

Applications

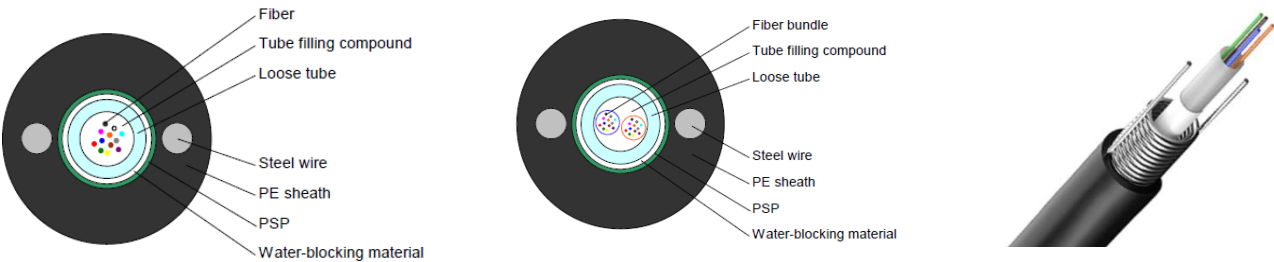
Prose outdoor optical fiber FC03 series cables are designed for fiber solutions with excellent performance which exceed TIA / EIA 568.3-D, ISO / IEC 11801, EN50173 requirements. Good EMI-resistant, easy installation, meanwhile having extremely high flexibility, adaptability and maximally integrated designing.

It is mainly used for optical fiber connection of outdoor areas, trunk pipelines or overhead pipelines between buildings. The optical cable is a 250um optical fiber inserted into the center beam tube, and the tube is filled with waterproof compound. The tube is longitudinally wrapped with a double-sided chromium-coated plastic steel strip, and water blocking material is added between the steel strip and the tube to ensure the compact and longitudinal water blocking of the cable. Two parallel steel wires are placed on both sides of the tube and the extruded PE sheath is formed.

Feature/Characteristic

- The center beam tube structure has good mechanical properties.
- The double-sided coated plastic steel strip can improve the anti-moisture ability of optical cable.
- Two parallel steel wires can ensure the tensile strength of the fiber cable;
- Provide single mode, multi-mode, 2-24 core multiple models;

Profile/Outline



Structure parameter

| Fiber count                                      | 2-12F    | 13-24F    |
|--------------------------------------------------|----------|-----------|
| Center tube outer diameter (mm)                  | 2.5±0.1  | 3.0±0.1   |
| Center tube thickness (mm)                       | 0.4±0.05 | 0.45±0.05 |
| Stiffener diameter (mm²)                         | 1mm²     | 1mm²      |
| Thickness of Steel-plastic composite tape (mm)   | 0.205    | 0.205     |
| Minimum distance of steel wire outer sheath (mm) | ≥0.8     | ≥0.8      |
| Outer diameter of optical cable sheath (mm)      | 7.3±0.3  | 7.8±0.3   |

Optical Parameters

| Properties               | Unit | Single Mode | Multi Mode |         |         |         |
|--------------------------|------|-------------|------------|---------|---------|---------|
|                          |      | G652D       | OM2        | OM3     | OM4     | OM5     |
| Core Diameter            | μm   | 9.2±0.4     | 50±3.0     | 50±2.5  | 50±2.5  | 50±2.5  |
| Cladding Diameter        | μm   | 125±0.7     | 125±2.0    | 125±2.0 | 125±1.0 | 125±1.0 |
| Diameter Primary Coating | μm   | 245±5       | 245±10     | 245±10  | 245±10  | 245±10  |

