

PRODUCTPROFILE

Catalogue number: 092A0008OM4

Partnumber: 776538

Fiber optic duplex patchcord
Connector side A: MDC Senior MM
Connector side B: LC-COMPACT Push Pull Boot
MM
50/125µmOM4, 2.0mm, violet
Polarity: crossed A to B
Cable I-V(ZN)H2G50/125µm,OM4



Related documents:

| | |
|-------------------------------|-------------------|
| DS_FASER OM4BI_OE | Fiber Data Sheet |
| DS_I-VZNH20_2X600_L_OE | Cable Data Sheet |
| DS_LC_COMPACT_PPBNB_STECKER_C | Steckerdatenblatt |
| DS_MDC_SENIOR_STECKER_OE | Steckerdatenblatt |



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

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Optical fiber OM4
bend insensitive

059A0381OM4BI

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 \leq 0.05 dB @ 850 nm
100 turns, 37.5 mm \leq 0.15 dB @ 1300 nm
2 turns, 15 mm \leq 0.1 dB @ 850 nm
2 turns, 15 mm \leq 0.3 dB @ 1300 nm
2 turns, 7.5 mm \leq 0.2 dB @ 850 nm
2 turns, 7.5 mm \leq 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 100GBASE-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⁾

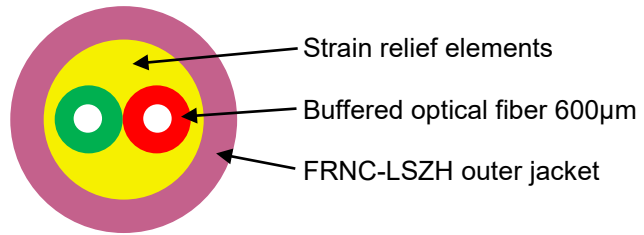
¹⁾ Inclusive max. 1.0 dB for connections (connectors and splices)

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| | | | | | | | |
|-------------|----------|----------|----------|------|---------------------------|-------------|----------|
| 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 |

Fiber Optic Cable
I-V(ZN)H 2.0mm 2x600

032AXXXX



Standards

-IEC 60794-2

Structure

Cable:

- 2 buffered optical fibers 600µm within the cable jacket filled with Aramid strain relief elements
- Buffered fiber color code: One buffered fiber red, the other buffered fiber at singlemode yellow, at 50µm multimode green

Outer jacket:

- FRNC-LSZH flame-retardant and halogen-free material
- Standard jacket colors:
 - Singlemode: yellow
 - Multimode OM2: orange or green
 - Multimode OM3: aqua (turquoise)
 - Multimode OM4: violet
 - Multimode OM5: fibrous green
- 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 | 2.0 | 4 | 0.11 |

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Mechanical properties

- Min. bending radius fixed (static):
 - with G.657.A1 bend-insensitive singlemode fiber 10 mm
 - with bend-insensitive OM3 and OM4 fiber 7.5 mm
- Min. bending radius during installation (dynamic):
 - with G.657.A1 bend-insensitive singlemode fiber 30 mm
 - with bend-insensitive OM3 and OM4 fiber 25 mm
- Max. tensile force short term = 300 N
- Max. crush resistance long term = 150 N/dm
- Kink resistance: Equivalent loop diameter = 8.4 mm

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
- 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 particularly appropriate for short LC-Compact and MU-Compact Patchcords

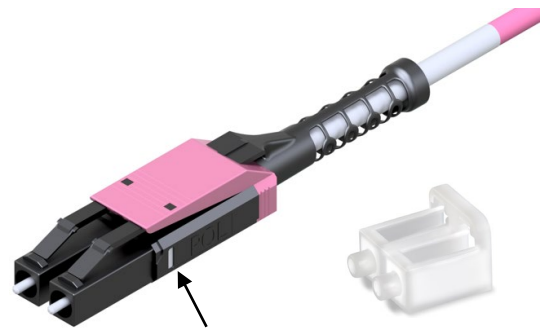
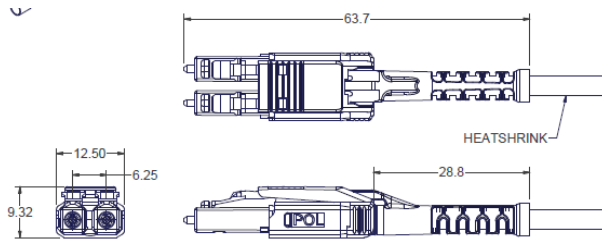
Deliveryform

- On one-way drums

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| H. Jungbäck | 2016-02-02 | P. Maier | 2016-02-02 | 003 | without | H. Jungbäck | 2021-08-25 |

LC-COMPACT Push-Pull-Boot Connector Next Generation



Delivery status of polarity window POL:
 - at this connector side (B) = white
 - at the opposite connector side (A) = black

Properties and applications

- LC-Duplex Push-Pull connector with compact and rugged backshell with central strain relief and push-pull-boot, with which the connector can be plugged and un-plugged
- A/B polarity easy and secure, toolless changeable
- For HIGH-DENSITY (HD) and ULTRA-HIGH-DENSITY (UHD) applications required
- Translucence duplex protection cap, fast and secure to handle and permeable for the light of laser pointers (visual fault locators)

