OLC – PE
OTDR Launch Cable

Description:

If you are installing an outside plant network such as a longdistance network or a long campus LAN with splices between cables, you will want an OTDR to check if the fibers and splices are good. The OTDR can see the splice after it is made and confirm its performance. It can also find stress problems in the cables caused by improper handling during installation. If you are doing restoration after a cable cut, the OTDR will help find the location of cut and help confirm the quality of temporary and permanent splices to restore operation. On single mode fibers where connector reflections are a concern, the OTDR will pinpoint bad connectors easily.

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Since so little of the light comes back to the OTDR for analysis, the OTDR receiver circuit must be very sensitive. That means that big reflections, which may be one percent of the outgoing signal, will saturate the receiver, or overload it. Once saturated, the receiver requires some time to recover, and until it does, the trace is unreliable for measurement.

The most common place you see this as a problem is caused by the connector on the OTDR itself. The reflection causes an overload which can take the equivalent of 50 meters to one kilometer to recover fully, depending on the OTDR design, wavelength and magnitude of the reflection. It is usually called the "Dead Zone". For this reason, most OTDR manuals suggest using a "pulse suppresser" cable, which doesn't suppress pulses, but simply gives the OTDR time to recuperate before you start looking at the fiber in the cable plant you want to test. They should be called **"launch" cables**.

Do not ever use an OTDR without this launch cable! You always want to see the beginning of the cable plant and you cannot do it without a launch cable. It allows the OTDR to settle down properly and gives you a chance to see the condition of the initial connector on the cable plant. It should be long, at least 500 to 1000 meters to be safe, and the connectors on it should be the best possible to reduce reflections. They must also match the **connectors** being tested, if they use any special **polish techniques**.

General Features:

- Portable packaging – small, lightweight design
- The instrument's ergonomic design fits comfortably in hand for extended periods.
- The length of launch cable defined by the customer.
- Various types of optical connectors offer increased versatility and convenience.
- Optical connectors are dust and drop protected by a Snap-on cover.

Application:

- OTDR measurements
- Insertion loss testing
- Return loss testing
- Fault locations and fault clearance

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Technical parameters:

Parameter	unit	Note
Fiber length	m	200 – 5000 ± 50 m
Connectors Insertion loss	dB	following OPTOKON technical specification according connector type
Connectors Return loss	dB	following OPTOKON technical specification according connector type
Operating Temperature	°C	-20 to +70
Dimensions (W x H x D): OLC-PE	mm	270 x 246 x 124

Ordering code:

OLC-PE - AAA / AAA - XXX - XXXX

IN/OUT[1] interface:

Length[2] [m]

OLC-PE	OLC in Peli case

Fiber:	
OM1	MM 62.5/125 µm
OM2-5	MM 50/125 µm
S7X[3]	SM 9/125 µm (G.657X)
S2D	SM 9/125 µm (G.652D)
S5X[3]	SM 9/125 µm (G.655X)
S6X[3]	SM 9/125 µm (G.656X)

Note:
1) Connector type according relevant datasheet: CON_13-01_EN - ORD_CODE
2) MM fiber – at least 200 m, SM fiber – at least 1000 m
3) X – according fiber subtype (e.g. S7A1 for fiber G.657A1)

Example:

OLC-PE-UPC/NPC-S7A1-5000
OLC-PE-NE2A/NE2A-S7A1-5000

G.657A1 SM launch cable, cable connectors interface, 5000 m length:
UPC – ultra polished FC connector, IL = 0.15 dB, RL > 50 dB,
NPC – angle 8°polished FC connector, IL = 0.20 dB, RL > 60 dB
NE2A – angle 8°polished E2000 connector,

OLC-PE packaging:

OLC-PE-UPC/NPC-S2D-5000

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