



## FTTx External Subscriber cable

### Product Overview

The Hexatronic FTTx aerial drop cable is equally suited for use in aerial distribution applications and also MDU deployments, Its high strength abrasion resistant jacket is idea for harsh environments. With an outer diameter of just 3mm and light weight it allows for effective cable management around buildings and in distribution nodes.

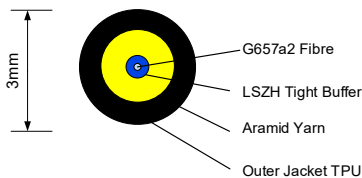
### Applications

- FTTH deployments
- Overhead aerial deployment
- MDU external cabling

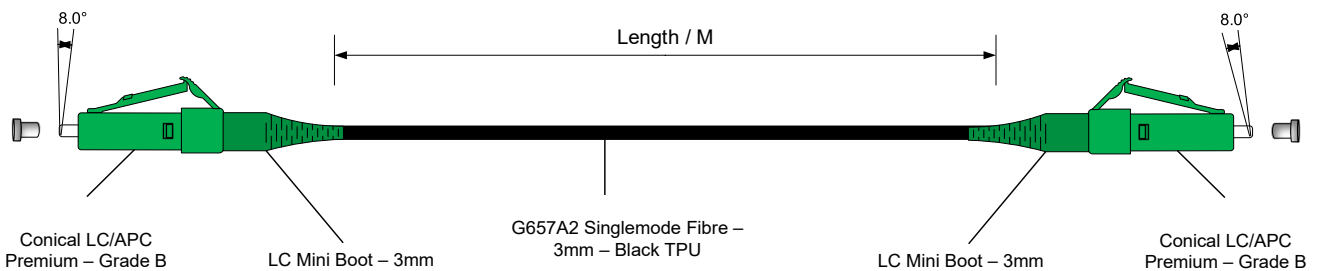
### Features

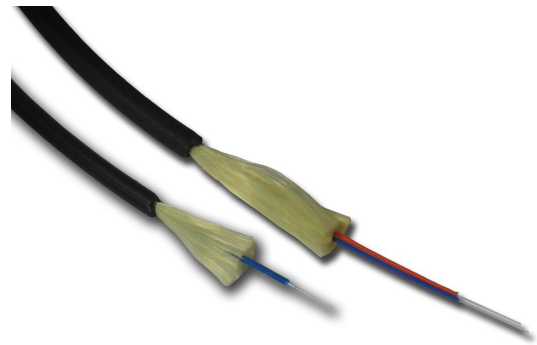
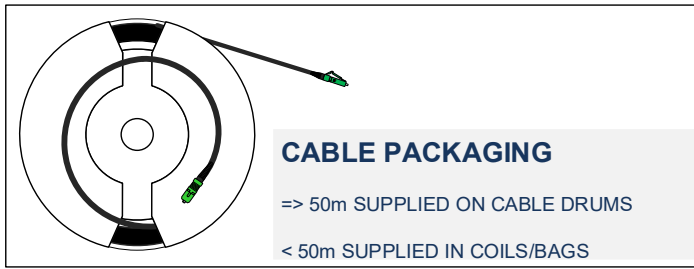
- Up to 4 fibres
- Lightweight self supporting tight buffered design
- For aerial or duct installation
- ITU-T G.657A2 bend insensotove fibre
- Dry design with water blocking aramid
- Non metallic cable (ADSS)
- UV stabilized jacket
- < 4mm diameter
- Controlled tensile breaking force <1800N
- Suitable for use under 11kv power lines
- Minimum vertical separation distance of 1.8 metres.

#### Simplex 1F



CHARACTERISTICS	CONDITIONS	VALUE MAX
Insertion Loss	Random Mated	0.25 dB max. for >97% of samples
Insertion Loss	Against Reference Cable	≤ 0.12 dB mean
Return Loss	UPC	>55 dB
	APC	>65 dB





### Cable type

Cable Designation	Fiber Type	Number of Fibers	Buffer Type	Strength Member	Outer Jacket
Drop Cable	SMF G.657A2	1F 2F	Tight-buffer (LSZH PO)	Water Blocking Aramid Yarn	TPU
Outdoor	* G.657B3	4F			

### Cable data

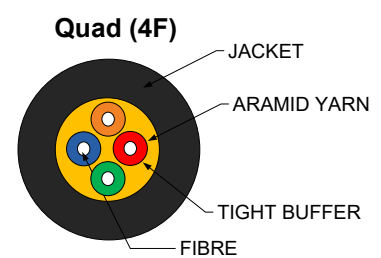
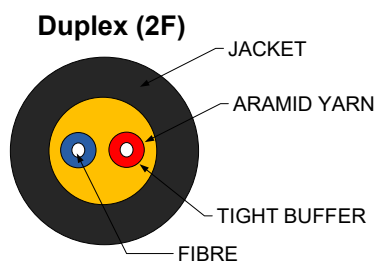
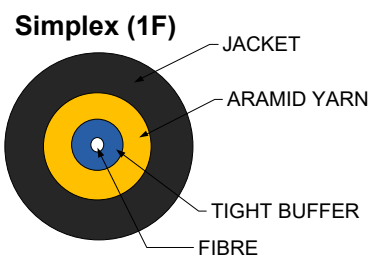
Diameter, weight, bending radius, tensile load