|                                        |                 |           |           |           |           |        |
|----------------------------------------|-----------------|-----------|-----------|-----------|-----------|--------|
| Numerical Aperture                     | mm              | 0.2±0.015 | 0.2±0.015 | 0.2±0.015 | 0.2±0.015 | 245±10 |
| Core-cladding Concentricity            | μm              | ≤0.5      | ≤1.5      | ≤1.5      | ≤1.5      | ≤1.5   |
| Attenuation                            | 1310 nm [dB/km] | ≤0.36     | -         | -         | -         | -      |
|                                        | 1550 nm [dB/km] | ≤0.22     | -         | -         | -         | -      |
|                                        | 850 nm [dB/km]  | -         | ≤3.0      | ≤3.0      | ≤3.0      | ≤3.0   |
|                                        | 1300 nm [dB/km] | -         | ≤1.0      | ≤1.0      | ≤1.0      | ≤1.0   |
| Bandwidth                              | 850 nm [MHz/km] | ≥400      | ≥160      | ≥160      | ≥160      | ≥160   |
|                                        | 1300nm [MHz/km] | ≥800      | ≥500      | ≥500      | ≥500      | ≥500   |
| Cladding Non-circularity               | %               | ≤1.0      | ≤1.0      | ≤1.0      | ≤1.0      | ≤1.0   |
| Fatigue Resistance Parameter (Typical) | %               | ≥20       | ≥20       | ≥20       | ≥20       | ≥20    |

Mechanical characteristics

| Item                  |            | 2-12F            | 13-24F            |
|-----------------------|------------|------------------|-------------------|
| Tensile Strength      | Long Term  | 600 N            | 1000 N            |
|                       | Short Term | 1500 N           | 3000 N            |
| Crush Resistance      | Long Term  | 300 N/100mm      | 1000 N/100mm      |
|                       | Short Term | 1500 N/100mm     | 3000 N/100mm      |
| Bending Radius        | Static     | 10 times O.D     | 10 times O.D      |
|                       | Dynamic    | 20 times O.D     | 20 times O.D      |
| Operating Temperature |            | -40℃ to +70℃     | -40℃ to +70℃      |
| Storage Temperature   |            | -40℃ to +70℃     | -40℃ to +70℃      |
| Cable Diameter        |            | approx. 8.7 mm   | approx. 12.0 mm   |
| Sheath Thickness      |            | average 2.2 mm   | average 2.8 mm    |
| Cable Weight          |            | approx. 82 kg/km | approx. 147 kg/km |

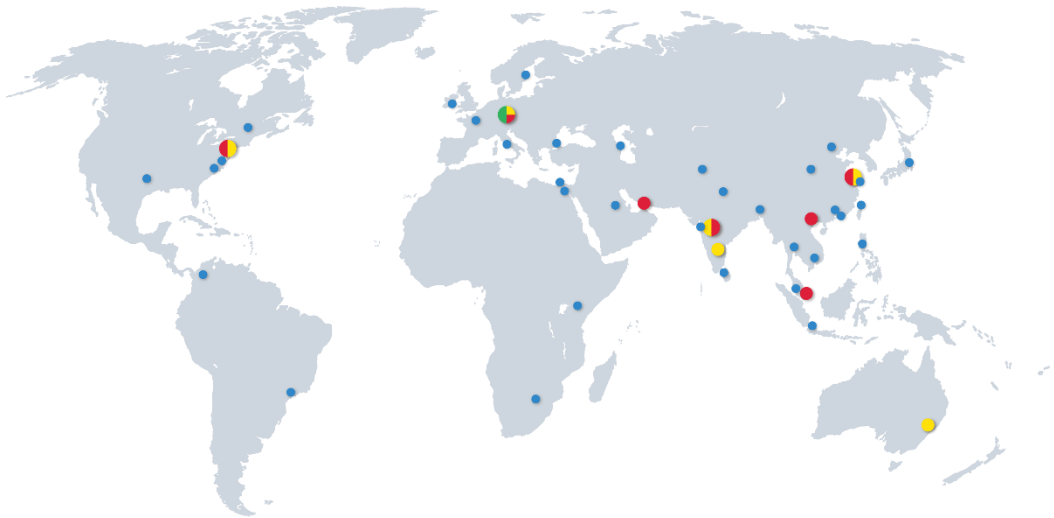
Ordering Information

| Category        | Cable Structure                                  | Fiber Type                                            | Outer Sheath Material | Fiber Count                                                 |
|-----------------|--------------------------------------------------|-------------------------------------------------------|-----------------------|-------------------------------------------------------------|
| FC: Fiber Cable | 03: Outdoor, Light Armored, Central tube (2-24F) | GD: G652D<br>M2: OM2<br>M3: OM3<br>M4: OM4<br>M5: OM5 | 3: PE                 | 004:4F<br>006:6F<br>008:8F<br>012:12F<br>016:16F<br>024:24F |

