

FTTH CABLE. MICROMODULE STRUCTURE

ORANGE L1091 – DUCT

According to FT/OLNC/OLN/WTC/13/03/14, Version 3.0 Dec 2020

DESCRIPTION AND APPLICATION

Outdoor, water-blocking, compact fibre-optic cables with black polyethylene sheath and fibreglass reinforcements incorporated in the sheath. Designed for duct installation (by blowing or pulling). These cables are designed for every type of communications networks with G657A2 fibre. Micro module cables reduce the time needed for deployment, ease of installation and connectorization.

Family code: EE85RG1, EE86RG1.

CONSTRUCTION

- 1. Micromodules:** Easy strippable tube with G657A2 fibres. See identification colours below
- 2. Cable core:** Modules are stranded in SZ without central element.
- 3. Water-blocking** yarns and/or tapes.
- 4. Fibreglass reinforcement** elements embedded in the outer sheath.
- 5. Black High density polyethylene UV-resistant sheath.**

Markings: According to L1091



OPTIC-FIBRE SPECIFICATIONS

Optic-fibre is according to UIT-T G.657A2 (EN 60794-2-50 B6_a2) recommendations.

Transmission:

Attenuation

Maximum @ 1310 nm: 0,36 dB/km

Nominal (90% fibres) / Maximum @ 1550 nm: 0,22 / 0,23 dB/km

Nominal (90% fibres) / Maximum @ 1625 nm: 0,24 / 0,26 dB/km

PMD $\leq 0,20$ ps/km^{1/2}

Cut-off wavelength (λ_{cc}) ≤ 1260 nm

PRODUCT INFORMATION

Family code	L1091-15
Cablescom Cable Code	EE85RG10001440WN
Fibre Count	144
Modules Count	24
Nom Weight (kg/km)	119
Nom OD (mm)	13.0
Tensile Strength T _m (N)	2510
IEC 60794-1-2 E1	$\Delta l < 0.6\%$, $\Delta \epsilon f < 0.5\%$, $\Delta \alpha$ reversible ($< 0,2$ dB/km).
Impact Resistance	10 J
IEC 60794-1-2 E4	$r = 10$ mm, $T^0 -15^{\circ}\text{C}$ & 20°C , $\Delta \alpha$ reversible, No damage to cable elements
Cut-through resistance	200N, 3 min.
IEC 60794-1-2 E12	($\Delta \alpha$ reversible, without perforation)
Curvature (mm.)	130
IEC 60794-1-2, Met. E11	10 cycles, $\Delta \alpha < 0.1$ dB
Kinking (mm.)	62
IEC 60794-1-2, Met. E10	No kinking, $\Delta \alpha$ reversible
Torsion Resistance	$\pm 180^{\circ}/\text{m}$, $L=80\text{N}$, 10 cycles, $\Delta \alpha < 0.1$ dB, r
IEC 60794-1-2, Met. E7	
Crush Resistance	2.500 N (15min, $\Delta \alpha < 0.1$ dB rev) 3.500 N (15min, $\Delta \alpha$ reversible), No damage
IEC 60794-1-2, Met. E3	
Thermal cycle	Operation ($\Delta \alpha < 0.1$ dB at 1550nm, $\Delta \alpha < 0.2$ dB at 1625nm and reversible) : TA1=-30°C / TB1=60°C Storage ($\Delta \alpha$ reversible) : TA1=-40°C / TB1=70°C
IEC 60794-1-2, Met. F1	
Water penetration	LP water ≤ 3 m (168 hr) (Cable core)
IEC 60794-1-2, Met. F5B	

Cables de Comunicaciones Zaragoza, SL.

Polígono de Malpica, calle D, nº 83. 50016 Zaragoza – SPAIN

+34 976 729 900 | +34 976 729 974

www.cablescom.com | comercial@cablescom.com

Certified Company ISO 9001 – ISO 14001

All drawings, weights and dimensions details, as well as tube and fibre colours in this document are only indicative and must not be considered contractual.

