

optotec OptoBlaze

Pre-connectorized Plug'n'Play Solution



OptoBlaze is a Connectorised Block Terminal (CBT) for FTTH Connectivity.

The STL OptoBlaze CBT is an essential component within the access network, facilitating the rapid connection between the Fibre Distribution Hub and subscribers. When customers opt for FTTH service, the OptoBlaze Terminal serves as the crucial link, connecting the drop cable to their residences.

This IP68 ruggedized pre-terminated solution offers a swift, secure, and user-friendly means of establishing connections in an ergonomically designed, low-profile housing. Tailored for Outside Plant (OSP) applications, it can be seamlessly deployed in various settings, such as hand-holes, pedestals, utility poles, or overhead cables, and securely fastened to any flat surface.

STL OptoBlaze features a user-friendly design that facilitates quick and effortless mounting or dismounting, providing installers with a time-saving advantage during both installation and maintenance processes. It arrives pre-stubbed, making it an optimal choice for a dependable deployment in access networks, whether for Point-to-Point (PtP) configurations or as a GPON distributor with preassembled PLC splitters.

The OptoBlaze CBT comes in multiple configurations, including 4-port, 8-port, or 12-port, with or without preloaded splitters. To establish the crucial link between the Terminal and the subscriber's residence, the OptoBolt pre-connectorized drop cables (each containing one fiber) are essential.

Notably, this solution meets stringent environmental criteria, making it capable of withstanding direct exposure to extreme temperatures and humidity. Furthermore, the STL Terminal and Plugs are fully compatible with similar products available in the market, making them an ideal choice for enhancing and expanding FTTH networks.

Technical Features

Optimized Space and Aesthetics: The innovative Zig-Zag port layout enables greater port spacing within the terminal without expanding its overall size. This design is exceptionally user-friendly, even when wearing gloves, making it more accessible for installation and maintenance.

Enhanced Spacing for Faster Installations: The increased port spacing not only facilitates more straightforward connections but also accelerates drop cable installations, and it does so without the need for specialized tools. This boost in efficiency results in faster network deployment.

Compatibility with Existing Infrastructure: STL terminals seamlessly integrate with both current and legacy mounting brackets in the field, whether on utility poles or within manholes. This compatibility ensures a smooth transition and easy retrofitting into existing network Setups.

Reduced Skill and Training Requirements: The user-friendly design of the Zig Zag port layout, intuitive numbering, and tool-less installation further minimizes the need for extensive training and specialized skills. This lowers the entry barrier for technicians, reducing the learning curve.

Ease of Mounting and Dismounting: An optional bolt-less mounting/dismounting feature provides an effortless and rapid way to attach or remove the terminal, saving valuable time during installation or maintenance operations.



Applications

- Underground chambers, manholes and handholes
- Suitable for mobra arms installation
- Pole mount and aerial applications

Dimensions ¹

4 Port Design

336mm x 88.6mm X 121.3mm

8 Port Design

431mm x 88.6mm X 121.3mm

12 Port Design

431mm x 88.6mm X 158.3mm

Note 1. The dimensions do not include the adapter caps.



