

Data sheet**OpDAT connection cable 2x1 OM3 - bend insensitive**

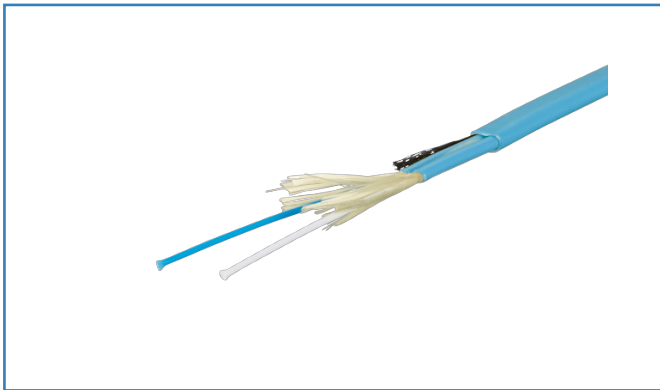
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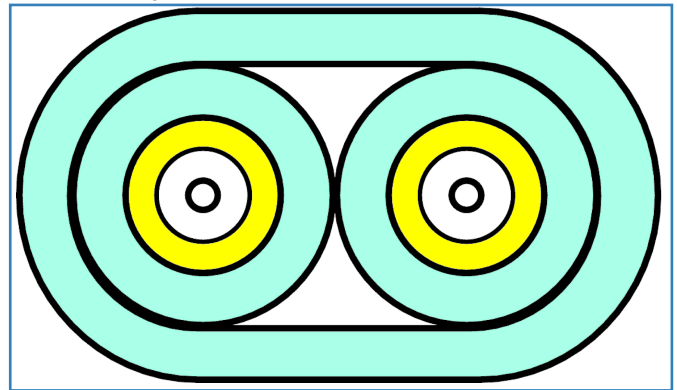
150J2000M

EAN 4251122186165

2018-13-03

Illustrations

Principle diagram



See enlarged drawings at the end of document

Product specification

- connection cable for direct connector termination with higher robustness
- cable structure: I-V(ZN)HH2, duplex patch cable with additional outer jacket („figure 0“)
- laser optimized fiber (not for OM2)
- bend insensitive fiber
- cable jacket: LSHF-FR
- strain relief: aramid
- applicable standards: EN 50173-1, ISO 11801 2nd edition, IEC 60794-2, IEC 60794-2-10, EN 187000

variants:

OS2, OM5, OM4, OM3, OM2



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Technical Data

General Data

Fields of application

Structured building cabling, Office
Data center

Design

Patch cords

Transmission technology

Fiber optic

Color

aqua

Color coding fiber/ wire(s)

see table

Mode type of the fiber

Multimode

Fiber class

OM3 (ISO/IEC 11801/EN 50173 & IEC 60793-2-10/EN 60793-2-10 A1.a.2)

Cable Type

Connection cable

Number of cables/ cores

2

Number of fibres each cable/ wire

1

Fiber construction

50/125 µm

Weight

18.00 kg/km

Connections/interfaces

Cable sheath diameter (min. - max.)

Cable sheath diameter

3.0 x 5.0 mm

Cable sheath diameter

0.118 x 0.197 in.

Optical characteristics

Attenuation of the fiber

Attenuation of the fiber in the cable at 850 nm

3.0 dB/km

Attenuation of the fiber in the cable at 1300 nm

1.0 dB/km

Mechanical characteristics

strain relief

aramide fibres

Maximum installation load (max.)

240 N

Maximum installation load

15.00 mm

Maximum installation load

0.591 in.

