

08.12.2020

Product Preliminary Datasheet
Fiber Optic Cable: Aerial ULW CFU
Aerial ULW CFU PE G.657.A1 1250N Ø 7.0mm

Please note: this design has not been put in production. All values are nominal. The datasheet parameters might be revised after trials. The leadtime for this design should be agreed separately. Make sure you are informed about all updates and consent to production parameters.

Order information

Design	Part number
Aerial ULW CFU PE 12 (1x12) G.657.A1 1250N Ø 7.0mm	0475-87990-FC00076
Aerial ULW CFU PE 24 (2x12) G.657.A1 1250N Ø 7.0mm	0475-89205-FC00076
Aerial ULW CFU PE 36 (3x12) G.657.A1 1250N Ø 7.0mm	0475-87985-FC00076
Aerial ULW CFU PE 48 (4x12) G.657.A1 1250N Ø 7.0mm	0475-89206-FC00076

Product Pros



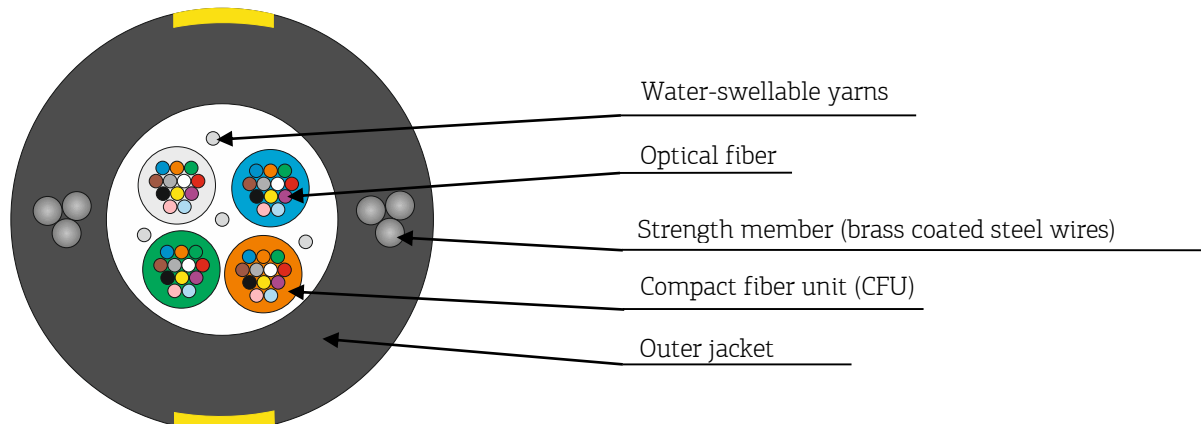
Ultra-light design

Max break < 2000 N
Elastic limit > 1250 N

No tools needed, use lightweight glove to strip

Application and design

FTTX Self-supporting cable the cable is suitable for installation below 11kV power lines.

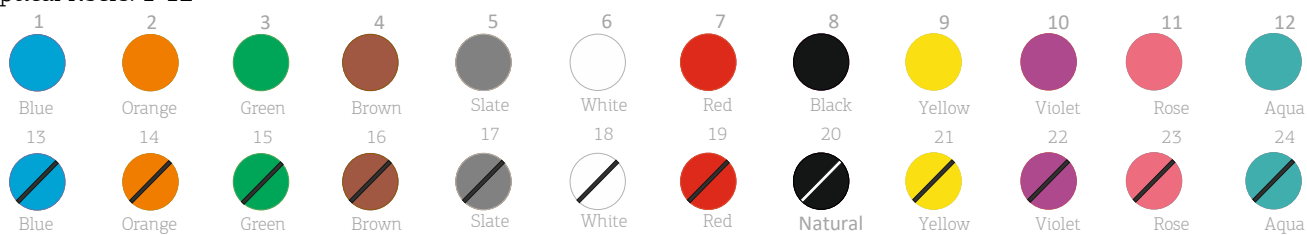


The cable consists of a bundle of compact fiber units, water-swellable yarns. Outer jacket is made of MDPE. Two strength members (brass coated steel wires 3x0.32 mm) are located inside the jacket. Outer jacket colour is black with 2 yellow stripes.