No. of Fibre	Tight Buffer	Overall	Approx. Cable	Cable Bending	Max. Tensile Load	
	Diameter (µm)	Diameter (mm)	Weight (kg/km)	Radius (mm)	Installation (N)	Operation (N)
1	900±50	3.0±0.2	8	15	500	200
2	600±50	3.5±0.2	11	20	500	200
4	600±50	3.5±0.2	11	20	500	200

### Installation length

General installation length: 15m to 150m

General span length for aerial drop: 15m to 80m



## Construction and material

CONSTRUCTION	DESCRIPTION	PARTICULARS		
		1F	2F	4F
Optical Fibre	Type	SMF G657A2, or SMF G.657B3 (Table 3)		
	Specification	ITU-T G.657 (IEC 60793-2-50, ISO/IEC 11801)		
Tight Buffer	Material	LSZH PO		
	Diameter	0.9±0.05 mm	0.6±0.05 mm	0.6±0.05 mm
	Colour	BL	BL, OR	BL, OR, GN, BR
		(other colour scheme may be applicable)		
Strength member	Material	Aramid yarn (Water blocked)		
Outer Jacket	Material	TPU		
	Diameter	3.0±0.2 mm	3.5±0.2 mm	3.5±0.2 mm
	Colour	Black		
		(other colour scheme may be applicable)		
MARKING	The cable shall be marked at interval of 1meter with following information.			
Cable Marking	<ul style="list-style-type: none"> <li>- Length marking</li> <li>- Type of cable and optical fibre</li> <li>- Number of fibre</li> <li>- Jacket material</li> <li>- Manufacturer name or trade mark</li> <li>- Trace number</li> <li>- Year of manufacture</li> </ul> (The other marking information can be added or modified when purchaser require) ex) 0001M DROP CABLE SM G.657B3 2F TPU TMC ##### 2018			

## Cable performance

Test	Condition	Criteria	Specification
Tensile strength	Applicable tensile load are followed by table 2.	after: ≤ 0.2 dB	IEC 60794-1-21-E1
Crush	Loadmax=1000N/10 cm, 5min., 3point	after: ≤ 0.2 dB	IEC 60794-1-21-E3
Impact	5J, 1impact, 3point	after: ≤ 0.2 dB	IEC 60794-1-21-E4
Repeated Bend	3bend, 3cycles, 15xD.	after: ≤ 0.2 dB	IEC 60794-1-21-E6
Torsion	±180°, 2m, 10 cycle, under load 5N	after: ≤ 0.2 dB	IEC 60794-1-21-E7
Bend	±180°, 20xD, 10 cycle	after: ≤ 0.2 dB	IEC 60794-1-21-E11
Temperature cycling test	<ul style="list-style-type: none"> <li>- Temperature +20°C → -40°C +75°C → -40°C +75°C +20°C</li> <li>- Duration time: 12hr</li> </ul>	after: ≤ 0.2 dB/km	IEC 60794-1-22-F1
Water Penetration	3m length, 1m height, 24hr	No leakage of water	IEC 60794-1-22-F5
UV resistance test	- Duration time: 720hr	≤ 80%	UL 1581
Flame retardant (Single cable)	- Duration of burning: 60s	Self-extinguished	IEC 60332-1

\*Measurement of attenuation error cover + 0.02 dB (as same below test)

\*Measuring attenuation of multi-mode shall be carried out at 1550 nm

## Optical attenuation

Method C of IEC 60793-1-40

Properties	Mode	Wavelength	Value
Attenuation	SM	1310 nm	$\leq 0.4$ dB/km
		1550 nm	$\leq 0.3$ dB/km
		1625 nm	$\leq 0.34$ dB/km

## Fibre specification

Attribute	Detail	Unit	Specification	
			ITU-T G.657 (ISO/IEC11801 OS2)	
			G.657A2	G.657B3
Attenuation Coefficient	at 1310nm	dB/km	$\leq 0.4$	
	at 1550nm		$\leq 0.3$	
Chromatic Dispersion	at 1290nm ~ 1330nm	ps/nm.km	$\leq 2.8$	
	at 1550 nm		$\leq 18$	
Zero Dispersion Wavelength		nm	1300 ~ 1322	
Zero Dispersion Slope		ps/nm <sup>2</sup> .km	$\leq 0.095$	
PMD Coefficient		ps/ $\sqrt{\text{km}}$	$\leq 0.4$	
Cut-off Wavelength		nm	$\leq 1260$	
Mode Field Diameter	at 1310nm	$\mu\text{m}$	$8.6 \pm 0.5$	
Cladding Diameter		$\mu\text{m}$	$125 \pm 1$	
Core/Clad concentricity error		$\mu\text{m}$	$\leq 0.8$	
Cladding Non-circularity		%	$\leq 1$	
Coating Diameter		$\mu\text{m}$	$245 \pm 15$	
Macro bending loss (un-cabled fiber)	Radius(mm)		7.5	5
	at 1550 nm(dB)		$\leq 0.5$	$\leq 0.15$

