

Required informations from the cable supplier:

- Manufacturing plant (Location(s) and capacity)
- Fibre (Type, Manufacturer, Supplier...)
- Traceability of the Production process
- Variations (different number of Fibres...)

Required Samples

Min. required cable length: 300m (in one piece)

Remark:

- For outdoor cables with large diameter, the test length can be reduced.

Entrance Test (Attenuation)

Verification of the Attenuation of all fibres without any stress (OTDR- Backscatter Test (IEC 60793-1-40)).

Change of temperature Test

IEC 60794-1-22: F1	Outdoor Cable	Universal Cable	Indoor Cable
Requirement	-40°C / +75°C 21 Cycles	-25°C / +70°C 12 Cycles	-10°C / +60°C 5 Cycles
Requirement	Temperature range According Cat. O (IEC 61300-2-22)	Temperature range According Cat. U (IEC 61300-2-22)	Temperature range According Cat. C (IEC 61300-2-22)

Requirements during change of temperature Test:

Limit	Singlemode	Multimode
max. deviation before/after Test:	0,05 dB	0,2 dB
max. deviation during Test:	0,2 dB/100m	0,5 dB/100m
<u>Remark:</u> The mode condition was according IEC 61280-4-1-Encircled Flux. Ensured by mode Controller.		

The temperature range is the minimum requirement, if needed or otherwise specified we can test according the Product specifications of the manufacturer.

During the change of temperature test, there is a continuous monitoring of attenuation (monitoring according to IEC 60793-1-46)

Crush Test (Short Term)

IEC 60794-1-21:E3	Outdoor Cable	Universal Cable	Indoor Cable
Level 1	8.000N/dm	5.000N/dm	1.500N/dm
Level 2	3.000N/dm	3.000N/dm	1.000N/dm
Level 3	2.000N/dm	1.500N/dm	500N/dm

Requirements for Crush Test:

Limit	Singlemode	Multimode
max. deviation before/after Test:	0,05 dB	0,2 dB
Remark: The mode condition was according IEC 61280-4-1-Encircled Flux. Ensured by mode Controller.		

- Test of 3 positions within the distance of 50cm.
- The Test will be proceed at 23±3°C.
- The parameter with the lowest reached Level performance specifies the Level of the DUT.

Tensile performance (Short Term)

IEC 60794-1-21:E1	Outdoor Cable		Universal Cable		Indoor Cable	
	Tensile force	Fiber-strain	Tensile force	Fiber-strain	Tensile force	Fiber-strain
Level 1	6.000N	0,33%	4.000N	0,33%	1.000N	0,33%
Level 2	2.500N	0,60%	2.500N	0,60%	500N	0,60%
Level 3	1.000N	0,60%	1.000N	0,60%	250N	0,60%

Requirements for Tensile performance:

Limit	Singlemode	Multimode
max. deviation before/after Test:	0,05 dB	0,2 dB
Remark: The mode condition was according IEC 61280-4-1-Encircled Flux. Ensured by mode Controller.		

- The Test will be proceed at 23±3°C.
- The parameter with the lowest reached Level performance specifies the Level of the DUT.

Remark:

Force application with caple grip.

Cable Bending

IEC 60794-1-21:E11A	Outdoor Cable	Universal Cable	Indoor Cable
Requirement (Level1-Level3)	6 windings x 10 Cycles 10 x ø		

Requirements for Cable Bending:

Limit	Singlemode	Multimode
max. deviation before/after Test:	0,05 dB	0,2 dB
Remark: The mode condition was according IEC 61280-4-1-Encircled Flux. Ensured by mode Controller.		

- The Test will be proceed at 23±3°C.