TITLE
L1091.15_144

EDITION
1.0

PREPARED
RG

DATE
2021-01-21

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ANNEX TABLE 1: MICROMODULE COLOUR CODE FOR L1091 STANDARD

Cable Mod6	Cable Mod12	Tube											
		1	2	3	4	5	6	7	8	9	10	11	12
6	12	Red											
12	24	Red	Blue										
18	36	Red	Blue	Green									
24	48	Red	Blue	Green	Yellow								
36	72	Red	Blue	Green	Yellow	Violet	White						
48	96	Red	Blue	Green	Yellow	Violet	White	Orange	Grey				
60	120	Red	Blue	Green	Yellow	Violet	White	Orange	Grey	Brown	Black	Light green	
72	144	Red	Blue	Green	Yellow	Violet	White	Orange	Grey	Brown	Black	Light green	Turquoise
144	288	Red	Blue	Green	Yellow	Violet	White	Orange	Grey	Brown	Light green	Turquoise	Pink
		Red	Blue	Green	Yellow	Violet	White	Orange	Grey	Brown	Light green	Turquoise	Pink

Note: In 288-fibre cables, the micro modules from 1 to 12 will be marked with a ring and the micro modules from 13 to 24 will be marked with 2 rings.
The module number 10 can be coloured Black or Light Green for cables of 12 modules or less.

Cable	Tube											
	1	2	3	4	5	6	7	8	9	10	11	12
432	Red	Blue	Green	Yellow	Violet	White	Orange	Grey	Brown	Light green	Turquoise	Pink
	Red	Blue	Green	Yellow	Violet	White	Orange	Grey	Brown	Light green	Turquoise	Pink
	Red	Blue	Green	Yellow	Violet	White	Orange	Grey	Brown	Light green	Turquoise	Pink
576	Red	Blue	Green	Yellow	Violet	White	Orange	Grey	Brown	Light green	Turquoise	Pink
	Red	Blue	Green	Yellow	Violet	White	Orange	Grey	Brown	Light green	Turquoise	Pink
	Red	Blue	Green	Yellow	Violet	White	Orange	Grey	Brown	Light green	Turquoise	Pink
	Red	Blue	Green	Yellow	Violet	White	Orange	Grey	Brown	Light green	Turquoise	Pink
720	Red	Blue	Green	Yellow	Violet	White	Orange	Grey	Brown	Light green	Turquoise	Pink
	Red	Blue	Green	Yellow	Violet	White	Orange	Grey	Brown	Light green	Turquoise	Pink
	Red	Blue	Green	Yellow	Violet	White	Orange	Grey	Brown	Light green	Turquoise	Pink
	Red	Blue	Green	Yellow	Violet	White	Orange	Grey	Brown	Light green	Turquoise	Pink
	Red	Blue	Green	Yellow	Violet	White	Orange	Grey	Brown	Light green	Turquoise	Pink
864	Red	Blue	Green	Yellow	Violet	White	Orange	Grey	Brown	Light green	Turquoise	Pink
	Red	Blue	Green	Yellow	Violet	White	Orange	Grey	Brown	Light green	Turquoise	Pink
	Red	Blue	Green	Yellow	Violet	White	Orange	Grey	Brown	Light green	Turquoise	Pink
	Red	Blue	Green	Yellow	Violet	White	Orange	Grey	Brown	Light green	Turquoise	Pink
	Red	Blue	Green	Yellow	Violet	White	Orange	Grey	Brown	Light green	Turquoise	Pink
	Red	Blue	Green	Yellow	Violet	White	Orange	Grey	Brown	Light green	Turquoise	Pink

ANNEX TABLE 2: FIBRE COLOURS FOR ORANGE STANDARDS

Fibre	1	2	3	4	5	6	7	8	9	10	11	12
Colour	Red	Blue	Green	Yellow	Violet	White	Orange	Grey	Brown	Black	Turquoise	Pink

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