoor installation
- Duct installation
- Aerial installation
- Reduced diameter
- UV protection
- High and low temperature resistant
- Moisture resistant



Product information

| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (nom.) | Ø Cable [mm] (±0.2) | Ø Tube [mm] (±0.15) | Supporting element / Peripheral reinforcement | Reinforcing element | Coating material & thickness [mm] (nom.) | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
|---------------|----------------------------------|-----------------------|---------------------|---------------------|---|---------------------|--|--------------------------|----------------------------------|--|
| 1T1F | 1 | 8.3 | 3.2 | 0.9/1.4 | Aramid yarns | HDPE (0.75) | -20° to +50° C | -30° to +60° C | 20D/10D | |
| 1T2F | 2 | 8.3 | 3.2 | 0.9/1.4 | Aramid yarns | HDPE (0.75) | -20° to +50° C | -30° to +60° C | 20D/10D | |
| 1T4F | 4 | 8.3 | 3.2 | 0.9/1.4 | Aramid yarns | HDPE (0.75) | -20° to +50° C | -30° to +60° C | 20D/10D | |
| 1T6F | 6 | 9.4 | 3.4 | 0.9/1.4 | Aramid yarns | HDPE (0.75) | -20° to +50° C | -30° to +60° C | 20D/10D | |
| 1T8F | 8 | 9.4 | 3.4 | 1.0/1.6 | Aramid yarns | HDPE (0.75) | -20° to +50° C | -30° to +60° C | 20D/10D | |
| 1T12F | 12 | 9.4 | 3.4 | 1.0/1.6 | Aramid yarns | HDPE (0.75) | -20° to +50° C | -30° to +60° C | 20D/10D | |

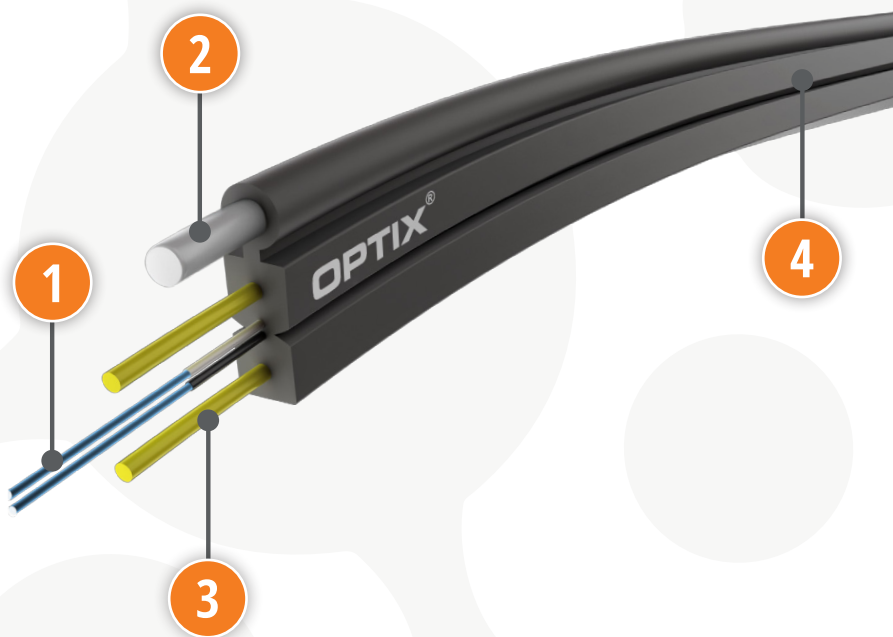
| Mechanical parameters | EN standard | IEC standard | 1F | 2-4F | 6-12F |
|--|-------------------|------------------|-------------------------|------|-------|
| Tensile Strength Installation (NESc Heavy) | EN 187000 | IEC 60794-1-2-E1 | 600N | 600N | 600N |
| Tensile Strength Operation (NESc Heavy) | EN 187000 | IEC 60794-1-2-E1 | 250N | 250N | 250N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 500N (100x100mm) | | |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 25 cycles [(20xD), 1Kg] | | |

OPTIX Cable S-NOTKSdp 0.6kN (up to 50m SPAN - NESCS Heavy)

9/125 ITU-T G.657A2

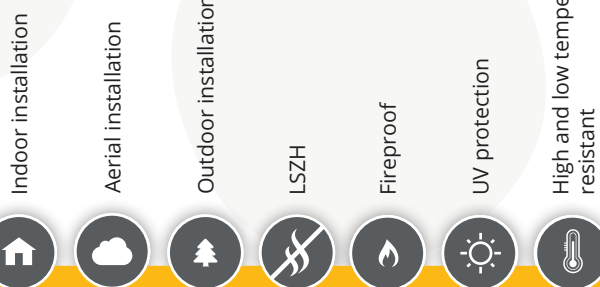
FEATURES:

- Cable for outdoor / indoor installation
- Span (NESCS Heavy) up to 50 meters (0.6kN)
- Fully dielectric construction
- Resistance to high and low temperatures
- Practical, flat design
- Solid FR LSZH jacket



CABLE CONSTRUCTION

1. Optical fibers in 0.25mm coloured coating
2. FRP rod
3. ARP rods
4. FR LSZH outer jacket (black), UV stabilized



Product information

| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±5%) | Ø Tube | Supporting element / Peripheral reinforcement [mm] (±0.1) | Reinforcing element [mm] (±0.1) | Coating material & thickness [mm] (±5%) | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
|---------------|----------------------------------|-----------------------|--------------------|--------|---|---------------------------------|---|--------------------------|----------------------------------|--|
| OT1F | 1 | 21.5 | 5.2x2.0 | None | FRP (1.0) | ARP (2x0.5) | LSZH (0.75) | -10° to +50° C | -40° to +70° C | 20D/15D |
| OT2F | 2 | 21.5 | 5.2x2.0 | None | FRP (1.0) | ARP (2x0.5) | LSZH (0.75) | -10° to +50° C | -40° to +70° C | 20D/15D |
| OT4F | 4 | 21.5 | 5.2x2.0 | None | FRP (1.0) | ARP (2x0.5) | LSZH (0.75) | -10° to +50° C | -40° to +70° C | 20D/15D |

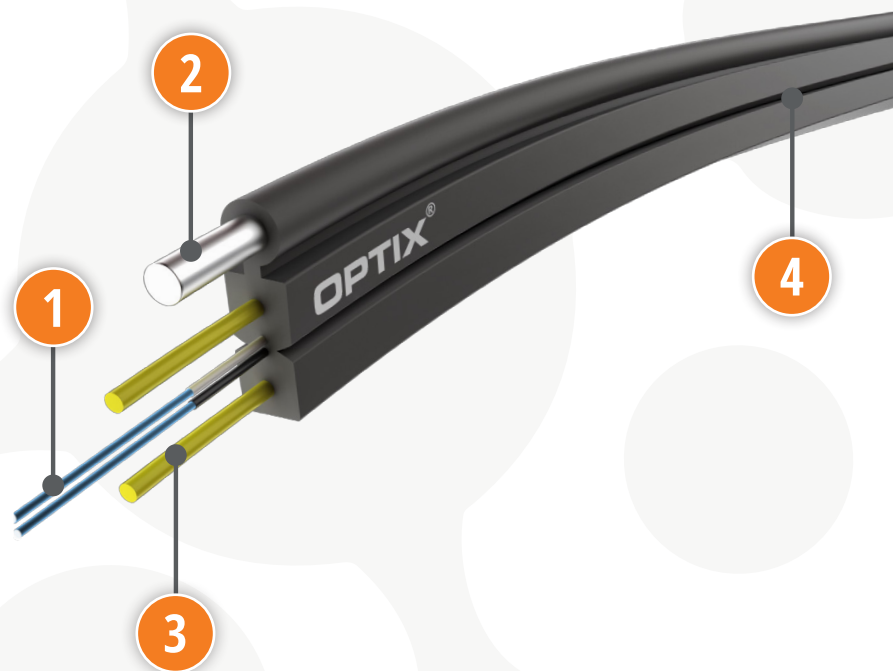
| Mechanical parameters | EN standard | IEC standard | 1F | 2F | 4F |
|---|-------------------|------------------|------------------------------|------|------|
| Tensile Strength Installation (NESCS Heavy) | EN 187000 | IEC 60794-1-2-E1 | 600N | 600N | 600N |
| Tensile Strength Operation (NESCS Heavy) | EN 187000 | IEC 60794-1-2-E1 | - | - | - |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 500N (100x100mm) for 60 sec. | | |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 30 cycles [(20xD), 1Kg] | | |

