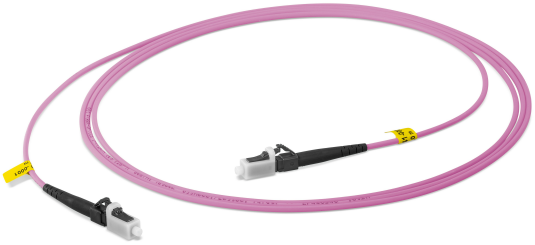
Rosenberger

PRODUCTPROFILE

Catalogue number: 087A0102OM4

Partnumber: 771838

Fiber optic simplex patchcord
Connector side A: LC-Simplex
Connector side B: LC-Simplex
50/125µmOM4, Zipcord 2x2.1mm, violet
Cable I-V(ZN)H2x2,1G50/125µm,OM4



Related documents:

DS_FASER OM4BI_OE	Fiber Data Sheet
DS_I-VZNH2X21_900_L_OE	Cable Data Sheet
DS_LC_SIMPLEXDUPLEX_STECKER_OI	Steckerdatenblatt

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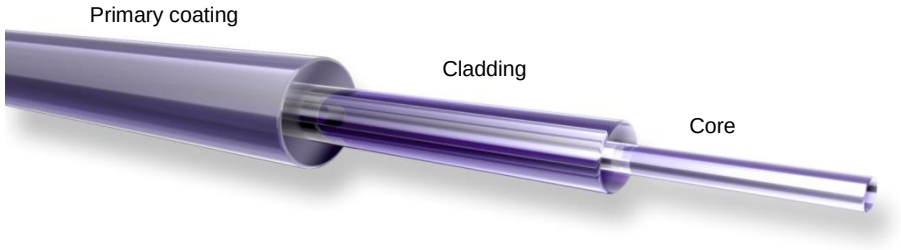
Technical Data Sheet	Rosenberger
Optical fiber OM4 bend insensitive	059A0381OM4BI



Standards

Graded index fiber 50/125µm according to
-ISO/IEC 11801 und EN 50173-1 OM4
-IEC 60793-2-10 type A1a.3
-ITU G.651.1
-TIA/EIA 492AAAD

Structure

Silica fiber with two layer acrylate primary coating

Geometrical properties

Core diameter	**50 µm +/- 2.5 µm**
Cladding diameter	**125 µm +/- 1 µm**
Core non-concentricity	**< 5 %**
Cladding non-circularity	**< 1 %**
Core-Cladding concentricity	**< 1.5 µm**
Primary coating diameter	**242 µm +/- 5 µm**
Coating-Cladding concentricity	**< 12 µm**

Mechanical properties

Break strength SCREEN-Test 1 % strain for 1 s @100 kpsi

Thermal properties

Operating temperature range -60 to +85°C

Transmission characteristics

Attenuation:
@ 850 nm max. 2.3 dB/km
@ 1300 nm max. 0.6 dB/km

Macrobending, induced attenuation:
100 turns, 37.5 mm </= 0.05 dB @ 850 nm
100 turns, 37.5 mm </= 0.15 dB @ 1300 nm
2 turns, 15 mm </= 0.1 dB @ 850 nm
2 turns, 15 mm </= 0.3 dB @ 1300 nm
2 turns, 7.5 mm </= 0.2 dB @ 850 nm
2 turns, 7.5 mm </= 0.5 dB @ 1300 nm

Bandwidth (Overfilled launch):
@ 850 nm min. 3500 MHz x km
@ 1300 nm min. 500 MHz x km

Effective modal Bandwidth-length-product (EMB):
@ 850 nm min. 4700 MHz x km

Numerical aperture: 0.200 +/- 0.015

Effective group index of refraction:
@ 850 nm 1.480
@ 1300 nm 1.479

Backscatter attenuation @ 1ns pulse width:
@ 850 nm -68 dB
@ 1300 nm -76 dB

Maximum possible transmission channels lengths:

Ethernet:

1 GBE 1000BASE-SX:	**min. 1100 m @ max. 3.56 dB channel attenuation [1)]**
10 GBE 10GBASE-SR:	**min. 550 m @ max. 2.60 dB channel attenuation [1)]**
40 GBE 40GBASE-SR4:	**min. 170 m @ max. 1.50 dB channel attenuation [1)]**
100 GBE 100GBASE-SR10:	**min. 170 m @ max. 1.50 dB channel attenuation [1)]**

