

# TECHNICAL DATASHEET FOR

FTTx Optical Fiber Cable

ITU-T G.657.A 4F

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**SAMSUNG ELECTRONICS HAINAN FIBEROPTICS**

## 1. Fibers

1.1 Fibers supplied against this specification must meet the requirements of ITU-T recommendation G.657.A fibers.

### 1.1.1 Optical specifications

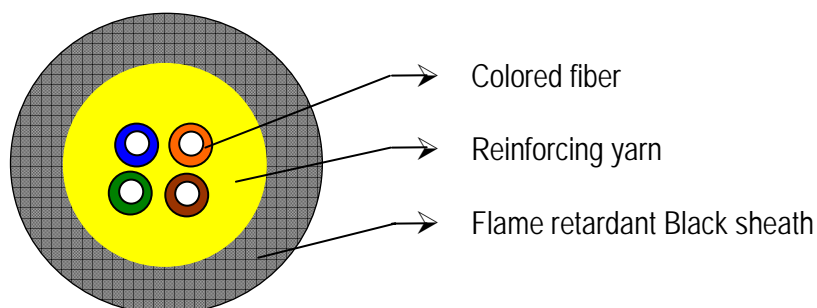
Parameters		Unit	Specifications
Attenuation	1310 nm	dB/km	$\leq 0.40$
	1383 nm		$\leq 0.40$
	1550 nm		$\leq 0.50$
Point Discontinuities	1310 & 1550 nm	dB	$\leq 0.1$
Mode Field Diameter	1310 nm	$\mu\text{m}$	$8.6 \pm 0.4$
Cable cut-off wavelength ( $\lambda_{\text{cc}}$ )		nm	$\leq 1260$
Chromatic Dispersion	1285 ~ 1330 nm	ps/(nm.km)	$\leq 3.5$
	1550 nm		$\leq 18$
	Zero dispersion wavelength	nm	1300 ~ 1324
	Zero dispersion slope	ps/(nm <sup>2</sup> .km)	$\leq 0.092$

### 1.1.2 Dimensional Specifications

Parameters	Unit	Specifications
Cladding Diameter	$\mu\text{m}$	$125 \pm 0.7$
Cladding Non-circularity	%	$\leq 1.0$
Core-clad Concentricity Error	$\mu\text{m}$	$\leq 0.5$
Coating Diameter [Uncolored]	$\mu\text{m}$	$245 \pm 10$

## 2. Cable construction

### 2.1. Cable drawing



### 2.2. Weights and dimensions

Fiber Count	Outer Diameter ( Nominal )	Fiber color	Weight (Nominal)	Max. pulling strength
	mm		kg/km	N
4	3.0	Blue, Orange Green, Red	7.5	500

- The nominal outer diameter may vary by  $\pm 10\%$
- The cable delivery length: 1km/Box

### 2.3 Sheath marking

**200X SAMSUNG DROP CABLE SM 4F = XXXX M =**

- 200X : manufacturing year (Example: 2008)
- SAMSUNG : Manufacturer name
- XXXX : The figure of meter
- The marking is printed every 1 meter

### 3. Cable Properties

#### 3.1 Mechanical & Environmental properties

3.1.1 Cable bending radius : 8 x cable diameter

3.1.2 Operating temperature range : -30°C to + 60°C

Storage/Transport temperature range : -40°C to + 70°C

Installation temperature range : -30°C to + 60°C

#### 3.2 Mechanical & Environment Requirements

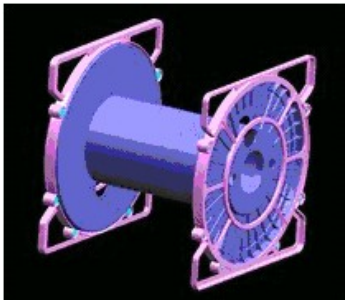
No	Item	Test Method	Specification
1	Tensile strength IEC 60794-1-2-E1	- Max. pulling load: 500N - Length: 100 m - Time: 5 minutes	- Loss change @1550nm ≤ 0.10 dB after test
2	Crush test IEC 60794-1-2-E3	- Load: 500 N for 5mins - Metal Flat: 100 ± 5mm	- Loss change @1550nm ≤ 0.10 dB after test
3	Temperature Cycling IEC 60794-1-2-F1	- Temperature step: +20°C → -30°C → +60°C → -30°C → +60°C → +20°C - Number of cycle: 1 - Time per each step: 12 hrs	- Loss change @1550nm ≤ 0.30 dB/km

4. Packing

4.1 Packing

- The Plastic Bobbin is individually packed in a Box.
- Pallet is applied for the shipment.

4.2 Packing Picture (Ex.)



(Bobbin)



(Box: 320mm \* 345mm \* 365mm)



Pallet package (36 box)

## Revision History

DATE	AUTHOR	REVISION	PAGE	COMMENTS
July 11, 2008	YP Kim	-	-	Initial Release

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