Standards

LC-Duplex acc. to IEC/DINEN 61754-20 and EIA/TIA 604-10

Material

- Ferrule: Zirconia ceramic, Ø 1.25 mm
- Body: PA, PBT and PTFE, flammability UL94-V0
- Push-Pull-Boot: PP, flammability UL94-V0
- Protection cap: TPE, flammability UL94-HB

Optical properties

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 OM1, 62.5/125µm | | 0.30 | --- |
| - 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]:

| Quality feature | BASIC | mean value | 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 |

GHMT PVP certificate
 No.: c6997X-XX
 No.: c6998X-XX



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LC-COMPACT Push-Pull-Boot Connector Next Generation

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 classes | | 35 | 40 |

Mechanical properties

| | |
|-----------------|-------------------------------------|
| - Mating cycles | min. 500, 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 2.0 to 3.0 mm |
|-------------------|-----------------|

Colors

Connector body / boot:

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

Polarity change

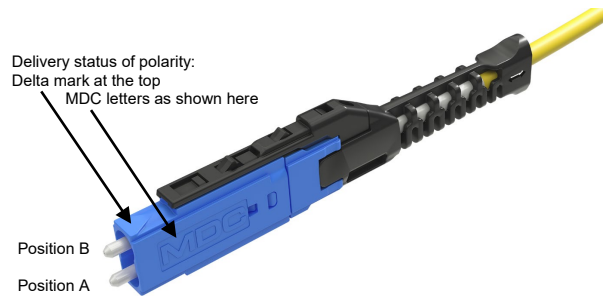
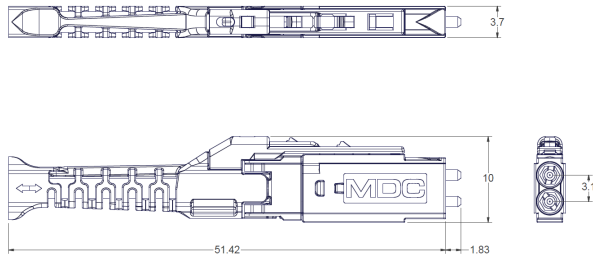
See our video



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| Gezeichnet | Datum | Freigegeben | Datum | Rev. | Änderungsnummer | Name | Datum |
|-------------|------------|-------------|------------|------|-----------------|-------------|------------|
| H. Jungbäck | 2022-01-20 | R. Mees | 2022-01-20 | 003 | --- | H. Jungbäck | 2022-10-07 |

MDC Senior connector



Properties and applications

- MDC (Miniature Duplex Connector) of category Very-Small-Form-Faktor (VSFF) connector, Senior type
- Even of its miniature design the connector has a rugged housing with central strain relief and push-pull-boot, with which the connector can be plugged and un-plugged
- A/B polarity easy and secure, toolless changeable
- To attach transceivers with MDC interface and for MEGA-HIGH-DENSITY (MHD) infrastructure cabling

Standards

IEC 61754-37

Material

- Ferrule: Zirconia ceramic, Ø 1.25 mm
- Body: PEI, flammability UL94-V0
- Push-Pull-Boot: PP, flammability UL94-V0
- Protection cap: PC, flammability UL94-V0

Optical properties

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

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|---|-----------------|-------|------|
| - Singlemode SM, 9/125µm | | 0.30 | 0.20 |
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Insertion Loss IL „random mated“ acc. to IEC61300-3-34, Method 2, [dB]:

| Quality feature | BASIC | mean value | 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 |

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MDC Senior connector

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 classes | | 35 | 40 |

Mechanical properties

- Mating cycles min. 500, IL increase < 0.2 dB
- Strain relief max. 70 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 1.2 to 2.0 mm

Colors

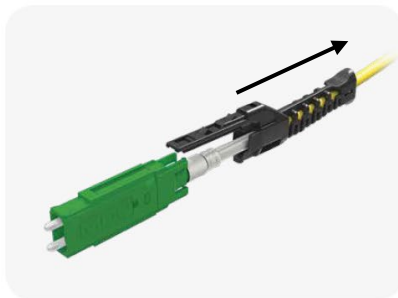
Connector body / boot:

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

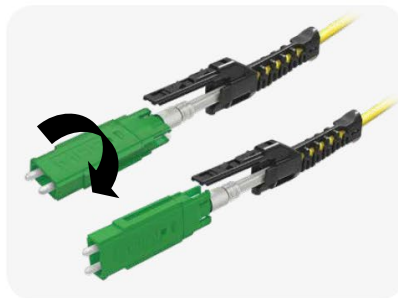
Polarity change

Source USCONEC Ltd. www.usconec.com

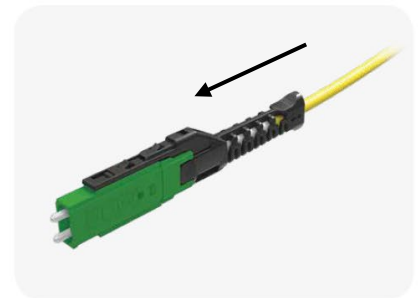
Pull of the push-pull-boot



rotate 180°



push on the push-pull-boot



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|-------------|------------|-------------|------------|------|---------------------------|-------------|------------|
| H. Jungbäck | 2021-02-02 | A. Burggraf | 2021-02-02 | 003 | ---- | H. Jungbäck | 2022-10-07 |

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