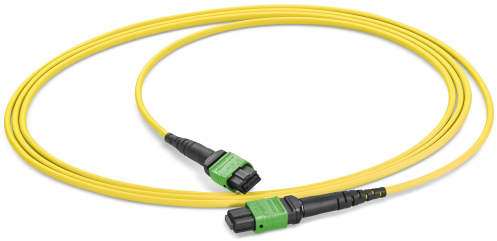
Rosenberger

PRODUCTPROFILE

Catalogue number: 080A1052G657A1

Partnumber: 766863

Fiber optic MTP patchcord
Connector side A: MTP12 female SM
Connector side B: MTP12 female SM
9/125µm, 3.0mm, yellow
Polarity: 1 to 12 Method B
Cable I-F(ZN)H12E9/125µm,G657A1



Related documents:

DS_FASER G657A1_OE	Fiber Data Sheet
DS_I-FZNH_L_OE	Cable Data Sheet
DS_MTPNX12_STECKER_OE	Steckerdatenblatt

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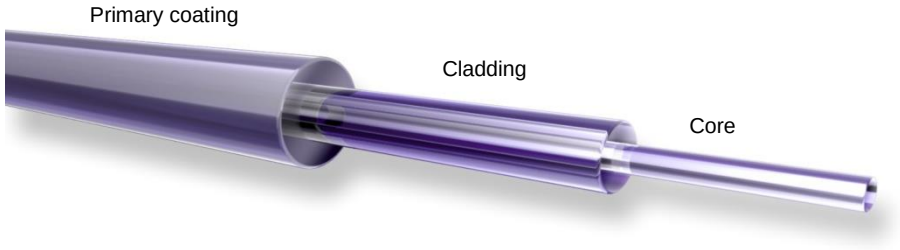
Technical Data Sheet	Rosenberger
Optical fiber G.657.A1/G.652.D	059A0478



Standards

Stepped index fiber 9/125µm according to
-ISO/IEC 11801 und EN 50173-1 OS2
-IEC 60793-2-50 type B1.3
-ITU G.657.A1 und G.652.D

Structure

Silica fiber with two layer acrylate primary coating

Geometrical properties

Modefield diameter @1310 nm	**9.2 µm +/- 0.4 µm**
Modefield diameter @1550 nm	**10.4 µm +/- 0.5 µm**
Cladding diameter	**125 µm +/- 0.07 µm**
Cladding non-circularity	**≤ 0.7 %**
Core-Cladding concentricity	**≤ 0.5 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:

Cabled fiber tight buffered:	**@ 1310 nm max. 0.38 dB/km** **@ 1550 nm max. 0.28 dB/km**
Cabled fiber loose tube:	**@ 1310 nm max. 0.36 dB/km** **@ 1550 nm max. 0.22 dB/km**
Uncabled fiber:	**@ 1310 nm max. 0.32 dB/km** **@ 1383 nm max. 0.32 dB/km** **@ 1490 nm max. 0.21 dB/km** **@ 1550 nm max. 0.18 dB/km** **@ 1625 nm max. 0.20 dB/km**

Macrobending, induced attenuation, uncabled fiber:
Radius 10 mm, 1 turn, @ 1550 nm ≤ 0.50 dB
Radius 10 mm, 1 turn, @ 1625 nm ≤ 1.50 dB
Radius 15 mm, 10 turns, @ 1550 nm . 0.05 dB
Radius 15 mm, 10 turns, @ 1625 nm ≤ 0.30 dB
Radius 25 mm, 100 turns, @ 1310, 1550 und 1625 nm ≤ 0.01 dB

Dispersion:

@ 1285 - 1330 nm	**≤ 3.0 ps/(nm*km)**
@ 1550 nm	**≤ 18.0 ps/(nm*km)**
@ 1625 nm	**≤ 22.0 ps/(nm*km)**

Polarization Mode Dispersion (PMD):
PMD Link Design Value ≤ 0.04 ps/√km
Maximum individual fiber PMD ≤ 0.1 ps/√km

Cut-off-Wavelength: ≤ 1260 nm

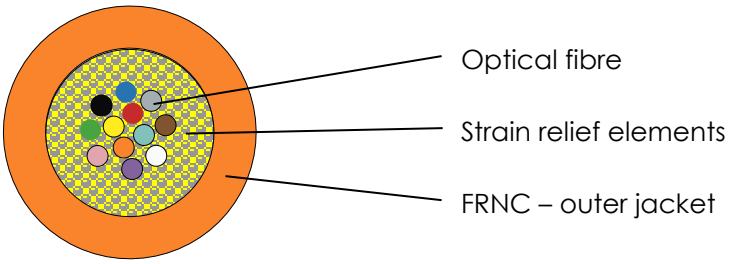
Effective group index of refraction:
@ 1310 nm 1.4676
@ 1550 nm 1.4682

Backscatter attenuation @ 1ns pulse width:
@ 1310 nm -77 dB
@ 1550 nm -82 dB
@ 1625 nm -83 dB

Draft	Date	Approved	Date
H. Jungbäck	12-04-15	P. Maier	12-04-15

Rev.	Engineering change number	Name	Date
001	without	H. Jungbäck	12-04-15

Technical Data Sheet	Rosenberger
Fiber Optic Cable I-F(ZN)H	037AXXXX



Standards

-IEC 60794-2
-EN 50575:2014 +A1:2016 Number of Declaration of Performance:
- 24 fibers B2ca CDEAL0000098-V1
- 8, 12, 16 fibers not tested