Crush (compressive strength)

1000 N

Fire load

315 MJ/km



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Technical Data

Materials and material properties

Material - Cable jacket	LSHF-FR
Bend insensitivity	yes
Flame retardancy	yes
Halogen free	yes
Laser-optimized	yes

Environmental conditions

Temperature (min. - max.)	
Temperature - Storage °C	-40 - 70 °C
Temperature - Storage °F	-40 - 158 °F
Temperature - Operating °C	-40 - 70 °C
Temperature - Operating °F	-40 - 158 °F
Temperature - Installation °C	-40 - 70 °C
Temperature - Installation °F	-40 - 158 °F

Approvals

RoHS	compliant
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The product meets the following standards

Generic cabling systems	
General requirements	ISO/IEC 11801
Optical fibers: Product specifications	
Sectional specification for category A1 multimode fibres	ISO/IEC 60793-2-10 (A1a.2)
Optical fibers: Sectional specification	
Indoor cables	ISO/IEC 60794-2
Optical fibers: Indoor optical cables	
Family specification for simplex and duplex cables	ISO/IEC 60794-2-10
Test on gases evolved during combustion of materials from cables	
Determination of acidity (by measuring the pH value) and conductivity	IEC 60754-2
Tests on electric and optical fibre cables under fire conditions	
Test for vertical flame propagation for a single insulated wire or cable	IEC 60332-1
Test for vertical flame spread of vertically-mounted bunched wires or cables	ISO/IEC 60332-3-24
Measurement of smoke density of cables burning	ISO/IEC 61034

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Technical Data

The product meets the following standards

ITU-T standard	G.651.1
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Packing details

Type of packaging	meter
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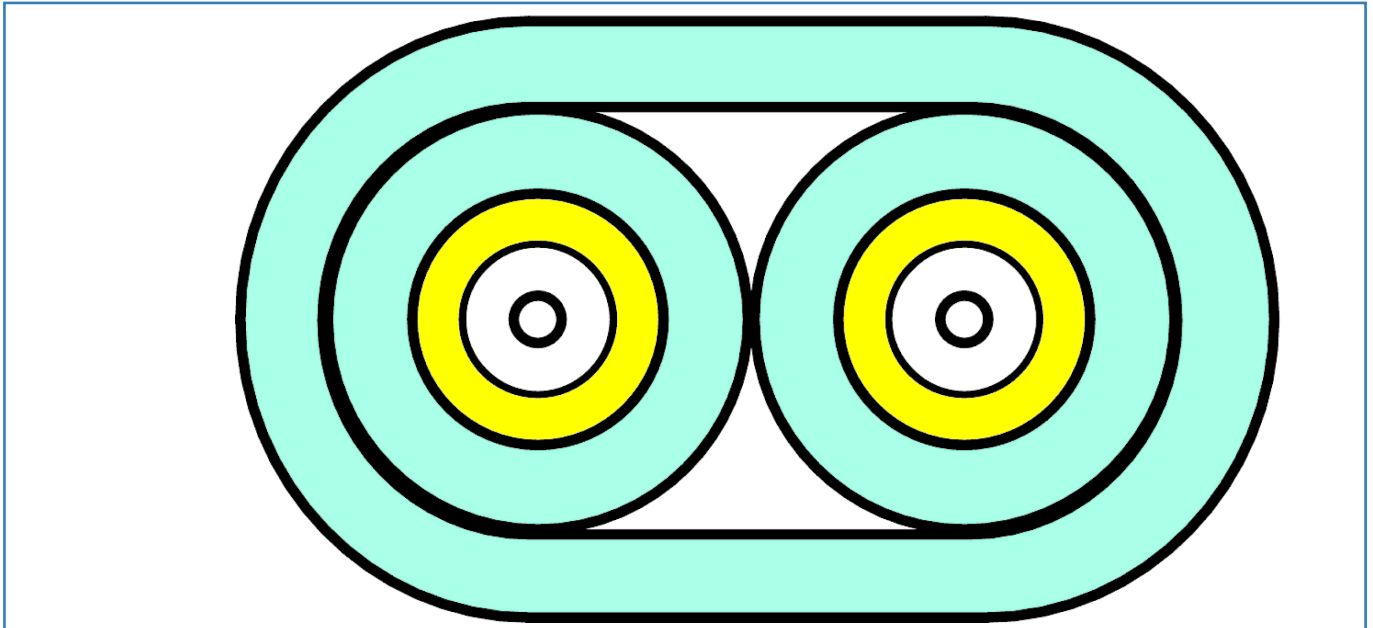
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Illustrations

