Data sheet

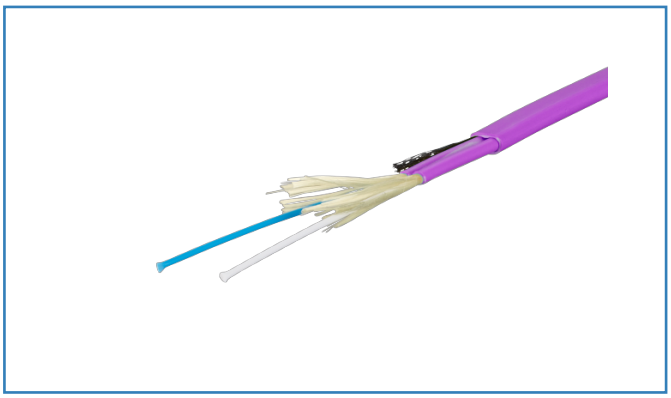
OpDAT connection cable 2x1 OM4 - bend insensitive

P/N 150S2000M

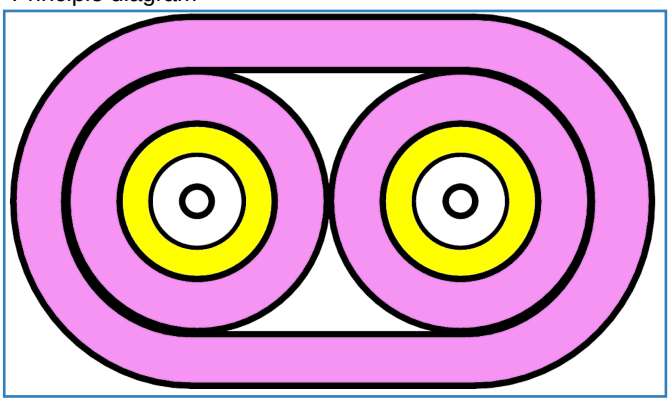
EAN 4251122186172

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	heather violet
Color coding fiber/ wire(s)	see table
Fiber class	OM4 (ISO/IEC 11801/EN 50173 & IEC 60793-2-10/EN 60793-2-10 A1.a.3)
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 1625 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
Torsion resistance	5 cycles ± 1 revolution
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

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.3)
Optical fibers: Generic specification	
Cross reference table for optical cable test procedures	ISO/IEC 60794-1-2
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
ITU-T standard	G.651.1

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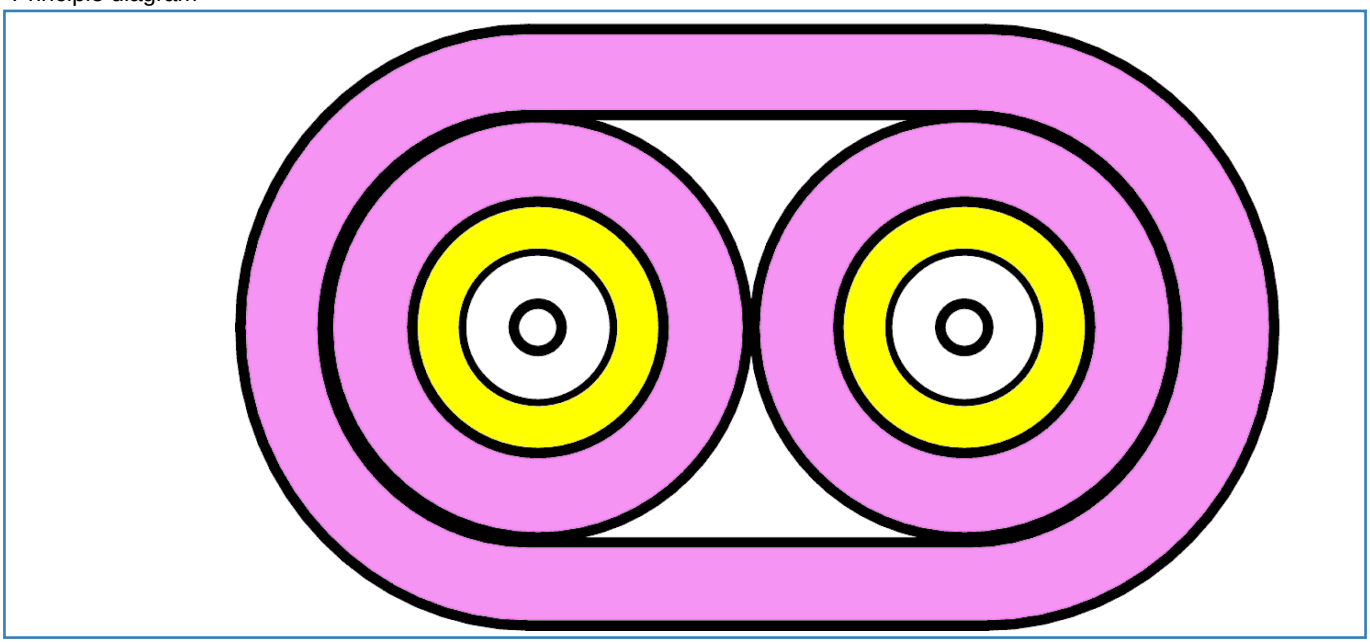

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Fiber color coding

Fiber color code		
	1	natural
	2	blue

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OpDAT fiber OM4 BR

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Technical Data

General Data	
Transmission technology	Fiber optic
Mode type of the fiber	Multimode
Fiber class	OM4 (ISO/IEC 11801/EN 50173 & IEC 60793-2-10/EN 60793-2-10 A1.a.3)
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	1100 m
Reichweite 10GBASE SR	550 m
Reach 40GBASE SR4	190 m
Reichweite 100GBASE SR4	100 m
Reichweite 100GBASE SR10	190 m
Overfilled (OFL) modal bandwidth at 850 nm (min.)	3500 MHz * km
Overfilled (OFL) modal bandwidth at 1300 nm (min.)	500 MHz * km
Effective modal bandwidth (EMB) at 850 nm (min.)	4700 MHz * km

Connections/interfaces	
Connector technology interface 1	Free line end
Connector technology interface 2	Free line end
Fiber core diameter	50 ± 2 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

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OpDAT fiber OM4 BR

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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. 10
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
Approvals	
RoHS	compliant
The product meets the following standards	
Generic cabling systems	
General requirements	ISO/IEC 11801 cat. OM4 | 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

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OpDAT fiber OM4 BR

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Technical Data

The product meets the following standards	
Optical fibers: Measuring methods and test procedures	
Bandbreite	ISO/IEC 60793-1-41
Numerical aperture	ISO/IEC 60793-1-43
Gruppenlaufzeitdifferenz	ISO/IEC 60793-1-49
Optical fibers: Product specifications	
Sectional specification for category A1 multimode fibres	ISO/IEC 60793-2-10 (A1a.3)
ITU-T standard	G.651.1
TIA/ANSI-492	AAAD