## Ordering Information

Part number	Description
CFMDU-PUA230-ALCALC-M10X	Subscriber Drop Cable - 1f - A2 - 3mm - ALC-ALC - 10m - Black
CFMDU-PUA230-ALCALC-M15X	Subscriber Drop Cable - 1f - A2 - 3mm - ALC-ALC - 15m - Black
CFMDU-PUA230-ALCALC-M20X	Subscriber Drop Cable - 1f - A2 - 3mm - ALC-ALC - 20m - Black
CFMDU-PUA230-ALCALC-M25X	Subscriber Drop Cable - 1f - A2 - 3mm - ALC-ALC - 25m - Black
CFMDU-PUA230-ALCALC-M30X	Subscriber Drop Cable - 1f - A2 - 3mm - ALC-ALC - 30m - Black
CFMDU-PUA230-ALCALC-M35X	Subscriber Drop Cable - 1f - A2 - 3mm - ALC-ALC - 35m - Black
CFMDU-PUA230-ALCALC-M40X	Subscriber Drop Cable - 1f - A2 - 3mm - ALC-ALC - 40m - Black
CFMDU-PUA230-ALCALC-M45X	Subscriber Drop Cable - 1f - A2 - 3mm - ALC-ALC - 45m - Black
CFMDU-PUA230-ALCALC-M50X	Subscriber Drop Cable - 1f - A2 - 3mm - ALC-ALC - 50m - Black
CFMDU-PUA230-ALCALC-M55X	Subscriber Drop Cable - 1f - A2 - 3mm - ALC-ALC - 55m - Black
CFMDU-PUA230-ALCALC-M60X	Subscriber Drop Cable - 1f - A2 - 3mm - ALC-ALC - 60m - Black
CFMDU-PUA230-ALCALC-M65X	Subscriber Drop Cable - 1f - A2 - 3mm - ALC-ALC - 65m - Black
CFMDU-PUA230-ALCALC-M70X	Subscriber Drop Cable - 1f - A2 - 3mm - ALC-ALC - 70m - Black
CFMDU-PUA230-ALCALC-M75X	Subscriber Drop Cable - 1f - A2 - 3mm - ALC-ALC - 75m - Black
CFMDU-PUA230-ALCALC-M80X	Subscriber Drop Cable - 1f - A2 - 3mm - ALC-ALC - 80m - Black
CFMDU-PUA230-ALCALC-M85X	Subscriber Drop Cable - 1f - A2 - 3mm - ALC-ALC - 85m - Black
CFMDU-PUA230-ALCALC-M90X	Subscriber Drop Cable - 1f - A2 - 3mm - ALC-ALC - 90m - Black
CFMDU-PUA230-ALCALC-M95X	Subscriber Drop Cable - 1f - A2 - 3mm - ALC-ALC - 95m - Black
CFMDU-PUA230-ALCALC-M100X	Subscriber Drop Cable - 1f - A2 - 3mm - ALC-ALC - 100m - Black
CFMDU-PUA230-ALCALC-M105X	Subscriber Drop Cable - 1f - A2 - 3mm - ALC-ALC - 105m - Black
CFMDU-PUA230-ALCALC-M110X	Subscriber Drop Cable - 1f - A2 - 3mm - ALC-ALC - 110m - Black
CFMDU-PUA230-ALCALC-M115X	Subscriber Drop Cable - 1f - A2 - 3mm - ALC-ALC - 115m - Black
CFMDU-PUA230-ALCALC-M120X	Subscriber Drop Cable - 1f - A2 - 3mm - ALC-ALC - 120m - Black
CFMDU-PUA230-ALCALC-M125X	Subscriber Drop Cable - 1f - A2 - 3mm - ALC-ALC - 125m - Black
CFMDU-PUA230-ALCALC-M130X	Subscriber Drop Cable - 1f - A2 - 3mm - ALC-ALC - 130m - Black
CFMDU-PUA230-ALCALC-M135X	Subscriber Drop Cable - 1f - A2 - 3mm - ALC-ALC - 135m - Black
CFMDU-PUA230-ALCALC-M140X	Subscriber Drop Cable - 1f - A2 - 3mm - ALC-ALC - 140m - Black
CFMDU-PUA230-ALCALC-M145X	Subscriber Drop Cable - 1f - A2 - 3mm - ALC-ALC - 145m - Black
CFMDU-PUA230-ALCALC-M150X	Subscriber Drop Cable - 1f - A2 - 3mm - ALC-ALC - 150m - Black
CFMDU-PUA230-ALCALC-M155X	Subscriber Drop Cable - 1f - A2 - 3mm - ALC-ALC - 155m - Black
CFMDU-PUA230-ALCALC-M160X	Subscriber Drop Cable - 1f - A2 - 3mm - ALC-ALC - 160m - Black
CFMDU-PUA230-ALCALC-M165X	Subscriber Drop Cable - 1f - A2 - 3mm - ALC-ALC - 165m - Black