Example:

| Order Number | Fiber count | Description                                                   |
|--------------|-------------|---------------------------------------------------------------|
| FC03-GD3006  | 6           | Cable, Outdoor, Light Armored, Central Tube, 6F, SM G652D, PE |
| FC03-M33012  | 12          | Cable, Outdoor, Light Armored, Central Tube, 12F, MM OM3, PE  |
| FC03-M43024  | 24          | Cable, Outdoor, Light Armored, Central Tube, 24F, MM OM4, PE  |

GLOBAL FOOTPRINT



Headquarters

**Donauwörth - Germany**  
**PROSE Technologies GmbH**  
Add.: Dr.-Friedrich-Drechsler-Straße 14, 86609  
Donauwörth, Germany  
E-mail: [info.eu@prosetechnologies.com](mailto:info.eu@prosetechnologies.com)

Western Europe

**Dublin - Ireland**  
**PROSE Technologies (Ireland) Limited**  
Add.: 6th Floor, South Bank House, Barrow Street,  
Dublin 4 Ireland  
E-mail: [Info@prosetechnologies.com](mailto:Info@prosetechnologies.com)

Eastern Europe & Central Asia

E-mail: [info.eeca@prosetechnologies.com](mailto:info.eeca@prosetechnologies.com)

North America

**New Jersey - America**  
**PROSE Technologies LLC**  
Add.: 550 Clark Drive Budd Lake, NJ 07828, United  
States of America  
Tel: +1 888 840 4066  
E-mail: [info.us@prosetechnologies.com](mailto:info.us@prosetechnologies.com)

Middle East

**ubai - UAE**  
**PROSE Technologies DMCC**  
Add.: 3702, Mazaya Business Avenue BB2, JLT, Dubai  
Tel: +971 4 3999168  
E-mail: [info.ae@prosetechnologies.com](mailto:info.ae@prosetechnologies.com)

Africa

**Nairobi - Kenya**  
**PROSE Technologies Africa (PTY) Ltd**  
Tel: +254 780440410  
E-mail: [info.ke@prosetechnologies.com](mailto:info.ke@prosetechnologies.com)

**Gauteng, (Johannesburg) - South Africa**  
**PROSE Technologies Africa (PTY) Ltd**  
Add.: Building 20, Cambridge Office Park, 5 Bauhina  
Road, Highveld Techno Park Centurion, Gauteng 0169,  
South Africa  
Mobile: +27 725554840  
E-mail: [info.za@prosetechnologies.com](mailto:info.za@prosetechnologies.com)

South Asia

**Mumbai - India**  
**PROSE Technologies India Private Limited**  
Add.: 403-407, Eco Star, Vishveshwar Nagar,  
Goregaon East, Mumbai ,India 400063  
Tel: +91 22-66453000  
E-mail: [info.in@prosetechnologies.com](mailto:info.in@prosetechnologies.com)

**Pune - India**  
**PROSE Technologies India Pvt.Ltd**  
Add.: A-79, Block-A , Horizon Industrial Parks, Phase II,  
MIDC Chakan Industrial Area, Khed, Pune , India  
410501  
Tel: +91 2135-635200  
E-mail: [info.in@prosetechnologies.com](mailto:info.in@prosetechnologies.com)

**Bangalore - India**  
**PROSE Technologies India Private Limited**  
Add.: No.494 East End Main Road, Jayanagar IX Block,  
Bangalore, India 560069  
E-mail: [info.in@prosetechnologies.com](mailto:info.in@prosetechnologies.com)

**New Delhi - India**  
**PROSE Technologies India Pvt.Ltd**  
Add.: H-3/157, 2nd Floor, Vikas Puri, New Delhi, India  
110018  
E-mail: [info.in@prosetechnologies.com](mailto:info.in@prosetechnologies.com)

**Dhaka - Bangladesh**  
**PROSE Technologies (Bangladesh) Limited**  
Add.: House-360 (2nd Floor), Lane-5 (East), Baridhara  
DOHS, Dhaka-1206, Bangladesh  
Tel: +880 1977070130  
E-mail: [info.bd@prosetechnologies.com](mailto:info.bd@prosetechnologies.com)

**Islamabad - Pakistan**  
Add.: Unit 514, 5th Floor, ISE Towers, Islamabad,  
Pakistan  
Tel: +92 3335357733  
E-mail: [info.pk@prosetechnologies.com](mailto:info.pk@prosetechnologies.com)

