

## Product Overview

FCST has been devoted to developing and producing the air blown fibre cable since 2003. So far, it has produced various air blown fibre cable types which are of good performance and compose a complete series of air blown products. ABF is the important part of the series, and it is the most popular product of the indoor optical fibre cables for generic cabling in Europe、Japan 、South Korea and so on.

The ABF is the product that with small diameter, lightweight, highly flexibility and proper stiffness, and it can be blown into the microduct of 5.0/3.5mm. The fibres are coated with a soft acrylate resin which provides excellent dimensional and thermal stability to cushion the fibres, in addition, the resin can be easily stripped in connecting the fibres. The outer sheath is a thermoplastic that is of low friction. The surface of the sheath is designed with special grooves, compared to the surface of the traditional optical fibre cable, it provides not only the high level of mechanical protection, but also the perfect blowing performance.

## Product Advantages

- 2、4、6、8 and 12 fibres options.
- Stable structure, good mechanical and temperature performance.
- Designed with special grooves to advance blowing distance.
- Lightweight and proper stiffness , repeat installation.
- Designed with no gel, easy stripping and handling.
- Better costs advantage compared to traditional product.
- Complete accessories, less manpower, lower installation time.

## Standards

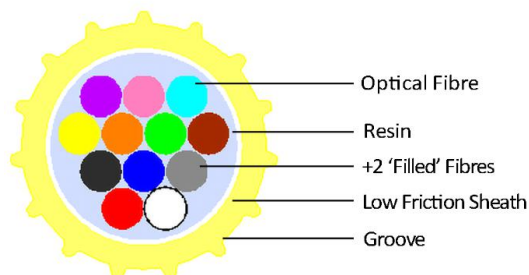
Unless otherwise specified in this specification, all requirements shall be mainly in accordance with the following standard specifications.

Optical Fibre: TU-T G.652、G.657 IEC 60793-2-50 Optica Cable: IEC 60794 1-2、IEC 60794-5

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## Basic Performance

| Fibre Count   | 2 Fibres            | 4 Fibres  | 6 Fibres               | 8 Fibres                 | 12 Fibres |
|---|---------------------|-----------|------------------------|--------------------------|-----------|
| Outer Diameter (mm)   | 1.15±0.05           | 1.15±0.05 | 1.35±0.05              | 1.50±0.05                | 1.65±0.05 |
| Weight(g/m)   | 1.0                 | 1.0       | 1.3                    | 1.8                      | 2.2       |
| Min Bend radius(mm)   | 50                  | 50        | 60                     | 80                       | 80        |
| Temperature   | Storage: -30℃ ~+70℃ |           | Operation: -30℃ ~ +70℃ | Installation: -5℃ ~ +50℃ |           |
| Cable service life (estimate value)   | 25 years            |           |                        |                          |           |
| Note: It is recommended that the structure of 2 fibres unit consist of 2 filled fibres, for it is provedthat 2 fibres unit with 2 filled fibres is better than the one with zero or one filled fibre in the blowing performance and the fibre stripping-ability |                     |           |                        |                          |           |

## Blowing Test

| Fibre Count              | 2 Fibres                                      | 4 Fibres      | 6 Fibres      | 8 Fibres      | 12 Fibres    |
|--------------------------|---|---------------|---------------|---------------|--------------|
| Test equipment           | PLUMETTAZ: UM25, ERICSSON: F, CATWAY: FBT-1.1 |               |               |               |              |
| Standard duct            | 5.0/3.5 mm                                    |               |               |               |              |
| Pressure                 | 7bar / 10bar                                  |               |               |               |              |
| Typical blowing distance | 500m / 1000 m                                 | 500m / 1000 m | 500m / 1000 m | 500m / 1000 m | 500m / 800 m |
| Typical blowing time     | 10 min/18 min                                 | 10 min/18 min | 12 min/18 min | 13 min/18 min | 15 min/20min |