Structure

Cable:
-Up to 24 optical fibers within the cable jacket filled with Aramid strain relief elements
-Fiber color code 1 to 12: red, green, blue, yellow, white, grey, brown, violet, turquoise, black, orange, pink
-Fiber color code 13 to 24: red, green, blue, yellow, white, grey, brown, violet, turquoise, transparent, orange, pink, all with black ring-marking

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 see geometrical properties
-Inkjet marking black acc. to separate drawing

Geometrical properties

Number of fibers	Outer diameter [mm]	Jacket wall thickness [mm]	Weight [kg/km]	Fire load [MJ/m]
8	2,0	0,25	3,8	0,05
8	3.0	0.55	8	0.14
12	3.0	0.55	8	0.14
16	3.0	0.55	8	0.14
24	3.7	0.60	12	0.21

Mechanical properties

-Min. bending radius fixed (static) acc. IEC 60794-1-2 E11A
15 x outside diameter
-Min. bending radius during installation (dynamic) with additional tensile strain acc. IEC 60794-1-2 E6
20 x outside diameter
-Max. tensile force acc. IEC 60794-1-21 E1 long term = 300 N
-Max. crush resistance acc. IEC 60794-1-21 E3 long term = 200 N/dm

Thermal properties

Transport and storage	**- 25°C to + 70°C**
Installation	**- 5°C to + 50°C**
In use acc. IEC 60794-1-2 F1	**- 10°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
-Fire Class according EN 13501-6: 24 fibers $B2_{CA}$/s1a/d1/a1, 8, 12, 16 fibers not tested

Transmission characteristics

See fiber data sheets

Applications

Indoor cable particularly appropriate for short MTP®/MPO Patchcords and Harnesses

Deliveryform

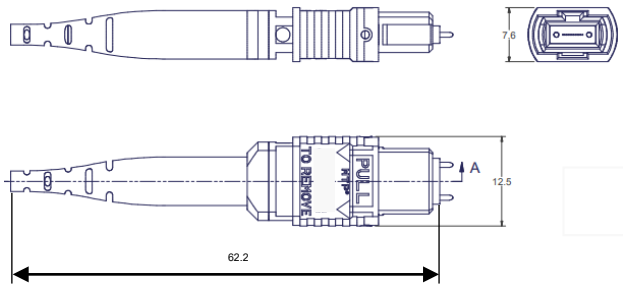
On one-way drums

Draft	Date	Approved	Date	Rev.	Engineering change number	Name	Date
H. Jungbäck	2015-11-02	P. Maier	2015-11-02	004	without	H. Jungbäck	2022-06-15

Technical Data Sheet

Rosenberger

MTP® (MPO) connector n x 12 fibers



female without pins

male with pins

1)

MTP® is a registered trademark of USCONEC Ltd.

Properties and applications

- MTP® (MPO) multi-fiber connector up to 72 fibers, based on n x 12 fiber MT ferrules, with strain relief and boot for round cable
- Centric coding-key
- Multimode MTP® (MPO) are acc. to world standard PC 0° polished, Singlemode APC 8°
- Polarity and gender can be changed acc. to USCONEC AEN-1405
- 1) With MTP® PRO protection cap, debris-repellent (better than anti-static), non-outgassing, halogen-free

Standards

IEC 61754-7 and EIA/TIA 604-5

Material

- Ferrule:	PPS filled with glass particles
- Body:	PBT, flammability UL94-V0
- Boot:	TPO, flammability UL94-V0
- Protection cap	TPO, flammability UL94-V0

Optical properties

GHMT PVP certificates
No.: c6955X-XX
No.: c6956X-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

Applied USCONEC ferrule qualities:

Quality features	BASIC	PURE
- Singlemode SM, 9/125µm all numbers of fibers	Standard	Elite
- Multimode OM2, OM3, OM4, OM5, 50/125µm up to 12 fibers	Elite	Elite
- Multimode OM2, OM3, OM4, OM5, 50/125µm larger 12 fibers	Standard	Elite

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

Quality features	BASIC	PURE
- Singlemode SM, 9/125µm, Standard ferrule	0,40	---
- Singlemode SM, 9/125µm, Elite ferrule	0.35	0.25
- Multimode OM2, OM3, OM4, OM5, 50/125µm, Elite ferrule	0.35	0.25
- Multimode OM2, OM3, OM4, OM5, 50/125µm, Standard ferrule	0.60	---

Insertion Loss IL „random mated“ in application
Multimode OM2, OM3, OM4, OM5, 50/125µm, Elite ferrule [dB]:

- 12 fibers and OCTO 4+4	89% lower 0.25
- 24 fibers	80% lower 0.25

Optical properties

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

- Singlemode SM, 9/125µm	0.15
- Multimode OM2, OM3, OM4, OM5, 50/125µm	0.15

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

	Quality feature	BASIC	PURE
- Singlemode SM, 9/125µm, APC 8°		55	70
- Multimode all OM classes, PC 0°		30	30

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 4.5 mm

Colors

Connector body / boot:

- Singlemode SM, 9/125µm, APC 8°	green / black
- Multimode OM2, OM3, OM4, OM5, 50/125µm	black / black

Draft	Date	Approved	Date
Y. Zhang	2017-03-31	H. Jungbäck	2017-03-31

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