

optotec

OPTO DOP

Drop Optical Point



Optotec designed a set of devices suitable for branching STL retractable multifibre and minibundle cables. This system can be installed aerial, on façade or pole (IP55) sealing. OPTO- DOP (Drop Optical Point) protects and distributes the fibres of the cable coming from the closest distribution point (closure or box) to the subscriber terminal outlet.

OPTOTEC DOP I is needed to recover the window cut on the retractable cable necessary for the sectioning of the fibres to be extracted. It is installed floating on the feeder cable.

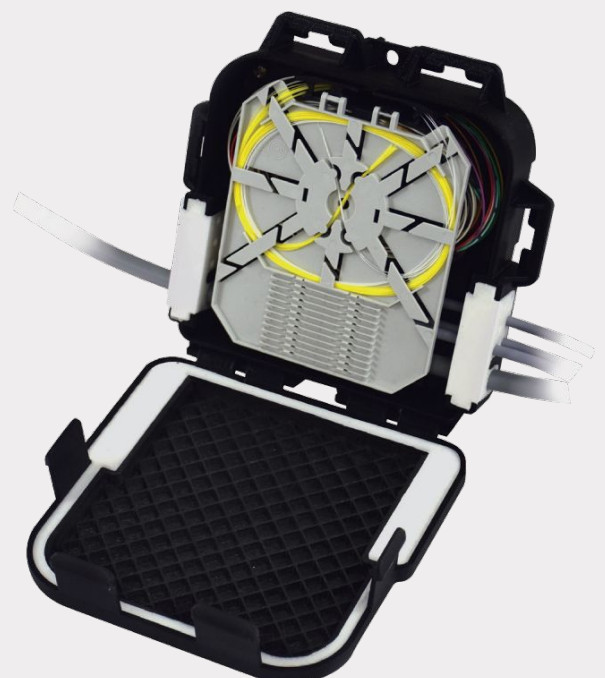
OPTOTEC DOP III is an ultracompact in-line enclosure able to manage up to 12 single fibre outdoor/indoor drops cables. It is possible to splice the drops to the retracted modules or to pull them inside a protection tube without splicing. DOP III can be installed floating or fixed to the pole or to the façade.

Applications

- Multifibre and minibundle cables branching on FTTH networks
- Installable on façade or pole

Technical Features

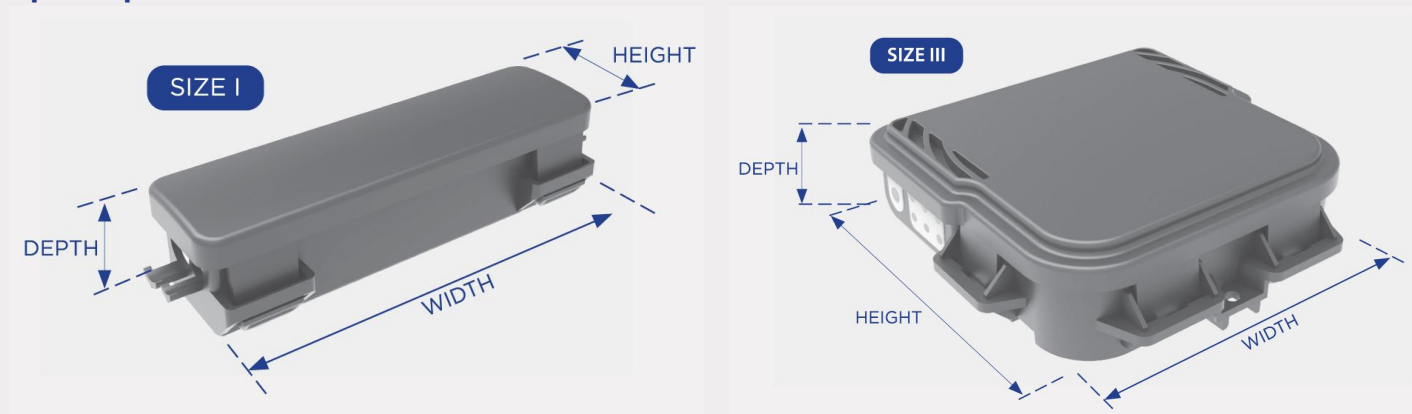
- DOP I protection window cut cover
- DOP III distribution splice box for pole and façade
- Easy to install
- Possibility of re-access and rework
- Small footprint with low visual impact
- UV Resistant materials and compliant with current regulations
- Tool less access
- Available in Grey RAL 7035 or Black RAL 9005 colour options