OPTIX Cable S-NOTKSp 0.6kN (up to 50m SPAN - NESc Heavy)

9/125 ITU-T G.657A2

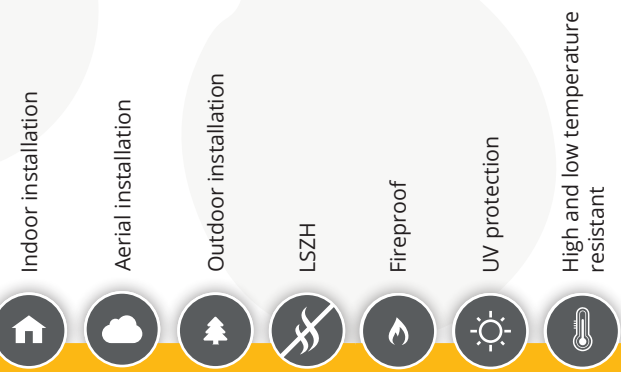
FEATURES:

- Cable for outdoor / indoor installation
- Span (NESc Heavy) up to 50 meters (0.6kN)
- Resistance to high and low temperatures
- Practical, flat design
- Solid FR LSZH jacket



CABLE CONSTRUCTION

1. Optical fibers in 0.25mm coloured coating
2. Galvanised steel rod
3. ARP rods
4. FR LSZH outer jacket (white or black), UV stabilized



| Product information | | | | | | | | | | |
|---------------------|----------------------------------|-----------------------|--------------------|--------|---|---------------------------------|---|--------------------------|----------------------------------|--|
| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±5%) | Ø Tube | Supporting element / Peripheral reinforcement [mm] (±0.1) | Reinforcing element [mm] (±0.1) | Coating material & thickness [mm] (±5%) | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
| OT1F | 1 | 21.5 | 5.2x2.0 | None | Galvanised steel(1.0) | ARP (2x0.5) | LSZH (0.75) | -10° to +50° C | -40° to +70° C | 20D/15D |
| OT2F | 2 | 21.5 | 5.2x2.0 | None | Galvanised steel(1.0) | ARP (2x0.5) | LSZH (0.75) | -10° to +50° C | -40° to +70° C | 20D/15D |
| OT4F | 4 | 21.5 | 5.2x2.0 | None | Galvanised steel(1.0) | ARP (2x0.5) | LSZH (0.75) | -10° to +50° C | -40° to +70° C | 20D/15D |

| Mechanical parameters | EN standard | IEC standard | 1F | 2F | 4F |
|--|-------------------|------------------|------------------------------|------|------|
| Tensile Strength Installation (NESc Heavy) | EN 187000 | IEC 60794-1-2-E1 | 600N | 600N | 600N |
| Tensile Strength Operation (NESc Heavy) | EN 187000 | IEC 60794-1-2-E1 | - | - | - |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 500N (100x100mm) for 60 sec. | | |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 30 cycles [(20xD), 1Kg] | | |

OPTIX Cable ARP ZW-NOTKSdp 0.08kN

9/125 ITU-T G.657A2

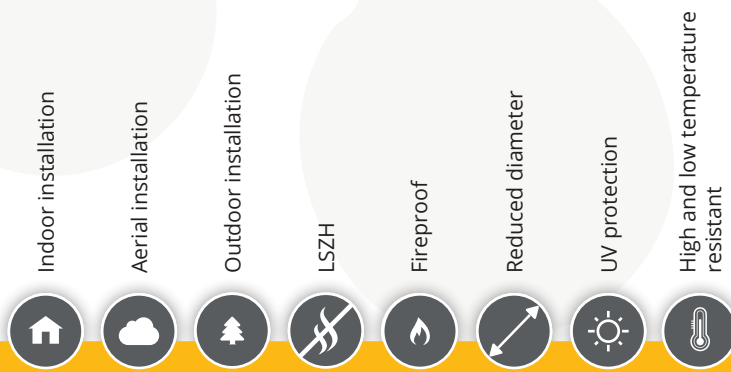
FEATURES:

- Cable for outdoor / indoor installation
- Practical, flat design
- Fully dielectric construction
- Resistance to high and low temperatures
- Reduced bend radius - G.657A2 fibers
- Small diameter ~3mm
- Solid FR LSZH jacket



CABLE CONSTRUCTION

1. Optical fibers in 0.25mm coloured coating
2. ARP rods
3. FR LSZH outer jacket, UV stabilized (available: white or black)



| Product information | | | | | | | | | | |
|---------------------|----------------------------------|-----------------------|--------------------|--------|---|---------------------------------|---|--------------------------|----------------------------------|--|
| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±5%) | Ø Tube | Supporting element / Peripheral reinforcement | Reinforcing element [mm] (±0.1) | Coating material & thickness [mm] (±5%) | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
| OT1F | 1 | 9.4 | 3.0x2.0 | None | None | ARP (2x0.5) | LSZH (0.75) | -10° to +50° C | -40° to +70° C | 20D/15D |
| OT2F | 2 | 9.6 | 3.0x2.0 | None | None | ARP (2x0.5) | LSZH (0.75) | -10° to +50° C | -40° to +70° C | 20D/15D |
| OT4F | 4 | 9.8 | 3.0x2.0 | None | None | ARP (2x0.5) | LSZH (0.75) | -10° to +50° C | -40° to +70° C | 20D/15D |