**Sri Lanka**  
Tel: +880 1977070130  
E-mail: [info.lk@prosetechnologies.com](mailto:info.lk@prosetechnologies.com)

South East Asia

**Selangor - Malaysia**  
**PROSE Technology (M) Sdn. Bhd**  
Add.: Unit 2-1, Level 2, The Podium, Tower 3, UOA  
Business Park, No 1, Jalan Pengaturcara U1/51a,  
Seksyen U1, 40150 Shah Alam, Selangor, Malaysia  
Tel: +60 126859319  
E-mail: [info.my@prosetechnologies.com](mailto:info.my@prosetechnologies.com)

**Bangkok - Thailand**  
**PROSE Technology (Thailand) Co., Ltd**  
Add.: 349 SJ Infinite I Business Complex,9 Floor, Room  
905, Vibhavadi Rangsit Road, Chom Phon Sun-district,  
Chatuchak District, Bangkok Provice, Thailand  
Tel: +66 80 6606630  
E-mail: [info.th@prosetechnologies.com](mailto:info.th@prosetechnologies.com)

**Singapore**  
**PROSE Technologies (Singapore) Pte.Ltd**  
Add.: 10 Anson Road#13-15 International Plaza  
Singapore 079903  
Tel: +6598366793  
E-mail: [info.sg@prosetechnologies.com](mailto:info.sg@prosetechnologies.com)

**Hanoi - Vietnam**  
**PROSE Technologies (Vietnam) Company Limited**  
Add.: Floor 15, Vinaconex 9 Building, HH-2 Block,  
Pham Hung Street, Me Tri Ward, Nam Tu Liem District,  
Hanoi, Vietnam  
Tel: +84 933086498  
E-mail: [info.vn@prosetechnologies.com](mailto:info.vn@prosetechnologies.com)

**Taguig - Philippines**  
**PROSE Technologies Philippines, Inc.**  
Add.: Unit 17 19th Floor Highstreet South Corporate  
Plaza Tower 1, 26th Street corner 9th Avenue, Bonifacio  
Global City, Taguig City, Philippines  
Tel: +63 27572762  
E-mail: [info.ph@prosetechnologies.com](mailto:info.ph@prosetechnologies.com)

**Jakarta - Indonesia**  
**PT. PROSE Technologies Indonesia**  
Add.: Plaza Sentral 6th Floor, Jalan Jenderal Sudirman  
No. 47, Jakarta 12930, Indonesia  
Tel: +62 21 57901997  
E-mail: [info.id@prosetechnologies.com](mailto:info.id@prosetechnologies.com)

East Asia

**Suzhou - China**  
**PROSE Technologies (Suzhou) Co.,Ltd**  
Add.: No. 6, Shen'an Road, DianShanHu, Suzhou,  
JiangSu, China  
E-mail: [Info@prosetechnologies.com](mailto:Info@prosetechnologies.com)

**Beijing - China**  
**PROSE Technologies (Beijing) Co.,Ltd**  
E-mail: [Info@prosetechnologies.com](mailto:Info@prosetechnologies.com)

**Shanghai - China**  
**PROSE Technologies (Shanghai) Co.,Ltd**  
E-mail: [Info@prosetechnologies.com](mailto:Info@prosetechnologies.com)

**Dongguan - China**  
Add.: Room 1506, building 1, No. 1, Yile Road,  
Songshanhu Park, Dongguan City, Guangdong  
Province, China  
E-mail: [Info@prosetechnologies.com](mailto:Info@prosetechnologies.com)

**Hongkong - China**  
**PROSE Technologies Company Limited**  
Add.: Unit B 13/F,Prat Commercial Building, 17-19 Prat  
Avenue, Tsimshatsui, Kowloon, HongKong, China  
Tel:+86 512 86896789 - 2921/2922  
E-mail: [info.hk@prosetechnologies.com](mailto:info.hk@prosetechnologies.com)

**Taiwan**  
Tel: +63 2 7572762  
E-mail: [info.tw@prosetechnologies.com](mailto:info.tw@prosetechnologies.com)

Oceania

**New South Wales - Australia**  
**PROSE Technologies (Australia) Pty. Ltd**  
Add.: 5/13 Boundary Rd, Northmead, NSW 2152,  
Australia  
Tel: +61 2 78055523  
E-mail: [info.au@prosetechnologies.com](mailto:info.au@prosetechnologies.com)