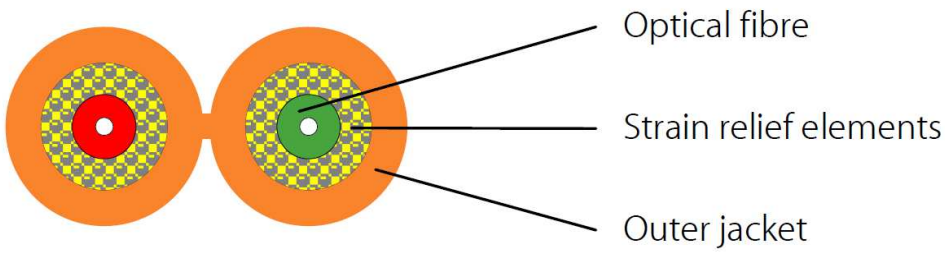
Fibre Channel:

8 GFC (800-SN):	**min. 245 m @ max. 1.76 dB channel attenuation [1)]**
16 GFC (1600-SN):	**min. 165 m @ max. 1.51 dB channel attenuation [1)]**

[1)] Inclusive max. 1.0 dB for connections (connectors and splices)

Draft	Date	Approved	Date	Rev.	Engineering change number	Name	Date
H. Jungbäck	26-10-15	P. Maier	26-10-15	004	without	H. Jungbäck	26-10-15

Technical Data Sheet	Rosenberger
Fiber Optic Cable I-V(ZN)H 2x 2.1mm… 900µm	033AXXXX



Standards

IEC 60794-2

Structure

Cable core:
buffered optical fiber, outer diameter 0.9 mm
colour: red, other core yellow (E9/125), green (G50/125), blue (G62.5/125)
Strain relief elements (aramid)

Outer jacket:
Halogen-free and flame-retardant material (FRNC)
Standard colours:

Singlemode:	**yellow**
Multimode 50 µm:	**orange or green**
Multimode OM3:	**aqua (turquoise)**
Multimode 62.5 µm:	**orange**
Multimode OM4:	**violet**

Wall thickness 0.3 mm
Inkjet marking black acc. to separate drawing

Geometrical properties

Number of fibers	Outer diameter [mm]	Weight [kg/km]	Fire load [MJ/m]
2	2.1 x 4.3	10.2	0.24

Mechanical properties

Min. bending radius (over the flat side) only for bending resistant fibers	
static	**10mm**
dynamic	**30mm**
Min. bending radius (over the flat side) for cables with standard fibers	
static	**30mm**
dynamic	**60mm**
Max. pull force	**400 N**
Max. crush resistance long term	**400 N/dm**

Thermal properties

Transport and storage	**- 25°C to + 70°C**
Installation	**- 5°C to + 50°C**
In use	**- 5°C to + 70°C**

Chemical properties

No resistance to oil, petrol, acid, leach and water

Fire performance

-Flame-retardant acc. to IEC 60332-1-2 and IEC 60332-3-22 Cat. A
-Smoke density acc. to IEC 61034
-Halogen-free acc. to IEC 60754-1
-Acidity of the combustion gases acc. to IEC 60754-2

Transmission characteristics

See fiber data sheets

Applications

Indoor cable for the installation in cable ducts and in tubes and also suitable for interconnections
For direct connector assembly

Deliveryform

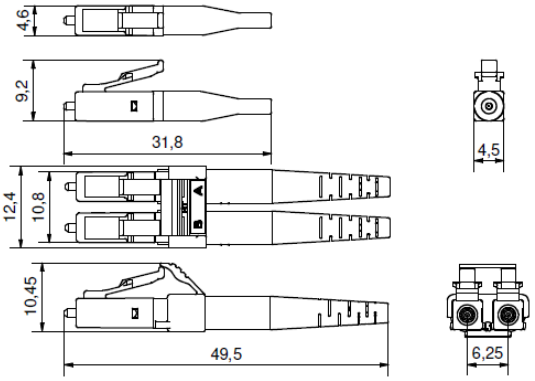
Disposable drums

Draft	Date	Approved	Date	Rev.	Engineering change number	Name	Date
P. Maier	02.02.2016	H. Jungbäck	02.02.2016	001	without	Y. Zhang	22.06.2017

