

# Technical specifications

## Managed Dark Fiber

Fiber type	
Netherlands - construction until 2010	Single Mode ITU-G.652.D
Netherlands - construction after 2010	Single Mode ITU-G.657.A1*
Route Amsterdam-Hamburg	Single Mode ITU-G.655.D

\* Fully compatible with the ITU-T G.652.D fibers

Attenuation per kilometer	ITU-G.652.D	ITU-G.655.D
Attenuation at 1310 nm Max.	0.35 dB/km	n.a.
Attenuation at 1550 nm Max.	0.25 dB/km	0.24 dB/km
Attenuation at 1625 nm Max.	0.28 dB/km	0.25 dB/km

Attenuation along the entire route	
$(L \times 0,25) + 1,0 + (n \times 0,1)$ in dB	

L = length in km

0.25 Attenuation in dB per kilometer at 1550 nm

1.0 = 2 x 0.5 dB = maximum attenuation at connector transition points

n x 0.1 = number of fusion splices in the route

OTDR measurements
After delivery of the connection, a bi-directional OTDR measurement at a wavelength of 1550 nm is performed as standard.

CD and PMD	ITU-G.652.D	ITU-G.655.D
Chromatic Dispersion (CD) at 1530 nm - 1565 nm (C-Band)	< 18 ps/(nm x km)*	2.6 – 6.0 ps/(nm x km)
Chromatic Dispersion (CD) at 1565 nm - 1625 nm (L-Band)	< 21 ps/(nm x km)**	4.0 – 8.9 ps/(nm x km)
Polarization Mode Dispersion (PMD) coefficient	< 0.2 ps/√km	< 0.1 ps/√km

\* at 1550 nm \*\* at 1625 nm

CD and PMD measurements
CD and PMD are always measured at delivery on connections longer than 40 km.

Connector type as demarcation point	
Standard with new construction	SC/APC 8°
Optional after agreement (location dependent)	SC/UPC
	LC/UPC
	LC/APC 8°
	E2000/APC 8°

Building connection	
Single connection	Single connection to building
Dual connection	2 fiber-optic cables, separated digging route
Dual flat connection	2 fiber-optic pairs that run partly through one casing

# Technical specifications

## Managed Dark Fiber

Configuration	
Point-to-Point	Single route between A and B location
Ring	Ring structure connecting multiple locations
Cascade	Chain structure connecting multiple locations

Laser power
Up to Class 3R

Device that switches off laser during interruption in the light circuit (ALS, APR, IPR)
Mandatory for all classes higher than 1M

Condition for high capacities
Class 3B (max 500 mW) after consultation
Higher power is not allowed

Continuity	
Availability of Point-to-Point configuration	99.9% per calendar year
Availability of Ring configuration	99.98% per calendar year*
Repair time for network interruption (line down)	Guaranteed < 8 hours

\* The total availability is partly determined by the customer equipment where the customer is responsible for the redundant configuration of the hardware.

## Eurofiber Nederland

Safariweg 25-31, 3605 MA Maarssen

+31 (0)30 242 87 00

info@eurofiber.com