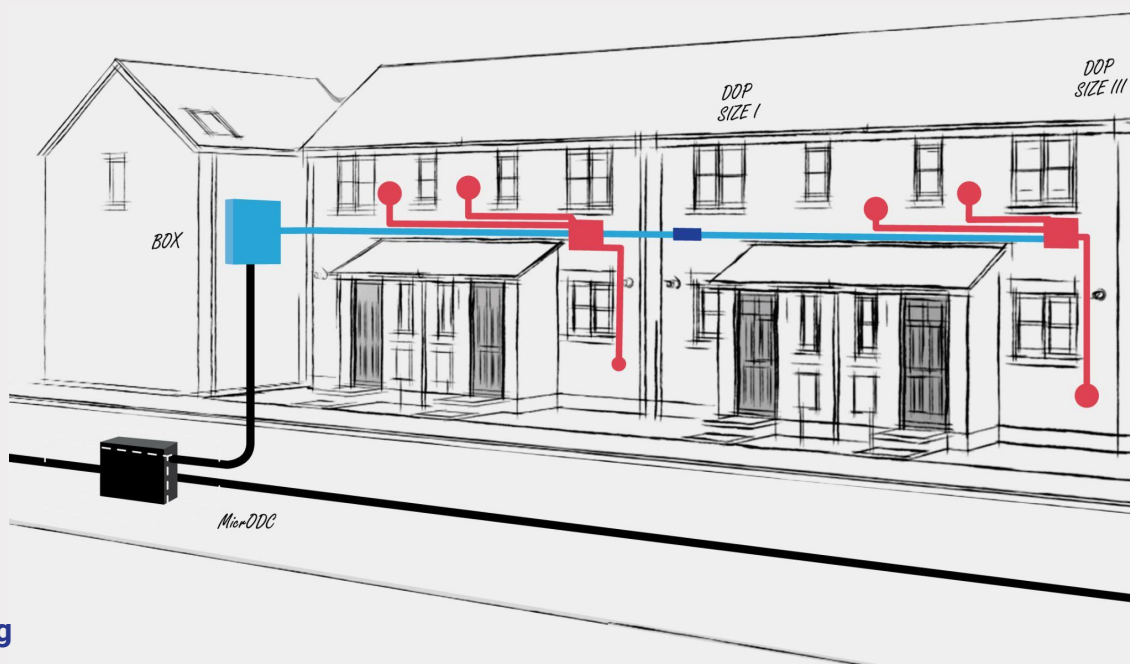
Opto DOP Ordering Information

SERIES NAME	SPLICE ARRAY MODULE TYPE	NO. OF TRAYS	NO. OF SPLICE PER TRAYS	HOLDER TYPE FOR SPLICE PROTECTION	BRACKET	COLOR
DOP	-	-	-	H = HEAT-SHRINKABLE (SMOUV TYPE)	-	G = GREY B = BLACK
	RHD	1	12	C = MECHANICAL CRIMP (ANT TYPE)	Y = YES / N = NO	

Opto Dop Dimensions



	DIMENSION (mm)			Ø CABLE (mm)		CAPACITY	WEIGHT	COLOR	MATERIAL	STANDARD OF PROTECTION
	WIDTH	HEIGHT	DEPTH	FEEDER	DROP	MAX. SPLICE CAPACITY				
SIZE I	100	29	18,5	7/10	4,5	-	80 gr	GREY RAL 7035 or BLACK RAL 9005	PP, SILICONE RUBBER PC/ABS	IP55 - IK08
SIZE III	150	150	41,5	7/10	4,5	UP TO 12 F.O.	360 gr			

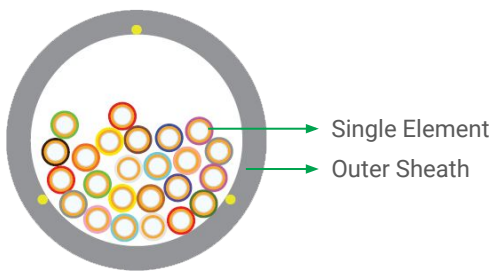


Packaging

PRODUCT NAME PACKAGING	PACKAGING TYPE	DIMENSIONS (mm)			GROSS WEIGHT (kg)
		WIDTH	DEPTH	HEIGHT	
OPTO-DOP	Carton box	215	55	170	~ 1,5