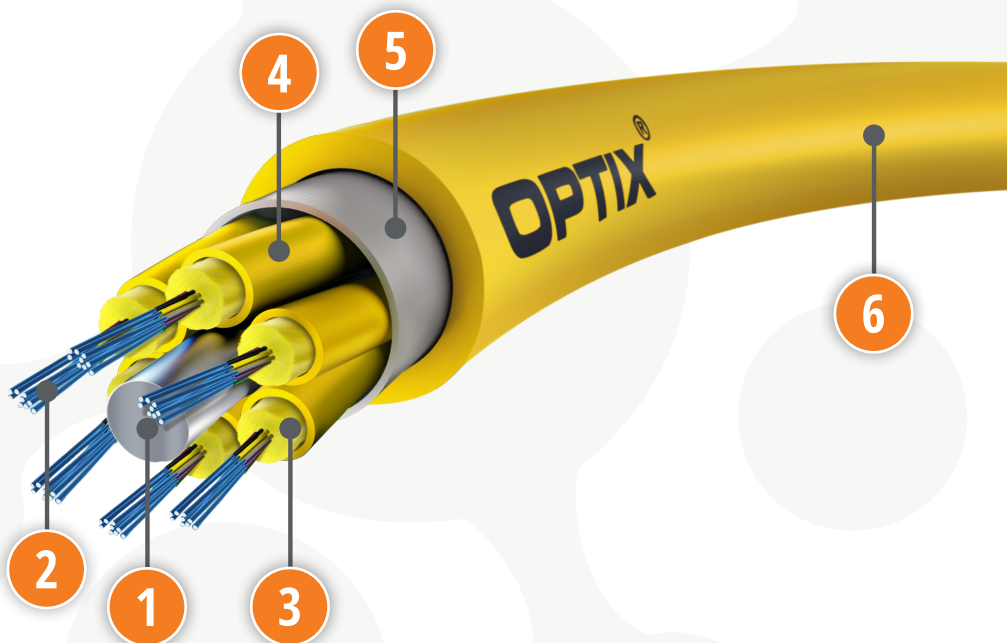
| Mechanical parameters | EN standard | IEC standard | 1F | 2F | 4F |
|-------------------------------|-------------------|------------------|------------------------------|-----|-----|
| Tensile Strength Installation | EN 187000 | IEC 60794-1-2-E1 | 80N | 80N | 80N |
| Tensile Strength Operation | EN 187000 | IEC 60794-1-2-E1 | - | - | - |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 500N (100x100mm) for 60 sec. | | |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 30 cycles [(20xD), 1Kg] | | |

OPTIX Cable BREAKOUT W-NNOTKSd 0.15 - 1.0kN

9/125 ITU-T G.652D

FEATURES:

- Indoor cable for FTTB/FTTH installation
- Reinforced with FRP central strengthening element
- Water blocking construction
- Special "breakout" design
- Solid LSZH jacket (yellow)



CABLE CONSTRUCTION

- | | |
|--|-----------------------------------|
| 1. FRP rod | 4. FR LSZH micro modules (yellow) |
| 2. Optical fibers in 0.25mm coloured coating | 5. Water blocking tape |
| 3. Aramid yarns | 6. FR LSZH outer jacket (yellow) |



| Product information | | | | | | | | | | |
|---------------------|----------------------------------|-----------------------|---------------------|---------------------|---|---------------------|------------------|--------------------------|----------------------------------|--|
| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±0.5) | Ø Tube [mm] (±0.15) | Supporting element / Peripheral reinforcement | Reinforcing element | Coating material | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
| 1x12 | 12 | 7.8 | 3.0 | 2.9 | None | None | LSZH | -20° to +60° C | -40° to +70° C | 20D/10D |
| 2x12 | 24 | 72 | 9.0 | 2.9 | None | FRP | LSZH | -20° to +60° C | -40° to +70° C | 20D/10D |
| 4x12 | 48 | 79 | 9.0 | 2.9 | None | FRP | LSZH | -20° to +60° C | -40° to +70° C | 20D/10D |
| 6x12 | 72 | 126 | 11.2 | 2.9 | None | FRP | LSZH | -20° to +60° C | -40° to +70° C | 20D/10D |
| 8x12 | 96 | 178 | 13.5 | 2.9 | None | FRP | LSZH | -20° to +60° C | -40° to +70° C | 20D/10D |
| 12x12 | 144 | 285 | 17.5 | 2.9 | None | FRP | LSZH | -20° to +60° C | -40° to +70° C | 20D/10D |

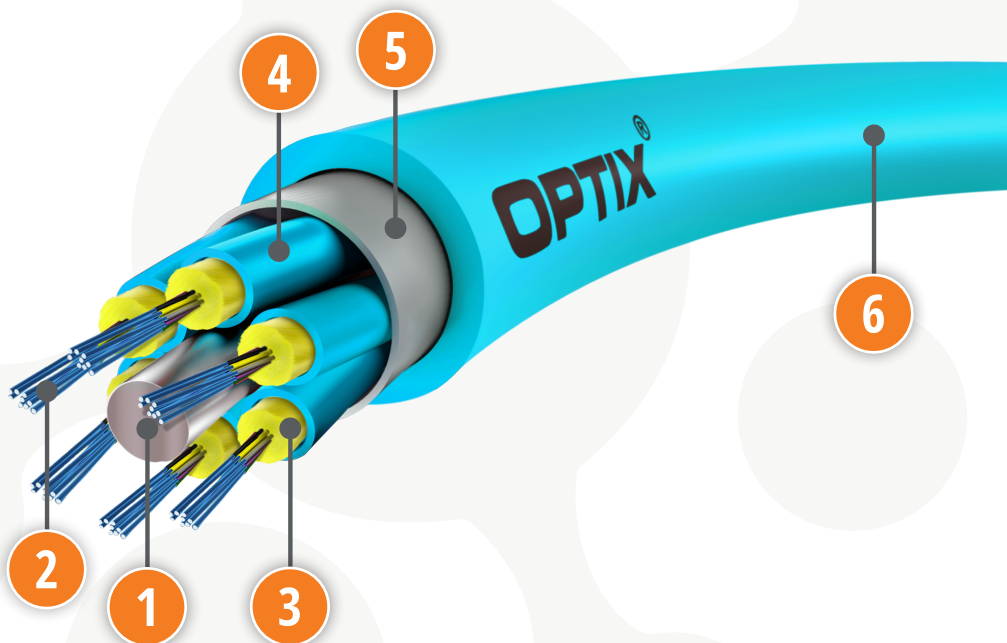
| Mechanical parameters | EN standard | IEC standard | 12F | 24F | 48F | 72-96F | 144F |
|-------------------------------|-------------------|------------------|-------------------------------|------|------|--------|-------|
| Tensile Strength Installation | EN 187000 | IEC 60794-1-2-E1 | 150N | 300N | 600N | 1000N | 1000N |
| Tensile Strength Operation | EN 187000 | IEC 60794-1-2-E1 | 80N | 150N | 200N | 300N | 500N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 1000N (100x100mm) for 60 sec. | | | | |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 30 cycles [(20xD), 1Kg] | | | | |

OPTIX Cable BREAKOUT W-NNOTKSd 1.5kN

50/125 ITU-T OM3

FEATURES:

- Indoor cable for FTTB/FTTH installation
- Reinforced with FRP central strengthening element
- Water blocking construction
- Special "breakout" design
- Solid LSZH jacket



CABLE CONSTRUCTION

- | | |
|--|------------------------------|
| 1. FRP rod | 4. LSZH micro modules (aqua) |
| 2. Optical fibers in 0.25mm coloured coating | 5. Water blocking tape |
| 3. Aramid yarns | 6. LSZH outer jacket (aqua) |

Indoor installation

Outdoor installation

Moisture resistant

Duct installation



Product information

| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±1.0) | Ø Tube [mm] (±0.1) | Supporting element / Peripheral reinforcement | Reinforcing element | Coating material | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
|---------------|----------------------------------|-----------------------|---------------------|--------------------|---|---------------------|------------------|--------------------------|----------------------------------|--|
| 12x12 | 144 | 120 | 12.0 | 1.8 | None | FRP in PE coat | LSZH | -10° to +60° C | -30° to +70° C | 20D/10D |

| Mechanical parameters | EN standard | IEC standard | 144F |
|-------------------------------|-------------------|------------------|-------------------------|
| Tensile Strength Installation | EN 187000 | IEC 60794-1-2-E1 | 1500N |
| Tensile Strength Operation | EN 187000 | IEC 60794-1-2-E1 | 800N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 1000N (100x100mm) |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 30 cycles [(20xD), 1Kg] |

