

## Außenkabel A-DQ Outdoor cable A-DQ

A-DQ (ZN) B2Y **XXE09**

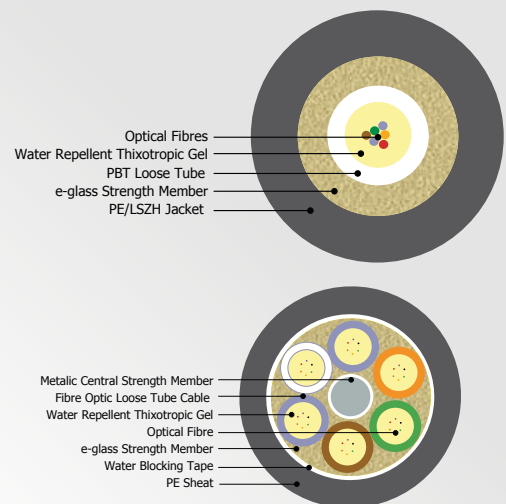


**Lightwin®**  
European Fibre Optic Solutions

### Beschreibung / Description

- Bündeladerkabel mit Gelfüllung
- Geeignet für direkte Erdverlegung
- inkl. nichtmetallischem Nagetierschutz, UV-stabil
- PE Mantel
- Mögliche Faseranzahlen:  
Einröhrchenkabel (Single Loose Tube) für: 4 (04), 8 (08), 12 (12)  
Mehrröhrchenkabel (Multi Loose Tube) für: 24 (24), 48 (48), 96 (96), 144 (144)

- Suitable for direct burial and indoor installation
- Rodent resistant (non-metallic), water blocking
- Halogen free, non metallic
- UV-resistant
- LSZH
- Possible number of fibres:  
Single Loose Tube for: 4 (04), 8 (08), 12 (12)  
Multi Loose Tube for: 24 (24), 48 (48), 96 (96), 144 (144)



**Lightwin®**  
European Fibre Optic Solutions

SM E 09/125µm

Artikelnummer / Part number

A-DQ (ZN) B2Y **XXE09**



MM G 50/125µm	MM G 50/125µm OM3	MM G 62,5/125µm	SM E 09/125µm
Artikelnummer / Part number	Artikelnummer / Part number	Artikelnummer / Part number	Artikelnummer / Part number
A-DQ (ZN) B2Y <b>XXG50</b>	A-DQ (ZN) B2Y <b>XXG50 OM3</b>	A-DQ (ZN) B2Y <b>XXG62</b>	A-DQ (ZN) B2Y <b>XXE09</b>

## Enhanced Single-Mode Optical Fiber (ESMF)

Improved performance across the entire 1260 nm to 1625 nm wavelength spectrum

Product Type: G.652.D

Coating Type: ColorLock-XS and Natural

### Optical Specifications

Attenuation	
Attenuation at 1310 nm	0.33 – 0.35 dB/km
Attenuation at 1383 nm*	0.32 – 0.35 dB/km
Attenuation at 1460 nm	0.25 dB/km
Attenuation at 1550 nm	0.19 – 0.21 dB/km
Attenuation at 1625 nm	0.20 – 0.23 dB/km

\* Including H2-aging according to IEC 60793-2-50, type B.1.3

Other values available on request

### Attenuation vs. Wavelength

Maximum attenuation change over the window from reference

Wavelength range (nm)	Reference $\lambda$ (nm)	(dB/km)
1285 – 1330	1310	$\leq 0.03$
1525 – 1575	1550	$\leq 0.02$
1460 – 1625	1550	$\leq 0.04$

### Point discontinuities

No point discontinuity greater than 0.05 dB at 1310 nm and 1550 nm.