Outdoor Retractable OFC

12-24F | Bow-Lite (E) - G.657.A2 Single Mode Fibre



* Typical Construction Diagram - Not to Scale

Features & Benefits

- Made using ITU-T G.657.A2 bend insensitive fibres
- Easily removable coating made of inert material enables retraction of the individual fibre units from the cable through small sheath openings
- Provides splice-free drop fibre connectivity when used in conjunction with STL's DOP solution set
- Small cable diameter for enhanced aesthetics
- UV Protected for external use
- CPR compliant
- Embedded Aramid Yarn in sheath for protection

Product Details

STL's innovative Outdoor Retractable Fibre Optic Cable is constructed of multiple single mode bend insensitive fibres individually protected by aramid yarns within a 900 µm sheath and then bundled within a UV protected outer sheath. The fibres are extracted from the sheath for a length of up to 15 metres via sheath "window" openings which eliminates the need to design and provision for traditional cable coils at drop locations. The Outdoor Retractable solution is ideally suited to on-demand connectivity where the exact drop cable premises entry location may not be known until connection and can also be used for pre-provisioned drop-off points.

Cable Performance Standards

The cable complies with the following standards IEC 60794-2-20, European regulation n° 305/2011, EN 50575: 2014 + A1:2016, Fire Reaction Class: Eca

Printing Details

On the outer sheath of each cable there will be an indelible marking bearing at least the following information:

- Name of the manufacturer
- Year
- Designation initials
- Euro class CPR

Other contents are customizable upon customer request

Specifications

Product Information	
Fibre	
Fibre Type	STL Fibre ITU.T - G.657.A2
Maximum Cabled Fibre Attenuation dB/Km	1310nm : < 0.40 , 1550nm : < 0.30
Cable	
Sheathing	White or Green UV protected Outer Sheath
Simplex Fibre OD	
Fibre (Uncoloured fibre)	9/125/250 µm
Outer Diameter (LSZH)	900 ± 50 µm

Cable Construction & Physical Parameter						
Fibre Count	Sheath Colour	Elements Color Sequence	Cable Diameter (± 0.5 mm)	Weight of Cable (Kg/Km) ± 10%	External Jacket's Thickness (mm)	Length in one Reel (Metres)
12	Green/White	Blue, Orange, Green, Brown, Grey, White, Red, Black, Yellow, Violet, Rose, Aqua	7.0	50	1.30	1000 ± 5%
24	Green/White	Blue, Orange, Green, Brown, Grey, White, Red, Black, Yellow, Violet, Rose, Aqua, Blue*, Orange*, Green*, Brown*, Grey*, White*, Red*, Black*, Yellow*, Violet*, Rose*, Aqua*	9.0	75	1.30	1000 ± 5%

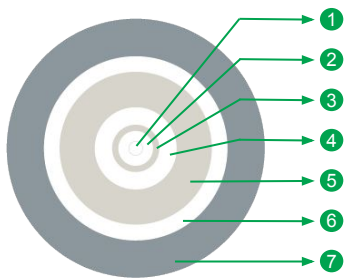
Note : * denotes black ring marking over the elements

Optical Fibre Cable Performance			
MECHANICAL (Test Standard - IEC 60794-1-2)		ENVIRONMENTAL (Test Standard IEC 60794-1-2)	
Tensile Strength	50 N	*Temp. Performance, Method F1	
Short Term Bend Radius	20 D	Installation	-10°C to +60°C
Long Term Bend Radius	15 D	Operation	-20°C to +70°C
CPR Rating	Cca, s1b, d1, a1		
Crush, Method E3	50 N /100mm		

