



## Air Blown Micro Cable 12F-432F G652D/G657A1 HDPE

### Features and Benefits

- Optimum cable structure, high fibre density.
- Accurate fibre length balance, ensure stable performance.
- No gel in cable core for water blocking, low carbon and environmental.
- Structure Innovation in sheath, enhancing the blowing performance.

### Standards

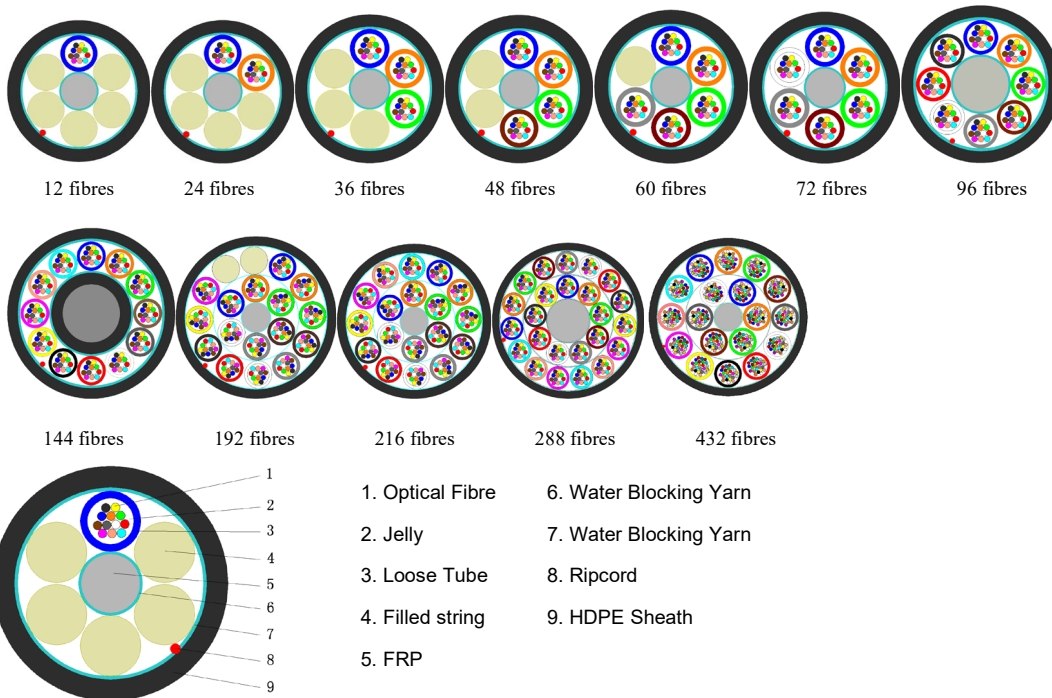
Unless otherwise specified in this specification, all requirements shall be mainly in accordance with the following standard specifications.

Optical fibre .....ITU-T G.652、IEC 60793-2-50

Optical cable ....IEC 60794-5、IEC 60794-1-2

### Technical Index

#### ◆ The structure of cable



#### ◆ Technical Index

Cable Type		Layer Cable						
Fibre Count		12-72	96	144	192	216	288	432
Number of fiber/tube		12	12	12	12	12	12	24
Number of loose tube		1-6	8	12	6+10	6+12	9+15	6+12
Water blocking method	FRP	Water Blocking yarn						
	Cable Core	Water Blocking yarn						
Thickness of HDPE sheath		Nominal: 0.50mm, Minimum: 0.40mm						
Overall Diameter (±0.2) mm		5.4	6.1	7.9	7.6	7.6	9.4	11.4
Weight (kg/km)		25	35	57	55	55	78	105
Min. Bending radius Static / Dynamic		12 outer Φ / 20 outer Φ						
Cabled Fiber Attenuation		G.652D/G657A1: 0.35dB/km max @1310nm 0.22dB/km max @1550nm						
Temperature range (°C)	Storage	-20~+50	-20~+50	-20~+50	-20~+50	-20~+50	-20~+50	-20~+50
	Installation	-5~+50	-5~+50	-5~+50	-5~+50	-5~+50	-5~+50	-5~+50
	Operation	-40~+70	-40~+70	-40~+70	-20~+70	-20~+70	-20~+70	-20~+70
Cable service life (estimate value)		25 years						



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## Testing Index

### ◆ Blowing performance

Blowing Tool	Typical blowing length				
	Fiber Count	Duct type			
PLUMETTAZ: PR-140, MiniJet-400 etc. AIR Pressure : 10~15 Bar		10/8 mm	12/10mm	14/12mm	16/14mm
	12-72 fibres	≥1500m	/	/	/
	96 fibres	/	≥1500m	/	/
	144-216 fibres	/	≥1000m	/	/
	288 fibres	/	/	≥1000m	/
	432 fibres		/	/	≥1000m

### ◆ Mechanic performance

Item	Testing Method	Testing Results	Specified Value
Tension performance	IEC 60794-1-21-E1	Short term: $\Delta a < 0.1$ dB, $\Delta a$ reversible; Long term: $\Delta a < 0.03$ dB, $\Delta a$ reversible;	Short term: see technical index Long term: 0.5 Short term
Crush	IEC 60794-1-21-E3	Short term: $\Delta a < 0.1$ dB, $\Delta a$ reversible; The outer sheath has no visible crack.	Short term: 800N/100mm Long term: 400N/100mm
Repeated bending	IEC 60794-1-21-E6	After test, $\Delta a \leq 0.03$ dB; The outer sheath has no visible crack.	R=20 outer $\Phi$
			Bending load =25N
			Bending times =25
Torsion	IEC 60794-1-21-E7	After test, $\Delta a \leq 0.03$ dB; The outer sheath has no visible crack.	Torsion angle = $\pm 180^\circ$
			Bending load =40N
			Torsion times =5
Cable bend	IEC 60794-1-21-E11A	After test, The optical fiber can't be broken; The outer sheath has no visible crack.	R=20 outer $\Phi$ 10Turns Cycles times =5

*All optical testing proceeded at 1550 nm*

### ◆ Environment performance

Item	Testing Method	Testing Results
Temperature cycling	IEC 60794-1-22-F1	Allowable additional attenuation (1550nm)
		Temperature range: see technical index
		$\Delta a \leq 0.15$ dB/km, $\Delta a$ reversible;
Water penetration	IEC 60794-1-22-F5B	Water column: 1m, 3m cable, Period:1 hours No water leak through the open end of cable
Filling compound flow	IEC 60794-1-22-E14	70°C, Period:24 hours No compound flow from the cable



## Other Index

### ◆ Fiber 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



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◆ **Loose Tube Colors** (Loose tube colors can be determined by the requirement of customer)

NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Color	Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua	Violet	Pink	Aqua

12-72 Fibers: 1~6 colors; 96Fibers: 1~8 colors; 144 Fibers: 1~12 colors;

192 Fibers: inner layer 1~6 colors, outer layer 1~10 colors.

216 Fibers/432 Fibers: inner layer 1~6 colors, outer layer 1~12 colors.

288 Fibers: inner layer 1~9 colors, outer layer 1~15 colors.

◆ **Cable core**

SZ stranding.

◆ **Filled String Colors**

All filled strings are uncolored (natural).

◆ **Sheath Color : Black**

◆ **Sheath Marking**

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

**PROSTAL Micro Cable number and type of fiber Fibers Per Tube×Tube Count [MM-YYYY] =length marking in meter=**

Example: PROSTAL Micro Cable 72F G652D 12×6 [02-2022] =3888m=

◆ **Delivery Lengths**

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

◆ **Packing**

Wooden or plywood drums with protection.