Technical Data Sheet

Rosenberger

LC-Simplex/Duplex connector



Properties and applications

- LC-Simplex/Duplex connectors for fiber optic cabling in broadband networks (telecom, MAN, WAN, CATV, GPON, FTTA, FTTx), building cabling (LAN, campus), data center, industry, laboratory and medical technology
- for cables with single core elements 600/900µm (e.g. buffered fiber for pigtails, breakout, mini breakout, figure "0" and figure "8" cables)
- A/B polarity of duplex connectors easily changeable without tools
- Translucence protection cap, fast and secure to handle and permeable for the light of laser pointers (visual fault locators)

Standards

LC-Simplex/Duplex connector according to IEC/DINEN 61754-20 and EIA/TIA 604-10

Material

- Ferrule:	Zirconia ceramic, Ø 1.25 mm
- Body:	PEI, flammability UL94-V0
- Boot:	TPE, flammability UL94-V0
- Protection cap	POM, flammability UL94-HB

Optical properties

GHMT PVP certificate
No.: c5711X-XX
No.: c5937X-XX

The quality feature of the connector at your product is identified by the part number:
- BASIC: Part numbers like XXXAXXXX
- PURE: Part numbers with “P“ at their end, XXXAXXXXP

Details about PURE see Produktinfo_Qualitätsmerkmal-PURE_od

Insertion Loss IL acc. to IEC61300-3-4, Method B, against reference, maximum [dB]:

Quality feature	BASIC	PURE
- Singlemode SM, 9/125µm	0,30	0,20
- Multimode low IL OM2, OM3, OM4, OM5, 50/125µm	0,15	0,15

Insertion Loss IL „random mated“ acc. to IEC61300-3-34, Method 2, [dB:

Qualitätsmerkmal BASIC	Mittelwert	Maximum
- Singlemode SM, 9/125µm	0,13	0,50
- Multimode low IL OM2, OM3, OM4, OM5, 50/125µm	0,03	0,27

Insertion Loss IL quality feature PURE “random mated” application limit value, maximum [dB]:

- Singlemode SM, 9/125µm	97%	0,25
- Multimode low IL OM2, OM3, OM4, OM5, 50/125µm	100%	0,40

Optical properties

Return Loss RL acc. to IEC61300-3-6, Method 1, against reference, minimum [dB]:

Quality feature	BASIC	PURE
- Singlemode SM, 9/125µm, PC 0°	45	45
- Singlemode SM, 9/125µm, UPC 0°	55	55
- Singlemode SM, 9/125µm, APC 8°	65	70
- Multimode all 50µ OM classes	35	40

Mechanical properties

- Mating cycles	min. 1000, IL increase < 0.2 dB
- Strain relief	max. 100 N, dependent on cable type

Thermal properties

- Operation temperature range	-40°C to +85°C, dependent on cable type
- Storage temperature range	-40°C to +85°C

Cable diameters

Round cable types	Ø 0,9 bis 3.0 mm
Hotmelt Duplex	Ø 4,8 ~ 7.0mm

Colors

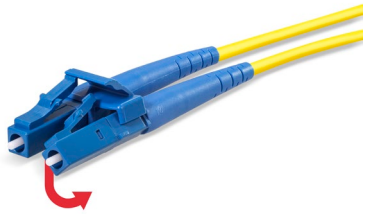
Connector body / boot:

- Singlemode SM, 9/125µm, PC and UPC 0°	blue / blue
- Singlemode SM, 9/125µm, APC 8°	green / green
- Multimode OM2, OM3, OM4, OM5, 50/125µm	black / black

Polarity change

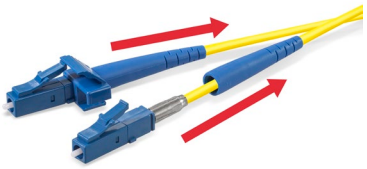
Step 1: Remove duplex clip

- When changing polarity, the release levers should be facing up as shown in the picture.
- Remove one of two simplex connectors from the duplex clip by pressing down and out, supported by a slight tilt movement.
- Then release the second simplex connector from the duplex clip in a similar manner.



Step 2: Reattach duplex clip

- Push back the boot of both simplex connectors
- Reattach the duplex clip over the simplex connectors that have been changed in position and insert the simplex connectors (a click is noticeable).



Step 3: Final assembly duplex connector

- Slide the boot of both simplex connectors to their original position.

Draft	Date	Approved	Date
S. Wiener	16.03.2021	H. Jungbäck	2021-03-16

Rev.	Engineering change number	Name	Date
003		H. Jungbäck	2022-10-07