Outdoor/Indoor FTTH OFC

TOL1 1 (1 SM G.657.A2 KM)/KM

For Outdoor FTTH Applications



1 FIBRE

2 ARAMID YARNS

3 TIGHT BUFFER

4 STRENGTH MEMBER

5 INNER JACKET

6 STRENGTH MEMBER

7 EXTERNAL JACKET

* Typical Construction Diagram - Not to Scale

Features & Benefits

- **Bend it without any signal loss:** Compared to standard single-mode fibres (G.652.D), the G.657.A2 can handle much tighter bends without experiencing signal loss.
- **Faster installs, Lower costs:** Because of the G.657.A2's bendability, it allows for easier installation in tight spaces.
- **Small and mighty:** The bendable design of G.657.A2 allows for the development of smaller diameter cables and tighter connector footprints.
- **Unleash the Bandwidth:** G.657.A2 fibre performs excellently at wavelengths commonly used in today's networks (1310nm and 1550nm)

Product Details

Deliver high-performance data transmission in space-constrained environments with the single-mode 9/125/250 μm ITU-T G.657.A2 fibre optic cable. This bend-optimized design allows for tighter turns without signal loss, simplifying installations in data centers, buildings, and FTTH deployments. Future-proof your network with best-in-class bendability, enabling efficient use of space and seamless integration with existing infrastructure. Unleash full bandwidth potential at 1310nm and 1550nm wavelengths, supporting demanding applications like 5G and cloud computing.

Fibres and Cable Performance Standards

Cable complies with the following standards: European Regulation n° 305/2011, EN 50575:2014 + A1:2016, TIM CT 934, OPENFIBER ST 1730, INFRATEL INF-ING-ST0043-20 rev. 4, IEC 60794, EN-50289, ITU-T.

Printing Details

Printing: "METALLURGICA BRESCIANA week/year – designation code – customer's reference – Euroclasse CPR" + Metric

Note: The accuracy of marking shall be + 0.5%.

Specifications

Physical Characteristics	
Maximum Cabled Attenuation (dB/km)	1310nm : 0.4 & 1550nm : 0.3
PMD (ps/sqrt.km)	≤ 0.20
Fibre	1, STL HD A2 Fibre (ITU-T G.657 A2)
Tight Buffer	Thermoplastic compound LSZH with Aramid yarn
Strength Members	Aramid yarns, ≥ 4500 dTex
Outer Jacket	Thermoplastic compound LSZH, colour: grey (RAL 7001)
Cable Diameter (mm)	4.5 ± 0.1
Covering	Optional (Eventual tight covering)
Euroclass CPR	Cca, s3, d1, a3

Cable Characteristic		
Reference Standard: ITU-T G.657A2		
Nominal MFD range at 1310 nm		Min. 8,6 µm – Max. 9,2 µm
Cladding diameter		125 ± 0,7 µm
Coating diameter		250 ± 15 µm
Core/Cladding concentricity error		≤ 0,50
Cladding non-circularity		≤ 1,00
Attenuation	1310 nm	≤ 0,35 dB/Km
Attenuation	1385 nm	≤ 0,33 dB/Km
Attenuation	1550 nm	≤ 0,21 dB/Km
Attenuation	1625 nm	≤ 0,22 dB/Km
Chromatic dispersion coefficient	1550 nm	≤ 18 ps/nm·Km
Chromatic dispersion coefficient	1625 nm	≤ 22 ps/nm·Km
Zero chromatic dispersion wavelength, λ ₀		1300 ≤ λ ₀ ≤ 1324 nm
Cable cut-off wavelength		≤ 1260 nm
Individual fibre polarization mode dispersion (PMD)		≤ 0,20 ps√(km)
Zero dispersion slope		≤ 0,092 ps/nm ² /Km

Mechanical & Environmental Characteristics		
Cable Characteristics	Testing Standard Method	Cable Performance
Pulling Resistance	IEC 60794-1-21 E1	500 N
Crush Resistance	IEC 60794-1-21 E3	2000 N (500 N Infratel)
Impact Resistance	IEC 60794-1-21 E4	2J; 3 shots
Thermic Cycles	IEC 60794-1-22 F1	-25°C +70°C
Strippability	IEC 60794-1-2-E5	positive
Kink	IEC 60794-1-2-E10	Ø kink min. < 10 mm a 20°C

Note 2: All tests shall be carried out as per IEC standards. Change in attenuation after and before testing shall be ≤ 0.05 dB/km for Single Mode fibre.

Packing and Lengths

Drum Type	Length Multiple (in km)	Order Tolerance	Short Lengths
Wooden Drums	2/4 \pm 5%	\pm 5%	Max 5%, Customer Approval

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For additional information please contact your sales representative.

You can also visit our website at www.stl.tech

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