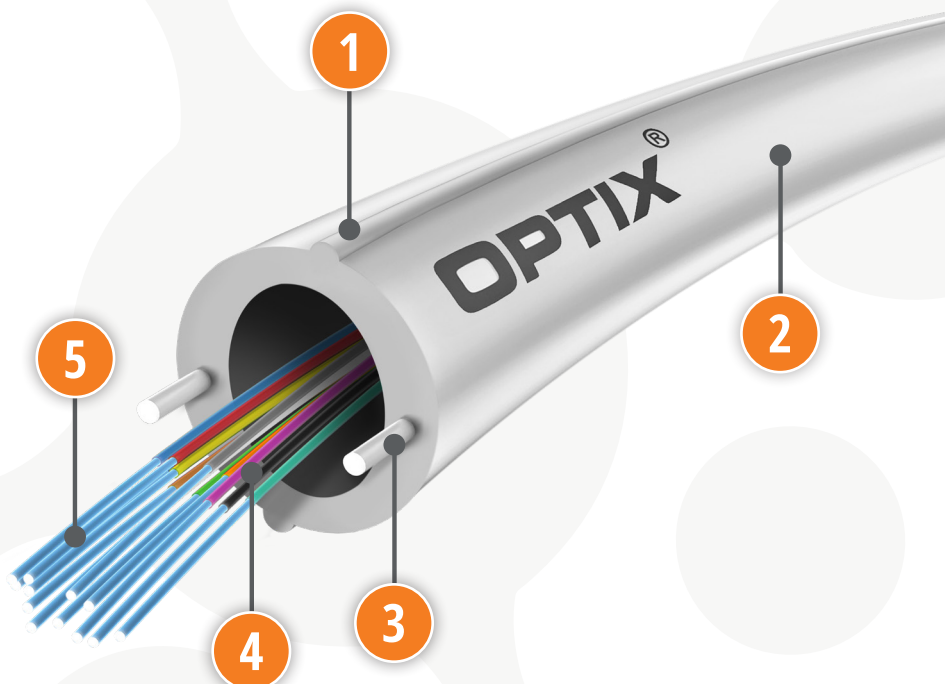


OPTIX Cable VERTICAL W-NOTKSd 1.0kN

9/125 ITU-T G.657A2

FEATURES:

- Easy access cable
- Best for installation in multi-family buildings / offices
- Fiber colour standard: EIA/TIA-598
- High quality LSZH jacket
- Reduced bend radius - G.657A2 fibers
- Cutting windows in jacket



CABLE CONSTRUCTION

1. Cable opening marker
2. LSZH outer jacket (white)
3. FRP rods
4. Coloured buffer 0.9mm (semi-tight buffer)
5. Optical fibers in 0.25mm coating



| Product information | | | | | | | | | | |
|---------------------|----------------------------------|-----------------------|---------------------|--------|---|---------------------------------|--|--------------------------|----------------------------------|--|
| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±0.5) | Ø Tube | Supporting element / Peripheral reinforcement | Reinforcing element [mm] (±0.1) | Coating material & thickness [mm] (±0.2) | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
| OT12F | 12 | 70 | 8.5 | None | None | FRP (2x1.0) | LSZH (1.5-2.0) | -20° to +60° C | -20° to +60° C | 20D/10D |
| OT16F | 16 | 85 | 10.0 | None | None | FRP (2x1.0) | LSZH (1.5-2.0) | -20° to +60° C | -20° to +60° C | 20D/10D |
| OT24F | 24 | 90 | 10.0 | None | None | FRP (2x1.0) | LSZH (1.5-2.0) | -20° to +60° C | -20° to +60° C | 20D/10D |
| OT36F | 36 | 139 | 13.5 | None | None | FRP (2x1.0) | LSZH (1.5-2.0) | -20° to +60° C | -20° to +60° C | 20D/10D |
| OT48F | 48 | 151 | 13.5 | None | None | FRP (2x1.0) | LSZH (1.5-2.0) | -20° to +60° C | -20° to +60° C | 20D/10D |

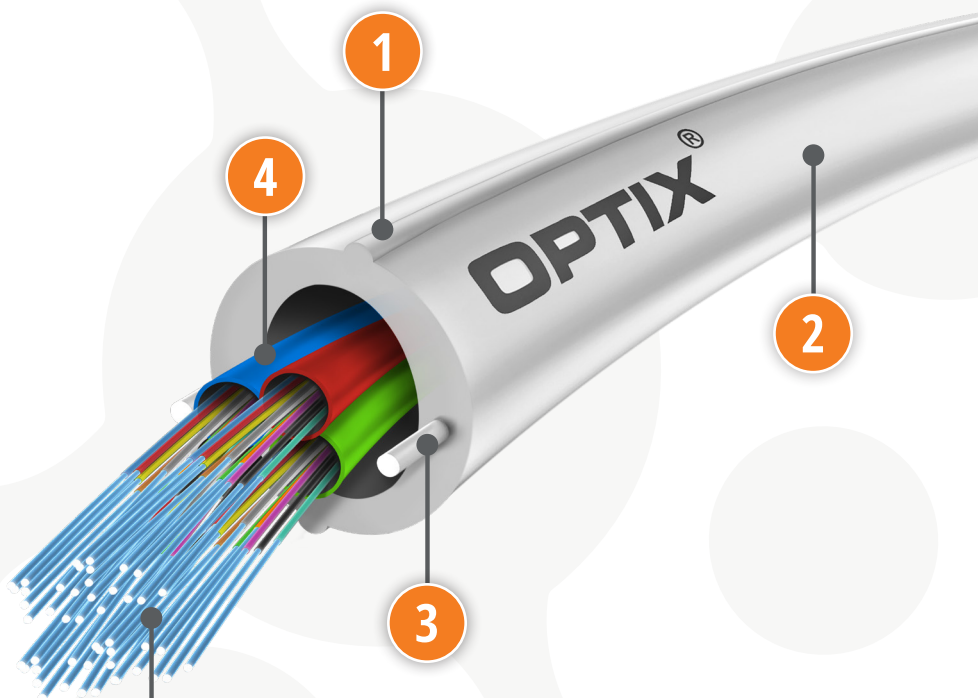
| Mechanical parameters | EN standard | IEC standard | 12F | 16-24F | 36-48F |
|-------------------------------|-------------------|------------------|-------------------------------|--------|--------|
| Tensile Strength Installation | EN 187000 | IEC 60794-1-2-E1 | 1000N | 1000N | 1000N |
| Tensile Strength Operation | EN 187000 | IEC 60794-1-2-E1 | 500N | 500N | 500N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 1000N (100x100mm) for 60 sec. | | |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 30 cycles [(20xD), 1Kg] | | |

OPTIX Cable VERTICAL MULTI W-NNOTKsd 1.0kN

9/125 ITU-T G.657A2

FEATURES:

- Easy access cable
- Best for installation in multi-family buildings / offices
- Fiber and micro modules colour standard: EIA/TIA-598
- High quality LSZH jacket
- Reduced bend radius - G.657A2 fibers
- Cutting windows in jacket



CABLE CONSTRUCTION

1. Cable opening marker
2. LSZH outer jacket (white)
3. FRP rods
4. Micro modules in coloured LSZH coating
5. Optical fibers in 0.25mm coloured coating