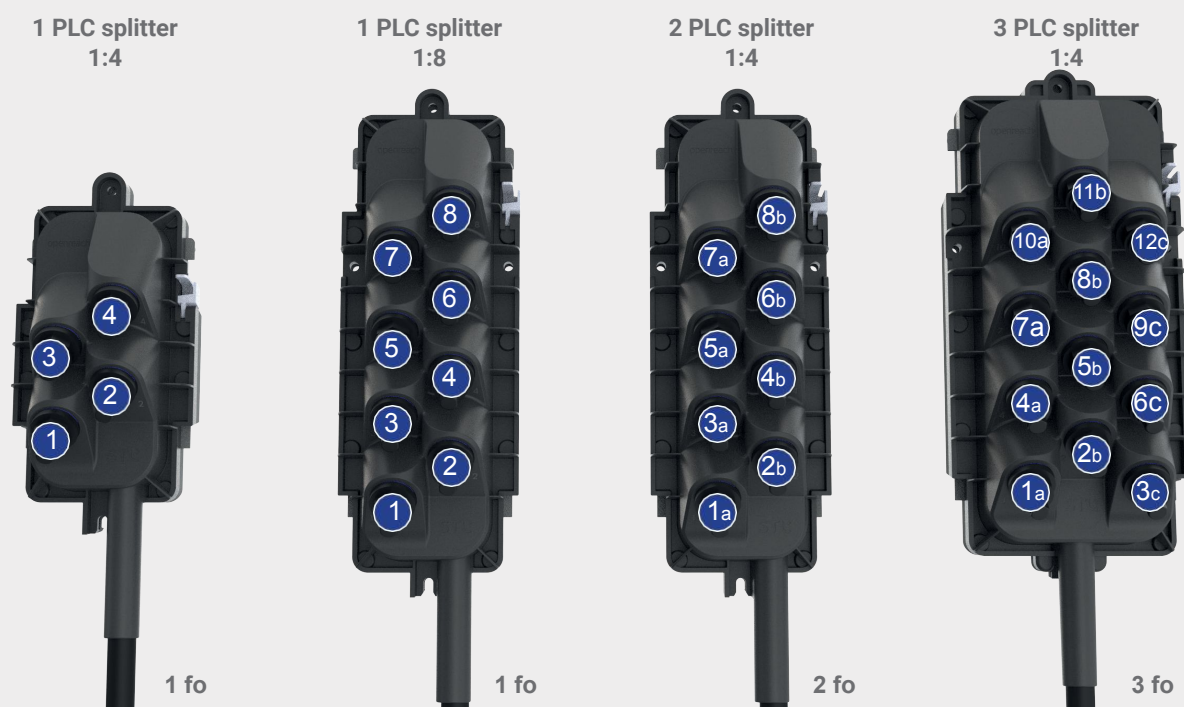
Reasons To Use Hardened Connectivity

- Expedites the homes passed build rates as terminals come pre-installed from the factory. As it increases speed of deployment, the lead to cash accelerates.
- Minimizes the technical skills required of labor force
- Saves time at the drop installation when connecting homes
- Is an accurate and severe tested system ensuring reliability of each installed terminal
- Can be used as demarcation point
- Simple, ruggedized, no installation failures in the last mile network (where faults >80% of the whole network)



OptoBlaze As GPON Distribution Point

The OptoBlaze terminal helps the rollout in every network application included fast rural deployments. Particularly it is the ideal device for GPON distribution point with factory preinstalled 1:4 and 1:8 PLC splitters.



Technical Specifications

Insertion loss (Random mated @ 1310 and 1550 nm)	IL avg < 0.3dB
Return Loss	RL >55dB
Water Tightness IP68	2m waterhead (20KPa)
Temperature Cycling	20 cycles from -40°C to 65°C Δ IL<0.2db (@1310, 1550 and 1625 nm)
Intermateability with Installed Base	Proven to the above criteria

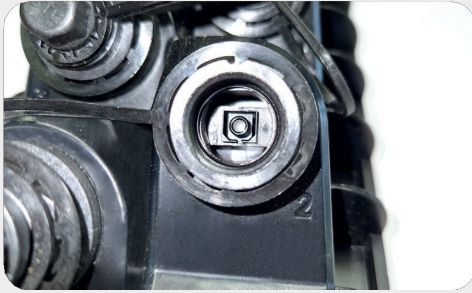
Splitters Specification

STL PLC splitters have excellent optical, reliability and size characteristics designed for outside plant conditions.

Parameter	Unit	1x4	1x8
Wavelength Band	nm	1260-1650nm	
Insertion Loss (on the entire wavelength band)	dB [max]	7.4	10.5
Loss Uniformity (on the entire wavelength band)	dB [max]	0.7	1.0
PDL – Polarization Dependent Loss @1310 nm, 1550 nm and 1625 nm	dB [max]	0.2	0.3

Hardened connectors and adapters provide sealed environmental protection for the subscriber drop cable connector and the SC adapter mounted within the OptoBlaze optical port.