## Fibre Unit Attenuation

| Fibre Type  | SM G.652D、G.657                                | OM1 / OM2 / OM3 / OM4 /OM5                    |
|-------------|--|---|
| Attenuation | 0.40dB/km max @1310nm<br>0.30dB/km max @1550nm | 3.50dB/km max @850nm<br>1.50dB/km max @1300nm |

## Mechanical Performance

| Test    | Standard                            | Parameters                       | Test Results                              |
|---------|-------------------------------------|----------------------------------|---|
| Tension | EN 18700 A1/501<br>IEC 60794-1-2-E1 | Load is 1×W                      | Additional attenuation ≤0.05dB after test |
| Bend    | IEC 60794-1-2--E11A                 | Diam 40mm×3turns 5 cycles at 20℃ | Additional attenuation ≤0.05dB,after test |
| Crush   | IEC 60794-1-2-E3                    | 100 N, 60s                       | Additional attenuation ≤0.05dB,after test |

SM fiber testing proceeded at 1550 nm; MM fiber test proceeded at 1300nm

Environment Performance

| Test   | Standard         | Parameters                           | Test Results  |
|--|------------------|--------------------------------------|---|
| Temperature Cycle  | IEC 60794-1-2-F1 | -30 C, +70 C,<br>(2 cycles)          | Absolute attenuation ≤0.5dB/km,during test<br>Additional attenuation ≤0.1dB/km, during and after test |
| Water Soak   | IEC 60794-5      | 1000 hours in water,<br>18℃～22℃      | (Test after temp cycle) ≤0.07dB/km<br>Change compared to start value                                  |
| Damp Heat Cycle  | IEC 60068-2-38   | 25℃, 65℃, 25℃, 65℃,<br>25℃,-10℃, 25℃ | Absolute attenuation ≤0.5dB/km,during test<br>Additional attenuation ≤0.1dB/km, during and after test |
| SM fiber testing proceeded at 1550 nm; MM fiber test proceeded at 1300nm |                  |                                      |   |

Fibre Color Code (Fibre colors can also be determined by customer)

| NO.   | 1    | 2      | 3     | 4     | 5    | 6     | 7   | 8     | 9      | 10     | 11   | 12   |
|-------|------|--------|-------|-------|------|-------|-----|-------|--------|--------|------|------|
| Color | Blue | Orange | Green | Brown | Grey | White | Red | Black | Yellow | Violet | Pink | Aqua |
|       |      |        |       |       |      |       |     |       |        |        |      |      |

Sheath Color

Yellow

# Air Blown Fibre Unit

## Sheath Marking

The outer sheath is marked in 1 meter intervals as follows:

FCST ABF type of fibre and number[MM-YYYY] =length marking in meter=  
 Example: FCST ABF G652D 4F [04- 2014] =1888m=

## Delivery Length

Standard delivery lengths are 1000m, 2000m, 3000m, 4000m, 6000m with a tolerance of -0.5~+1%. For more options, please contact the customer service.

## Packaging

Free coiling in the pan

| Fibre Count | Length (m) | Pan Size $\Phi \times H(\text{mm})$ | Weight (Gross) (kg) |
|-------------|------------|-------------------------------------|---------------------|
| 2~4 Fibres  | 2000 m     | $\phi 510 \times 200$               | 8.0                 |
|             | 4000 m     | $\phi 510 \times 200$               | 10.0                |
|             | 6000m      | $\phi 510 \times 300$               | 13.0                |
| 6 Fibres    | 2000 m     | $\phi 510 \times 200$               | 9.0                 |
|             | 4000 m     | $\phi 510 \times 300$               | 12.0                |
| 8 Fibres    | 2000 m     | $\phi 510 \times 200$               | 9.0                 |
|             | 4000 m     | $\phi 510 \times 300$               | 14.0                |
| 12 Fibres   | 1000 m     | $\phi 510 \times 200$               | 8.0                 |
|             | 2000 m     | $\phi 510 \times 200$               | 10.0                |
|             | 3000m      | $\phi 510 \times 300$               | 14.0                |
|             | 4000 m     | $\phi 510 \times 300$               | 15.0                |