Indoor installation

LSZH

Easy access

Fireproof



Product information

| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±0.5) | Ø Tube / Subunit [mm] (±0.2) | Supporting element / Peripheral reinforcement | Reinforcing element [mm] (±0.1) | Coating material & thickness [mm] (±0.2) | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
|---------------|----------------------------------|-----------------------|---------------------|------------------------------|---|---------------------------------|--|--------------------------|----------------------------------|--|
| 2T6F | 12 | 60 | 7.5 | 1.0 | None | FRP (2x1.0) | LSZH (1.5-2.0) | -15° to +60° C | -20° to +60° C | 20D/10D |
| 2T12F | 24 | 60 | 8.0 | 1.2 | None | FRP (2x1.0) | LSZH (1.5-2.0) | -15° to +60° C | -20° to +60° C | 20D/10D |
| 3T12F | 36 | 61 | 8.0 | 1.2 | None | FRP (2x1.0) | LSZH (1.5-2.0) | -15° to +60° C | -20° to +60° C | 20D/10D |
| 4T12F | 48 | 67 | 8.0 | 1.2 | None | FRP (2x1.0) | LSZH (1.5-2.0) | -15° to +60° C | -20° to +60° C | 20D/10D |
| 6T12F | 72 | 110 | 10.5 | 1.4 | None | FRP (2x1.0) | LSZH (1.5-2.0) | -15° to +60° C | -20° to +60° C | 20D/10D |
| 8T12F | 96 | 110 | 10.5 | 1.4 | None | FRP (2x1.0) | LSZH (1.5-2.0) | -15° to +60° C | -20° to +60° C | 20D/10D |
| 12T12F | 144 | 130 | 10.5 | 1.4 | None | FRP (2x1.0) | LSZH (1.5-2.0) | -15° to +60° C | -20° to +60° C | 20D/10D |
| 12T24F | 288 | 210 | 13.5 | 2.4 | None | FRP (2x1.0) | LSZH (1.5-2.0) | -15° to +60° C | -20° to +60° C | 20D/10D |

| Mechanical parameters | EN standard | IEC standard | 12-48F | 72-288F |
|-------------------------------|-------------------|------------------|-------------------------------|---------|
| Tensile Strength Installation | EN 187000 | IEC 60794-1-2-E1 | 1000N | 1000N |
| Tensile Strength Operation | EN 187000 | IEC 60794-1-2-E1 | 500N | 500N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 1000N (100x100mm) for 60 sec. | |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 30 cycles [(20xD), 1Kg] | |

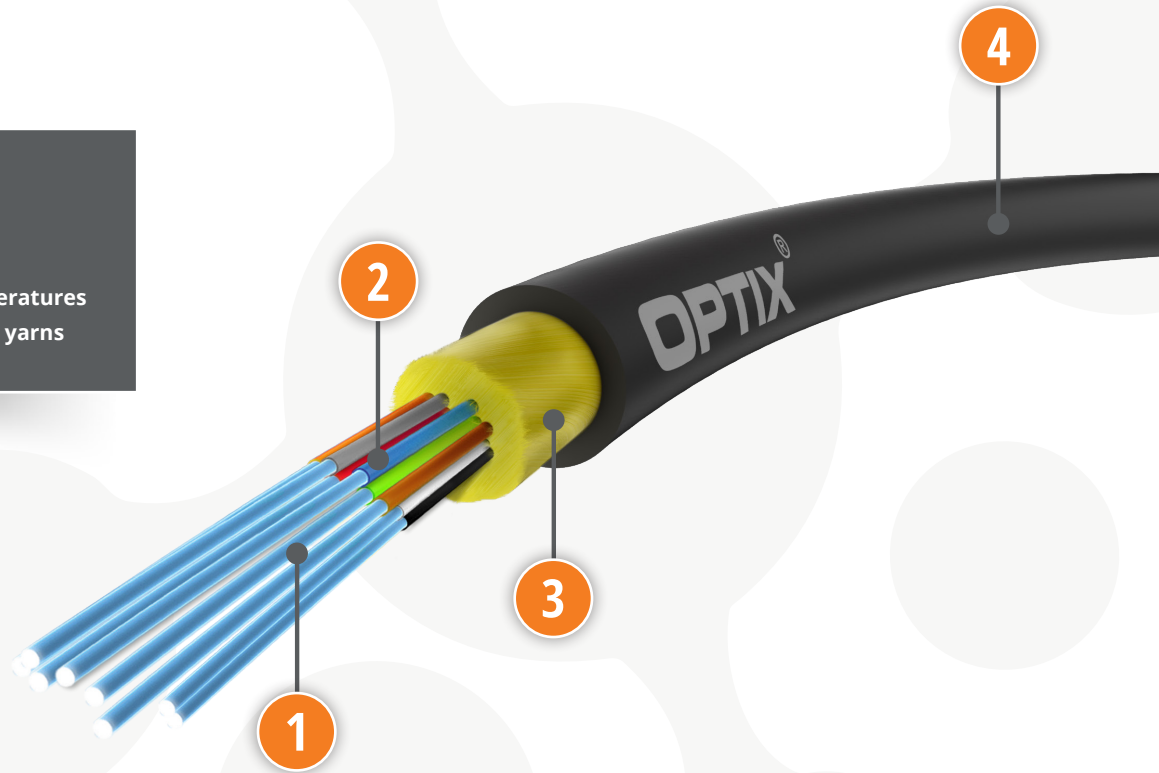


OPTIX Cable Multi LSZH W-NOTKSdD 0.8kN

9/125 ITU-T G.657A1/G.657A2

FEATURES:

- Cable for indoor installation
- Fully dielectric construction
- Resistance to high and low temperatures
- Enhanced by high quality aramid yarns
- Solid LSZH jacket



CABLE CONSTRUCTION

1. Optical fibers in 0.25mm coating
2. Coloured buffer 0.9mm (tight buffer for black outer jacket, easy strip for white outer jacket)
3. Aramid yarns
4. LSZH outer jacket, (allowed: white or black)

Indoor installation

LSZH

Fireproof

High and low temperature resistant



Product information

| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±0.4) | Ø Tube [mm] (±0.15) | Supporting element / Peripheral reinforcement | Reinforcing element | Coating material & thickness [mm] (±5%) | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
|---------------|----------------------------------|-----------------------|---------------------|---------------------|---|---------------------|---|--------------------------|----------------------------------|--|
| OT2F | 2 | 23 | 5.3 | None | Aramid yarns | | LSZH (1.0) | -10° to +70° C | -20° to +70° C | 20D/10D |
| OT4F | 4 | 24 | 5.4 | None | Aramid yarns | | LSZH (1.0) | -10° to +70° C | -20° to +70° C | 20D/10D |
| OT6F | 6 | 24 | 5.5 | None | Aramid yarns | | LSZH (1.0) | -10° to +70° C | -20° to +70° C | 20D/10D |
| OT8F | 8 | 26 | 5.7 | None | Aramid yarns | | LSZH (1.0) | -10° to +70° C | -20° to +70° C | 20D/10D |
| OT12F | 12 | 36 | 6.5 | None | Aramid yarns | | LSZH (1.0) | -10° to +70° C | -20° to +70° C | 20D/10D |

Mechanical parameters

| | EN standard | IEC standard | 2-6F | 8-12F |
|-------------------------------|-------------------|------------------|-------------------------------|-------|
| Tensile Strength Installation | EN 187000 | IEC 60794-1-2-E1 | 800N | 800N |
| Tensile Strength Operation | EN 187000 | IEC 60794-1-2-E1 | 300N | 300N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 1000N (100x100mm) for 60 sec. | |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 30 cycles [(20xD), 1Kg] | |