OptoBlaze coupling mechanism



OptoBolt coupling mechanism



Connecting OptoBolt Drop Cable to OptoBlaze Connectorised Block Terminal

1



Unscrew the dust cap from the OptoBolt drop cable connector.

2



Identify the right port to be connected. Use the 216B key tool (accessory) to unscrew the dust cap from the OptoBlaze optical port.

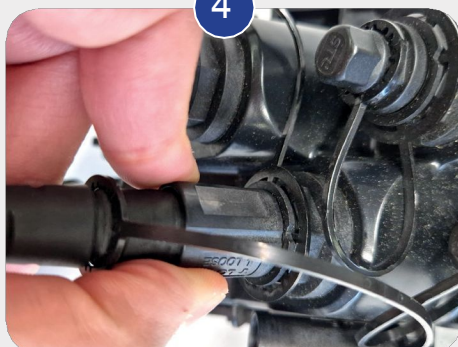
Align the drop cable connector with the optical port. **The pointer on the drop cable connector should line up with the notch on the optical port.**

3



Insert the drop cable connector into the optical port. If the drop cable connector does not insert all the way to the bottom of the port, rotate drop cable connector slightly to either side until it slides freely into place.

4



Thread the drop cable connector coupling nut into the optical port and tighten coupling nut until finger tight.

5



Thread the optical port dust cap into the drop cable dust cap and then tighten both dust caps finger tight. This ensures that both dust caps will stay clean when not in use.



Danger: Exposure to laser radiation can seriously damage the retina of the eye. Do not look into the ends of any optical fibre. Do not assume the laser power is turned-off or that the fibre is disconnected at the other end.

STL OptoBlaze

Series Name	Terminal Port	Inside End	Flat Tail Cable ³	Cable Length ⁴	Outside End	Standard Packaging	STL Cable Printing
OptoBlaze	Splitter Style 1x2 – 1x2 optical splitter 1x4 – 1x4 optical splitter 1x6 – 1x6 optical splitter 1x8 – 1x8 optical splitter 1x12 – 1x12 optical splitter	S-HFOC/APC Terminal	FT - All Dielectric flat Drop	XXXM (Meters)	S-HFOC/APC Terminal	1	STL
	Non-Splitter Style 2 - 2 Port 4 - 4 Port 6 - 6 Port 8 - 8 Port 12 - 12 Port	U-HFOC/UPC Terminal N-Blunt		XXXF (Feet)	U-HFOC/UPC Terminal N-Blunt		

STL OptoBlaze Accessories

Part Number	Product Description
FCFTTHS101S	Universal Mounting Bracket Kit

Note

2. Unbalanced splitter arrangements available upon request. Contact your sales representative for more information.

3. Refer the unitube flat drop OFC spec sheet for complete details

4. Our standard lengths are: 50-100-150-200-250-300-350m. Other lengths on request.

Packaging

4 Port and 8 Port Design

Product Length (Mtr)	Unit Carton Details				Pallet Details				Product / Palette or MOQ
	Length (mm)	Width (mm)	Height (mm)	No. of Stack	Length (mm)	Width (mm)	Total Pallet Height (mm)	Product / Unit Carton	
50	1000	600	150	7	1200	1000	1245	4	56
100	1000	600	150	7	1200	1000	1245	2	28
150	1000	600	150	7	1200	1000	1245	2	28
200	1000	600	150	7	1200	1000	1245	2	28
250	1000	600	150	7	1200	1000	1245	2	28
300	1000	600	180	6	1200	1000	1270	2	24
350	1000	600	180	6	1200	1000	1270	2	24