Color identification of loose tubes and optical fibers is according to ANSI/TIA-598-D-2014

Loose tubes: 1,2,3,6

Optical fibers: 1-12



Other colors upon request

Cable marking example

Marking is made on each meter of cable

Fiber optic cable	= EMCAB =	Aerial ULW CFU	48	4	x	12	G.657.A1	1250 N	Ø 7.0mm	BATCH	2020	= 00001 m =
			1	2	3	4	5	6	7	8	9	10

1	Cable type	6	Installation tension
2	Fiber count	7	Cable diameter
3	Number of loose tubes	8	Batch number
4	Fibers per loose tube	9	Year of production
5	Fiber type	10	Meter marking

Design details

Fiber count		12	24	36	48
Number of loose tubes		1	2	3	4
Number of PP fillers		3	2	1	-
Fibers per loose tube				12	
Cable diameter ±0.2	mm			7.0	
Cable weight	kg/km			39.4	

Other designs upon request

Optical fiber

Fiber type	«G.657.A1»
Fiber brand	Corning®
ITU-T Recommendation	G.657.A1
Dimensional Specifications	
Core-Clad Concentricity	0.5 µm
Cladding Diameter	125 ±0.7 µm
Cladding Non-Circularity	0.7 %
Coating Diameter	242 ±5 µm
Transmission Specifications	
Attenuation in the cable (dB/km)*:	
1310 nm wavelength (Typical** / Max.)	0.35 / 0.38
1550 nm wavelength (Typical** / Max.)	0.21 / 0.30

* Local attenuation discontinuities caused by cable winding on a reel are allowed.

** Typical attenuation is the real level of optical attenuation of at least 90% fibers after cabling

Additional information about optical fibers on www.emcab.co

Operating parameters

Operation temperature	-30°C...+70°C
Installation temperature	-20°C...+50°C
Transportation and storage temperature	-30°C...+70°C
Minimum bending radius	10 x cable diameter

Cable parameters

Parameter	Nominal value		Evaluation criterion
	Short Term	Long Term	
Tensile strength (IEC 60794-1-21 method E1)	1250 N	650 N	
Crush (IEC 60794-1-21 method E3)	200 N		- $\Delta\alpha^* \leq 0.05$ dB
Repeated bending (IEC 60794-1-21 method E6)	20 cycles, bending radius $\pm 90^\circ$		- no damage
Impact (IEC 60794-1-21 method E4)	Impact energy 5 J 20 cycles		
Water penetration (IEC 60794-1-22 method F5C)	Sample length: 3 m Testing time: 24 hours		No water at the cable end
Temperature cycling** (IEC 60794-1-22 method F1)	- temperature range from -30°C to 70°C - 2 cycles - cycle period ≥ 16 hours		$\Delta\alpha^* \leq 0.05$ dB/km

* - attenuation increasing at standard wavelengths

** - other temperature range upon request

Safety standards compliance

RoHS: 2011/65/EU; 2015/863/EU

"Restriction on the use of certain Hazardous Substances"

REACH: 1907/2006/EU

"Registration, Evaluation, Authorisation and Restrictions of Chemicals"

Reel packing and marking

Cables are supplied on non-returnable wooden reels. Reel diameter is not less than 40 diameters of the cable. Not less than 2 m of inside end of the cable is fixed to the reel flange. The cable ends are sealed with waterproof covers.

The label on the outer reel flange contains our trademark, cable type, customer's name and PO, reel number, production date, cable length, cable weight net/gross.

The following information is printed on the reel flange: manufacturer's name and website, rotation direction, cable end indication, shipping and handling summary, labels "Fragile" and "Handle with care".

Our cable passport shows: cable type, technical standard number, cable length, fiber type, fiber coloring, fibers per tube, tube identification coloring, final attenuation for all fibers, refractive index of the fiber, fiber manufacturer and production date.

Cable passport is affixed to the inner flange in a plastic bag. Additional information can be included on the passport upon request.

This document is intended as a guide only. Whilst the information it contains is believed to be correct, Emcab can take no responsibility for actions taken based on the information contained in this document. Emcab reserves the right to make changes to this document without notice. All sales of product are subject to Emcab's terms and conditions of sale only, which can be found on Emcab's website www.emcab.co. This document is protected by copyright (c) of Emcab GmbH. The products depicted are protected by intellectual property rights. Any unauthorized copying of this document or of our products is prohibited and Emcab GmbH will take action to prevent any infringement of its rights and to claim damages for the loss that it suffers.