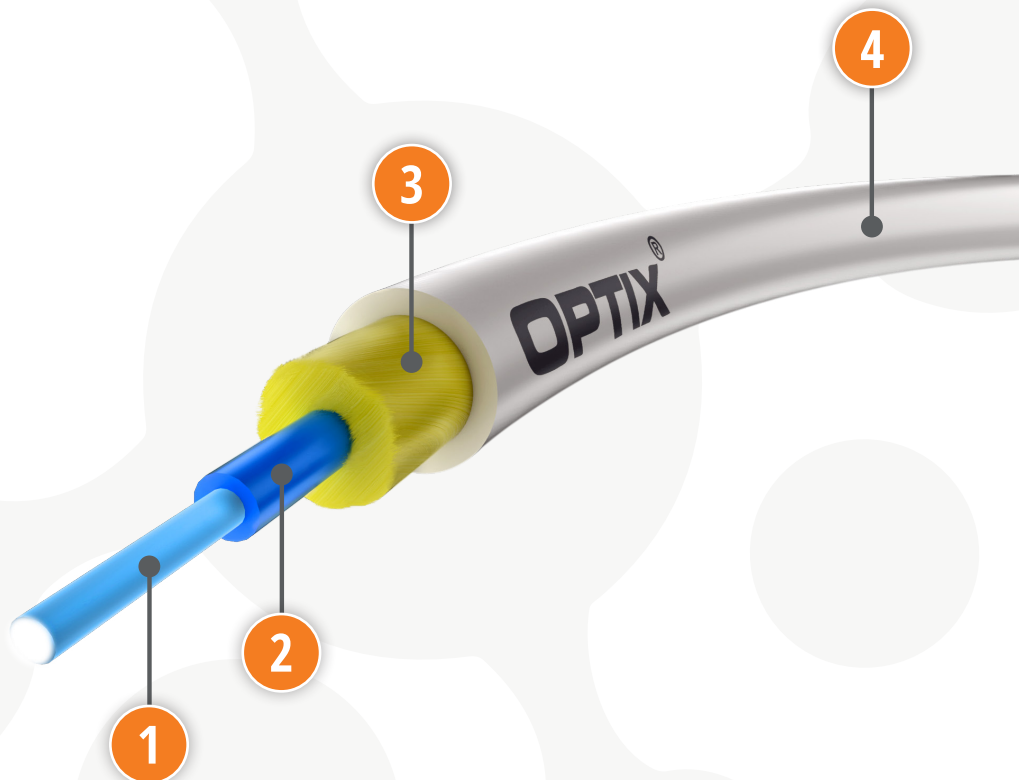


OPTIX Cable MINI LSZH W-NOTKSdD 0.12kN

9/125 ITU-T G.657A2 / ITU-T G.657B3

FEATURES:

- Cable for indoor installation
- Great flexibility and durability for dragging
- Fully dielectric construction
- Resistance to high and low temperatures
- Enhanced by high quality aramid yarns
- Solid FR LSZH jacket
- Small diameter ~3mm



CABLE CONSTRUCTION

1. Optical fibers in 0.25mm coating
2. Coloured buffer 0.9mm (tight buffer or semi-tight buffer)
3. Aramid yarns
4. FR LSZH outer jacket (white), UV stabilized

Indoor installation
 LSZH
 Flexible
 Fireproof
 Reduced diameter
 UV protection
 High and low temperature resistant

| Product information | | | | | | | | | | |
|---------------------|----------------------------------|-----------------------|--------------------|---------------------|---|---------------------|---|--------------------------|----------------------------------|--|
| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±5%) | Ø Tube [mm] (±0.15) | Supporting element / Peripheral reinforcement | Reinforcing element | Coating material & thickness [mm] (±5%) | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
| OT1F | 1 | 7.0 | 2.8 | None | Aramid yarns | | LSZH (0.40) | -10° to +50° C | -40° to +70° C | 20D/15D |
| OT2F | 2 | 8.5 | 3.0 | None | Aramid yarns | | LSZH (0.40) | -10° to +50° C | -40° to +70° C | 20D/15D |

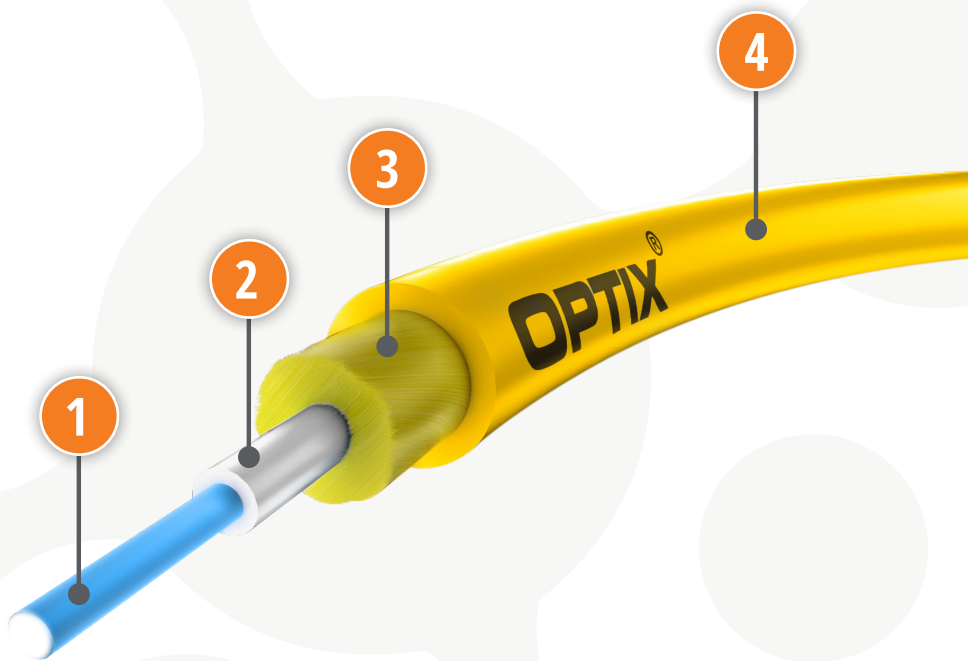
| Mechanical parameters | EN standard | IEC standard | 1F | 2F |
|-------------------------------|-------------------|------------------|------------------------------|------|
| Tensile Strength Installation | EN 187000 | IEC 60794-1-2-E1 | 120N | 120N |
| Tensile Strength Operation | EN 187000 | IEC 60794-1-2-E1 | - | - |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 500N (100x100mm) for 60 sec. | |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 30 cycles [(20xD), 1Kg] | |

OPTIX Cable FireBlock B2_{CA} W-NOTKSdD 0.5kN

9/125 ITU-T G.652D / ITU-T G.657A1

FEATURES:

- Cable for indoor installation in areas requiring special fire protection (escape routes)
- CPR - Euroclass of reaction to fire (acc. to EN 50575): B2_{CA}-s1a, d2, a1
- Fully dielectric construction
- Resistance to high and low temperatures
- Enhanced by high quality aramid yarns
- Small diameter
- Durable, halogen-free jacket, enhanced with flame-retardant additives



CABLE CONSTRUCTION

1. Optical fibers in 0.25mm coating
2. Coloured buffer 0.9mm (semi-tight buffer)
3. Aramid yarns
4. LSZH-FR (CPR B2_{CA}) outer jacket (yellow)