12 Port Design

Product Length (Mtr)	Unit Carton Details				Pallet Details				Product / Palette or MOQ
	Length (mm)	Width (mm)	Height (mm)	No. of Stack	Length (mm)	Width (mm)	Total Pallet Height (mm)	Product / Unit Carton	
50	1000	600	180	6	1200	1000	1270	4	48
100	1000	600	180	6	1200	1000	1270	2	24
150	1000	600	180	6	1200	1000	1270	2	24
200	1000	600	180	6	1200	1000	1270	2	24
250	1000	600	180	6	1200	1000	1270	2	24
300	1000	600	180	6	1200	1000	1270	2	24
350	1000	600	180	6	1200	1000	1270	2	24

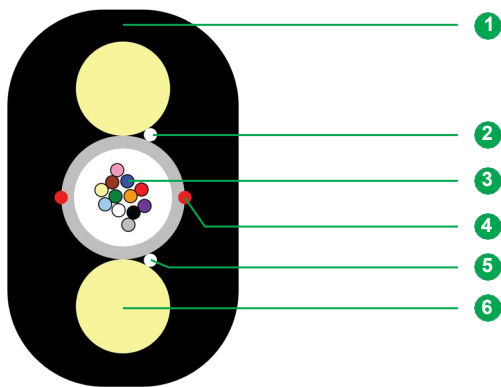
Packaging Reference



Drop-Lite

Unitube Flat Drop OFC

4F - 12F | G.657.A1 Single Mode Fibre



1 BLACK OUTER JACKET

2 WATER SWELLABLE YARNS

3 FIBRES WITH GEL

4 RIPCORDS

5 LOOSE TUBE

6 EMBEDDED STRENGTH MEMBER IN SHEATH

* Typical Construction Diagram - Not to Scale

Specifications

Product Information

Single Mode Optical Fibres	STL Fibre ITU.T - G.657.A1 (Enhanced)
Maximum Cabled Fibre Attenuation dB/Km	1310nm : 0.35; 1550nm : 0.21 & 1625nm : 0.24
Max Individual Fibre PMD	≤ 0.2 ps/ $\sqrt{\text{km}}$
PMDq	≤ 0.1 ps/ $\sqrt{\text{km}}$
Water Blocking Compound	Thixotropic jelly to prevent water ingress in loose tube
Tube	1 [Thermoplastic Material (PBTP)]
Tube Colour Sequence	White
Embedded Strength Member	2 (Fibre Reinforced Plastic(FRP) on either side of loose tube for tensile & anti buckling)
Water Blocking Elements	Water swellable yarns is added to prevent water ingress in the core of cable
Ripcord	2 (Twisted yarns)
Sheathing	UV Proof Black Polyethylene

Physical Parameters ⁵

Fibre Count	No. of loose tube	Loose tube Colour	Fibre Colour	Cable Height & Width (+/-0.5) mm	Cable Weight Kg/km	Reel Length km
4	1	Natural	Blue, Orange, Green, Red.	4.0 x 8.0	40 ± 10 %	2 km ± 5%
8	1	Natural	Blue, Orange, Green, Red, Grey, Yellow, Brown, Violet.	4.0 x 8.0	40 ± 10 %	2 km ± 5%
12	1	Natural	Blue, Orange, Green, Red, Grey, Yellow, Brown, Violet, Black, White, Pink, Aqua.	4.0 x 8.0	40 ± 10 %	2 km ± 5%

Note 5. The accuracy of marking shall be + 0.5%. Occasional loss of printing & remarking shall be as per Bellcore GR 20 and this supersedes the earlier markings.

Optical Fibre Cable Performance⁶

Cable Characteristics	Cable Performance
Max Tensile Strength	1000 N @ 0.4% Fibre strain
Minimum Bend Radius	12 D (where D = width of cable)
Crush Resistance	5000 N/100*100 mm (lateral portion)
Water Penetration	1m Head, 3m Samples, 24 hr.
Drip Test	30 cm, 60oC, 24 hr.
Temperature Performance	
Installation	-10°C to +85°C
Operation	-10°C to +85°C
Storage	-10°C to +85°C

Note6. Tests shall be carried out as per IEC Standards/Customer Specs.

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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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