### Attenuation with Bending

Number of Turns	Mandrel Radius (mm)	Wavelength (nm)	Induced Attenuation (dB)
100	25	1310	$\leq 0.05$
100	25	1550	$\leq 0.05$
100	30	1625	$\leq 0.05$

### Cutoff Wavelength

Cable Cutoff wavelength (Ac <sub>cf</sub> )	$\leq 1260$ nm
---	----------------

### Mode Field Diameter

Wavelength (nm)	MFD ( $\mu$ m)
1310	9.0 $\pm$ 0.4
1550	10.1 $\pm$ 0.5

### Chromatic Dispersion

Wavelength (nm)	Chromatic Dispersion (ps/[nm.km])
1285 – 1330	$\leq  3 $
1550	$\leq 18.0$
1625	$\leq 22.0$

Zero Dispersion Wavelength ( $\lambda_0$ ):	1300 - 1322 nm
Slope ( $S_0$ ) at $\lambda_0$ :	$\leq 0.090$ ps/(nm <sup>2</sup> .km)

### Polarization Mode Dispersion (PMD)

PMD Link Design Value** (ps $\sqrt$ km)	$\leq 0.06$
Max. Individual Fiber (ps $\sqrt$ km)	$\leq 0.1$

\*\* According to IEC 60794 –3, Ed 3 (Q=0.01%)

### Geometrical Specifications

#### Glass Geometry

Cladding Diameter	125.0 $\pm$ 0.7 $\mu$ m
Core/Cladding Concentricity Error	$\leq 0.5$ $\mu$ m
Cladding Non-Circularity	$\leq 0.7$ %
Fiber Curl (Radius)	$\geq 4$ m

#### Coating Geometry

Coating Diameter	242 $\pm$ 7 $\mu$ m
Coating/Cladding Concentricity Error	$\leq 12$ $\mu$ m
Coating Non-Circularity	$\leq 5$ %
Length	Standard lengths up to 50.4 km

### Mechanical Specifications

#### Proof Test

The entire length is subjected to a tensile proof stress  $\geq 0.7$  GPa (100 kpsi); 1% strain equivalent

#### Tensile Strength

Dynamic tensile strength (0.5 meter gauge length):

Aged\*\*\* and unaged: median  $> 3.8$  GPa (550 kpsi)

\*\*\* Aging at 85°C, 85% RH, 30 days

#### Dynamic and Static Fatigue

Dynamic fatigue, unaged and aged\*\*\*  $n_d \geq 20$

Static fatigue, aged\*\*\*  $n_s \geq 23$

#### Coating Performance

Coating strip force unaged and aged\*\*\*\*:

- Average strip force: 1 N to 3 N

- Peak strip force: 1.2 N to 8.9 N

\*\*\*\* Aging:

- 0°C and 45°C
- 30 days at 85°C and 85% RH
- 14 days water immersion at 23°C
- Wasp spray exposure (Telcordia)

### Environmental Specifications

#### Attenuation

Environmental Test	Test Conditions	Induced Attenuation at 1310, 1550 nm (dB/km)
Temperature cycling	- 60°C to 85°C	$\leq 0.05$
Temperature-Humidity cycling	- 10°C to 85°C, 4-98% RH	$\leq 0.05$
Water Immersion	14 days; 23°C	$\leq 0.05$
Dry Heat	30 days; 85°C	$\leq 0.05$
Damp Heat	30 days; 85°C; 85% RH	$\leq 0.05$

### Typical Values

#### Miscellaneous

Nominal Zero Dispersion Slope	0.085 ps/(nm <sup>2</sup> .km)
Effective group index @ 1310 nm	1.467
Effective group index @ 1550 nm	1.468
Effective group index @ 1625 nm	1.468
Rayleigh Backscatter Coefficient for 1 ns pulse width:	
@ 1310 nm	- 79.4 dB
@ 1550 nm	- 81.7 dB
@ 1625 nm	- 82.5 dB
Median Dynamic Tensile Strength	5.3 GPa (750 kpsi)
(Aged at 85°C, 85% RH, 30 days; 0.5 m gauge length)	