Class of Reaction-to-Fire B2_{CA}

Indoor installation

LSZH (CPR B2_{CA})

Flexible

Fireproof

Reduced diameter

High and low temperature resistant



Product information

| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±0.3) | Ø Tube | Supporting element / Peripheral reinforcement | Reinforcing element | Coating material & thickness [mm] (±5%) | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
|---------------|----------------------------------|-----------------------|---------------------|--------|---|---------------------|---|--------------------------|----------------------------------|--|
| OT1F | 1 | 8.0 | 2.8 (±0.2) | None | Aramid yarns | | LSZH-FR (0.45) [CPR B2 _{CA}] | -10° to +60° C | -20° to +70° C | 20D/10D |
| OT2F | 2 | 8.5 | 3.0 (±0.2) | None | Aramid yarns | | LSZH-FR (0.45) [CPR B2 _{CA}] | -10° to +60° C | -20° to +70° C | 20D/10D |
| OT4F | 4 | 19.0 | 5.0 | None | Aramid yarns | | LSZH-FR (0.65) [CPR B2 _{CA}] | -10° to +60° C | 20° to +70° C | 20D/10D |
| OT6F | 6 | 23.0 | 5.2 | None | Aramid yarns | | LSZH-FR (0.65) [CPR B2 _{CA}] | -10° to +60° C | -20° to +70° C | 20D/10D |
| OT8F | 8 | 26.0 | 5.5 | None | Aramid yarns | | LSZH-FR (0.65) [CPR B2 _{CA}] | -10° to +60° C | 20° to +70° C | 20D/10D |
| OT12F | 12 | 36.5 | 6.5 | None | Aramid yarns | | LSZH-FR (0.80) [CPR B2 _{CA}] | -10° to +60° C | -20° to +70° C | 20D/10D |
| OT16F | 16 | 44.5 | 7.5 | None | Aramid yarns | | LSZH-FR (1.00) [CPR B2 _{CA}] | -10° to +60° C | 20° to +70° C | 20D/10D |
| OT24F | 24 | 54.5 | 8.5 | None | Aramid yarns | | LSZH-FR (1.20) [CPR B2 _{CA}] | -10° to +60° C | -20° to +70° C | 20D/10D |

Mechanical parameters

| | EN standard | IEC standard | 1-8F | 12-24F |
|-------------------------------|-------------------|------------------|------------|--------|
| Tensile Strength Installation | EN 187000 | IEC 60794-1-2-E1 | 500N | 500N |
| Tensile Strength Operation | EN 187000 | IEC 60794-1-2-E1 | 200N | 200N |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 1000N/10cm | |
| Heat generation | EN 50399 | IEC 60332-3 | B2 | |
| Fire spreading | EN 60332-1-2 | IEC 60332-1 | s1a | |
| Smoke emission | EN 50399 | IEC 60332-3 | d2 | |
| Flaming droplets | EN 50399 | IEC 60332-3 | a1 | |
| Corrosive gases emission | EN 60754-1,-2 | IEC 60754-1,-2 | | |

OPTIX Cable GHOST W-VOTKSd 0.06kN

ITU-T G.657B3

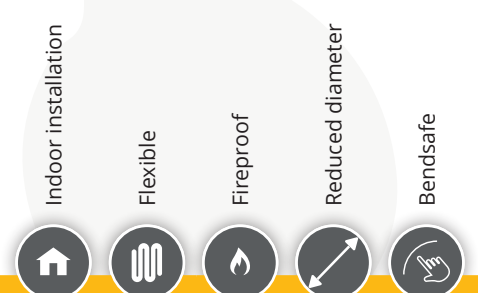
FEATURES:

- Cable for indoor installation
- Small diameter 0.9mm
- Reduced bend radius - G.657B3 fibers
- Invisible nylon coat (PA-12)
- Possibility to mount by warm glue
- Packed on one kilometre drums



CABLE CONSTRUCTION

1. Optical fibers in 0.25mm coating
2. Buffer 0.9mm Nylon PA-12 (invisible)



| Product information | | | | | | | | | | |
|---------------------|----------------------------------|-----------------------|--------------------|---------------------|---|---------------------|---|--------------------------|----------------------------------|--|
| Cable version | The total amount of fibers [pcs] | Weight [kg/km] (±10%) | Ø Cable [mm] (±5%) | Ø Tube [mm] (±0.15) | Supporting element / Peripheral reinforcement | Reinforcing element | Coating material & thickness [mm] (±5%) | Temp. range installation | Temp. range operating, transport | Minimum bending radius temporary/permanent |
| OT1F | 1 | 0.65 | 0.9 | None | None | None | Nylon (0.25) | -10° to +50° C | -10° to +50° C | 20D/15D |

| Mechanical parameters | EN standard | IEC standard | 1F |
|-------------------------------|-------------------|------------------|------------------------------|
| Tensile Strength Installation | EN 187000 | IEC 60794-1-2-E1 | 60N |
| Tensile Strength Operation | EN 187000 | IEC 60794-1-2-E1 | - |
| Crushing resistance | EN 187000, m. 504 | IEC 60794-1-2-E3 | 500N (100x100mm) for 60 sec. |
| Repeated bending | EN 187000, m. 507 | IEC 60794-1-2-E6 | 30 cycles [(20xD), 1Kg] |