Principle diagram



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Fiber color coding

Fiber color code		
	1	natural
	2	blue



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Technical Data

General Data

Transmission technology	Fiber optic
Mode type of the fiber	Multimode
Fiber class	OM3 (ISO/IEC 11801/EN 50173 & IEC 60793-2-10/EN 60793-2-10 A1.a.2)
Fiber construction	50/125 µm

Transmission characteristics

Transmission rate up to 10 GBit (Gigabit-Ethernet)	IEEE 802.3an
Transmission rate up to 100 GBit	IEEE 802.3ba
Reach	
Reach 1000BASE SX	1000 m
Reichweite 10GBASE SR	300 m
Reach 40GBASE SR4	140 m
Reichweite 100GBASE SR4	70 m
Reichweite 100GBASE SR10	140 m
Overfilled (OFL) modal bandwidth at 850 nm (min.)	1500 MHz * km
Overfilled (OFL) modal bandwidth at 1300 nm (min.)	500 MHz * km
Effective modal bandwidth (EMB) at 850 nm (min.)	2000 MHz * km

Connections/interfaces

Connector technology interface 1	Free line end
Connector technology interface 2	Free line end
Fiber core diameter	50 ± 2.5 µm
Core-/ Fiber cladding diameter	125.0 ± 1.0 µm
Primary coating diameter - colored	250 ± 15 µm
Primary coating diameter - uncolored	242 ± 7 µm

Optical characteristics

Attenuation of the fiber	
Attenuation of the fiber in the cable at 850 nm	max. 2.5 dB/km
Attenuation of the fiber in the cable at 1300 nm	max. 0.7 dB/km
Maximum value of cable attenuation at 850 nm	3.0 dB/km
Maximum value of cable attenuation at 1300 nm	1.0 dB/km



Technical Data

Mechanical characteristics

Proof stress level	min. 0.7 (~ 1 %) GPa
Typische durchschnittliche Abziehkraft	min. 1.0 max. 3.0 N
Strip force (peak)	min. 1.3 max. 8.9 N
Biegeverlust	
Dornradius = 7.5 mm, 2 Umdrehungen bei 850/1300 nm	min. 0.2 - max 0.5 dB
Dornradius = 15 mm, 2 Umdrehungen bei 850/1300 nm	min. 0.1 - max 0.3 dB
Fiber cladding non-circularity	max. 0.7 %
Core non-circularity	max. 5 %
Core (MDF)-cladding concentricity error	max. 1 µm
Primary coating concentricity error	max. 5 %
Primary coating-cladding concentricity error	max. 6
Inhomogeneity of OTDR measurement report at 1310 nm und 1550 nm	max. 0.1 dB/km
Group refractive index	
Gruppen-Brechungsindex bei 850 nm	1.482
Gruppen-Brechungsindex bei 1300 nm	1.477
Numerical aperture	0.200 ± 0.015

Materials and material properties

Bend insensitivity	yes
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The product meets the following standards

Generic cabling systems	
General requirements	ISO/IEC 11801 cat. OM3 TIA/EIA 568-C
Data centers	ISO/IEC 24764
Optical fibers: Measuring methods and test procedures	
Fibre geometry	ISO/IEC 60793-1-20
Coating geometry	ISO/IEC 60793-1-21
Length measurement	ISO/IEC 60793-1-22
Fibre proof test	ISO/IEC 60793-1-30
Coating strippability	ISO/IEC 60793-1-32
Attenuation	ISO/IEC 60793-1-40
Bandbreite	ISO/IEC 60793-1-41
Numerical aperture	ISO/IEC 60793-1-43
Gruppenlaufzeitdifferenz	ISO/IEC 60793-1-49

Technical Data

The product meets the following standards

Optical fibers: Product specifications

Sectional specification for category A1 multimode fibres	ISO/IEC 60793-2-10 (A1a.2)
ITU-T standard	G.651.1
TIA/ANSI-492	AAAC

