

Super Mini Uni-tube Blown Cable(Single Mode)



Product Overview

FCST has been devoted to developing and producing the air blown fibre cable since 2003. So far, we have produced various air blown cable types, in that, the air blown microcable and the air blown fibre unit are the main products.

It is proved that FCST products are superior to the other ones in several product performance tests, and the cables are praised by all the customers during its blowing installation. Till 2022, FCST has exported microcables to Europe about 10000 km and supplied to domestic customers nearly 1500 km.

Product Advantages

- Structure Innovation in sheath, enhancing the blowing performance.
- Particular technique control, prevent sheath form crinkling during installation.
- Accurate fibre length balance, stable mechanical and temperature performance.
- Special complex material loose tube, reduce the shrink of tube in cold temperature.

Standards

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

Optical fibreITU-T G.652D、 G657、 IEC 60793-2-50

Optical cableIEC 60794-5、 IEC 60794-1-



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Technical Index

Cable Type	GCYFXTY—XB1.3（MTE + Cable diameter）			
	MTE2.0	MTE2.3	MTE2.5	MTE2.8
Fibre Count	2～4	6～12	2～12	14～24
Thickness of HDPE sheath	Nominal value: 0.20mm, Average value: 0.15mm			
Nominal Overall Diameter	2.0±0.1mm	2.3±0.1mm	2.5±0.1mm	2.8±0.1mm
Weight	4.0 kg/km	5.0 kg/km	6.0 kg/km	7.0kg/km
Cable Fibre Attenuation	SM:0.35dB/km max @1310nm 0.22dB/km max @1550nm			
Max. Tensile Strength	40N	50N	60N	60N
Max. Crushing force	600N/100mm			
Min. Bending radius -Static / Dynamic	10 / 20 outer Φ			
Temperature	Storage -30～+50℃； Installation-10～+40℃； Operation-20～+50℃			
Cable service life(estimate value)	25 years			

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Blowing Performance

Blowing Tool	Typical blowing length		
	Fibres Count	Duct type 3.5/5.0mm	Duct type 5.5/7.0mm
PLUMETTAZ: PR-140, MiniJet-400 etc. Air pressure : 13bar	2~12 fibres	800m	1500m
	14~24 fibres	500m	1500m

Environment Performance

Item	Testing Method	Testing Results		
Temperature cycling	IEC 60794-1-2-F1	Allowable additional attenuation (1550nm)		
		G.652B	G.652D	G.657
		$\Delta\alpha \leq 0.10\text{dB/km}, \Delta\alpha$ reversible;		
Water penetration	IEC 60794-1-2-F5B	Water column: 1m, 3m cable, Period:24 hours No water leak through the open end of cable		
Filling compound flow	IEC 60794-1-2-E14	70℃ , Period:24 hoursNo compound flow from the cable		

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Mechanic Performance

Item	Testing Method	Testing Results		Specified Value
Tension performance	IEC 60794-1-2-E1	Optical fibre strain Short term: $\leq 0.3\%$ Long term: $\leq 0.1\%$	Additional attenuation Short term: $\alpha < 0.1$ dB, a reversible; Long term: $\alpha \leq 0.03$ dB	Max. Tensile Strength = Short term Allowable tension $\approx 2 \times (\text{Long term Allowable Tension})$
Crush	IEC 60794-1-2-E3	Short term $\alpha < 0.10$ dB, a reversible; Long term: $\alpha \leq 0.03$ dB; The outer sheath has no visible crack.		Short term crushing force = 600 N Long term crushing force = 300 N
Repeated bending	IEC 60794-1-2-E6	After test, $\alpha \leq 0.03$ dB; The outer sheath has no visible crack.		R=20 outer Φ Bending load = 15N Bending times = 25
Torsion	IEC 60794-1-2-E7	After test, $\alpha \leq 0.03$ dB; The outer sheath has no visible crack.		Torsion angle = $\pm 180^\circ$ Torsion load = 15N Torsion times = 5
Cable bend	IEC 60794-1-2-E11A	After test, The optical fibre can't be broken; The outer sheath has no visible crack.		R=20 outer Φ 10 Turns Cycles times = 5

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Fibre Colors

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
												

<Colors> with black ring marks at intervals of 100mm.

NO.	13	14	15	16	17	18	19	20	21	22	23	24
Color	Blue	Orange	Green	Brown	Grey	White	Red	natural	Yellow	Violet	Pink	Aqua
												

Sheath Color

Green

Sheath Marking

The outer sheath is marked at intervals of 1 meter as follows:

FCST ABC MINI number and type of fibre MTE Cable diameter [MM-YYYY] =length marking in meter=

Example: FCST ABC MINI 24 G652D MTE2.8 [04- 2014] =1888m=

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Packaging

Standard delivery lengths are 2km, 4km, 6km with a tolerance of -1%~+3%.

Fibre Count	Drum length (m)	Drum Size $\Phi \times W$ (mm)	Packing Size $L \times W \times H$ (mm)	Weight (Gross) (kg)
2~12 Fibres ϕ 2.0-2.5	2000	$\Phi 450 \times 370$	$480 \times 370 \times 645$	27
	4000	$\Phi 500 \times 370$	$530 \times 370 \times 695$	39
	6000	$\Phi 550 \times 370$	$580 \times 370 \times 745$	51
14~24 Fibres ϕ 2.8	2000	$\Phi 500 \times 370$	$530 \times 370 \times 695$	31
	4000	$\Phi 550 \times 370$	$580 \times 370 \times 745$	46