BASIC PARAMETERS OF OPTICAL FIBERS

SINGLE AND MULTI MODE



SINGLE MODE OPTICAL FIBERS

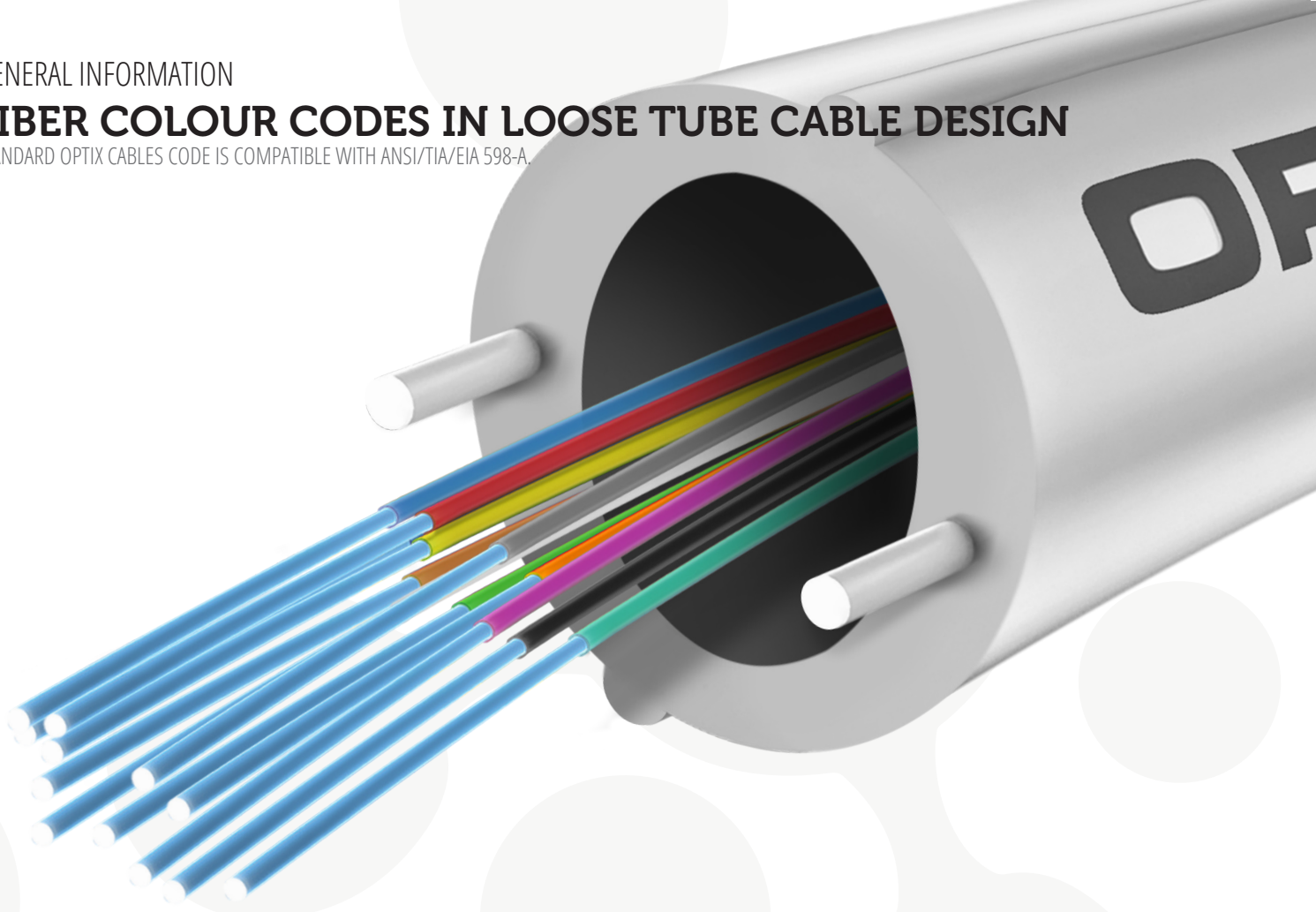
| Geometrical parameters | Unit | ITU-T G652D | ITU-T G655 | ITU-T G657A1 | ITU-T G657A2 | ITU-T G657B3 (A3) |
|---|------------|--------------|------------|------------------|------------------|-------------------|
| Mode field diameter at wavelength 1310 nm | μm | 9.2±0.3 | --- | 8.5 – 9.3 ± 0.3 | 8.4 – 9.2 ± 0.3 | 8.3 – 9.1 ± 0.3 |
| Mode field diameter at wavelength 1550 nm | μm | 10.4±0.5 | 9.6±0.5 | 9.4 – 10.4 ± 0.5 | 9.4 – 10.4 ± 0.5 | 9.2 – 10.4 ± 0.5 |
| Cladding diameter | μm | 125±0.7 | 125±0.7 | 125±0.7 | 125±0.7 | 125±0.7 |
| Primary coating diameter | μm | 235-245 | 235-245 | 235-245 | 235-245 | 235-245 |
| Mode field eccentricity | μm | ≤0.5 | ≤0.5 | ≤0.5 | ≤0.5 | ≤0.5 |
| Coating/cladding eccentricity | μm | ≤12 | ≤12 | ≤12 | ≤12 | ≤12 |
| Cladding ellipticity | % | ≤0.7 | ≤1.0 | ≤0.7 | ≤0.7 | ≤0.7 |
| Transmission parameters | | | | | | |
| Attenuation | | | | | | |
| - at wavelength 1310 nm | dB/km | ≤0.34 | ≤0.40 | ≤0.35 | ≤0.35 | ≤0.35 |
| - at wavelength 1550 nm | | ≤0.21 | ≤0.22 | ≤0.21 | ≤0.21 | ≤0.21 |
| - at wavelength 1625 nm | | --- | ≤0.24 | ≤0.24 | ≤0.24 | ≤0.23 |
| - at wavelength 1285-1380 nm | | ≤0.37 | --- | ≤0.37 | ≤0.37 | ≤0.38 |
| - at wavelength 1525-1625 nm | | ≤0.23 | --- | ≤0.23" | ≤0.23" | ≤0.23" |
| Chromatic dispersion | ps/(nm*km) | | | | | |
| - at wavelength 1550 nm | | ≤18.0 | ≤4.5 | ≤18.0 | ≤17.5 | ≤18.0 |
| - at wavelength 1625 nm | | ≤22.0 | --- | ≤22.0 | ≤22.0 | ≤22.0 |
| Polarisation mode dispersion (PMD) | ps/√km | ≤0.1 | ≤0.1 | ≤0.1 | ≤0.1 | ≤0.1 |
| Zero dispersion wavelength | nm | 1302<λ0<1322 | ≤1460 | 1302<λ0<1322 | 1302<λ0<1322 | 1302<λ0<1322 |
| Cut-off wavelength λ _{cc} | nm | ≤1260 | ≤1450 | ≤1260 | ≤1260 | ≤1260 |

MULTI MODE OPTICAL FIBERS

| Geometrical parameters | Unit | Type G 50 (OM2) | Type G 62,5 |
|--------------------------------|--------|-----------------|-------------|
| Core diameter | μm | 50±2.5 | 62.5±2.5 |
| Cladding diameter | μm | 125±0.8 | 125±1.0 |
| Primary coating diameter | μm | 242±5 | 245±10 |
| Core ellipticity | % | ≤5 | ≤5 |
| Cladding ellipticity | % | ≤0.7 | ≤1 |
| Core/cladding eccentricity | μm | ≤1 | ≤1 |
| Numerical aperture | - | 0.200±0.010 | 0.275±0.015 |
| Transmission parameters | | | |
| Attenuation | | | |
| - at wavelength 850 nm | dB/km | ≤2.20 | ≤2.90 |
| - at wavelength 1300 nm | | ≤0.60 | ≤0.60 |
| Bandwidth | | | |
| - at wavelength 850 nm | MHz*km | ≥700 | ≥220 |
| - at wavelength 1300 nm | | ≥500 | ≥500 |

FIBER COLOUR CODES IN LOOSE TUBE CABLE DESIGN

STANDARD OPTIX CABLES CODE IS COMPATIBLE WITH ANSI/TIA/EIA 598-A.



LOOSE TUBE CABLES

The most popular fiber optic tube to distribute optical fibers. Standard in fiber optic cable OPTIX is 24 fibers with 0.25mm (250µm) coating. Usually in the tubes are 12 optical fibers. Advantages of these tubes are: compact and sturdy design, resistance to weather conditions, resistance to mechanical damage. Fibers and tubes are based (painted) on Optical Fiber Cable Colour Coding. Fiber optic cables OPTIX are coded according to ANSI/TIA/EIA 598-A.

Fibers colour for tight tube by ANSI/TIA/EIA 598-A

| number | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---------|------------|--------------|-------------|-------------|------------|-------------|-----------|--------------|--------------|--------------|------------|-----------------|
| colour | | | | | | | | | | | | |
| name | blue | orange | green | brown | grey | white | red | black | yellow | purple | pink | turquoise |
| number | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| colours | | | | | | | | | | | | |
| name | blue/black | orange/black | green/black | brown/black | grey/black | white/black | red/black | black/yellow | yellow/black | purple/black | pink/black | turquoise/black |

Tube colour by ANSI/TIA/EIA 598-A

| number | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|--------|------|--------|-------|-------|------|-------|-----|-------|--------|--------|------|-----------|
| colour | | | | | | | | | | | | |
| name | blue | orange | green | brown | grey | white | red | black | yellow | purple | pink | turquoise |





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