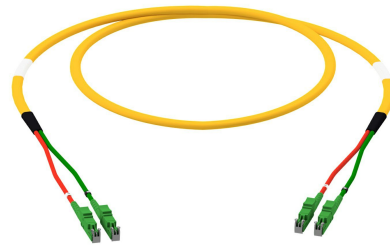


PRODUCTPROFILE

Catalogue number: 069A2201G657A1

Partnumber: 706825

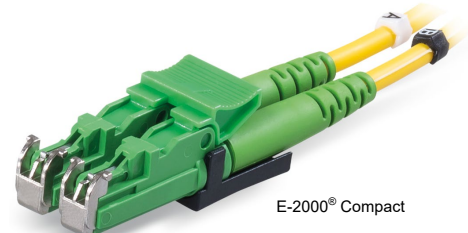
Fiber optic duplex patchcord
Connector side A: E2000HRL Simplex ceramic
Connector side B: E2000HRL Simplex ceramic
9/125µm, double jacket 2x2,8/4,0x6,8mm,
yellow
Polarity: uncrossed A to A
Cable I-V(ZN)HH2x2,8E9/125µm,G657A1



Related documents:

DS_E2000HRL_STECKER_R_SM_OE	Steckerdatenblatt
DS_FASER G657A1_OE	Fiber Data Sheet
DS_I-VZNHH2X28_900_L_OE	Cable Data Sheet

E-2000® HRL (APC 8°) connector



E-2000® is a registered trademark of DIAMOND SA

Properties and applications

- Our E-2000® HRL is a singlemode APC 8° fiber optic connector with solid-ceramic ferrule for all singlemode applications with high requirements on optical transmission quality and protection of the connector ferrule, e.g. LAN backbone, metropolitan (MAN) fiber optic networks, FTTx and industrial applications.
- Through its precision ferrule and its tuning with excentricity limit according to DINEN 61755-3-2 grade B specification, our E-2000® HRL reaches low insertion loss IL and high return loss RL values at „each-to-each“ (random-mated) connections.
- With automatically closing metal shutter for protection against laser light and contamination of the connector ferrule, protection class IP40

Standards

IEC 61754-15 (LSH), tuning with excentricity limit according to DINEN 61755-3-2 grade B specification

Material

- Ferrule: Zirconia ceramic, Ø 2.50 mm
- Connector body: PBT, flammability UL94-V0
- Boot: TPR, flammability UL94-V0
- Protection shutter: Metal, not flammable

Optical properties

- Insertion Loss IL acc. to IEC61300-3-4, Method B, against reference, maximum [dB]: 0.25
- Insertion Loss IL „random mated“ acc. to IEC61300-3-34, Method 2, [dB]: Mean 0.12 / Maximum 0.28
- Return Loss RL acc. to IEC61300-3-6, Method 1, against reference, minimum [dB]: 70

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 to 3.0 mm

Colors

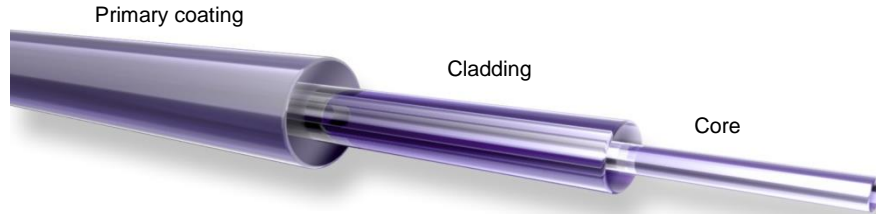
- Connector body: Green
- Boot: Green
- Protection shutter: Silver

GHMT PVP certificate
No.: c5803X-XX



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Draft	Date	Approved	Date	Rev.	Engineering change number	Name	Date
H. Jungbäck	2022-11-21	M. Komarow	2022-11-21	009		---	---



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

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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:

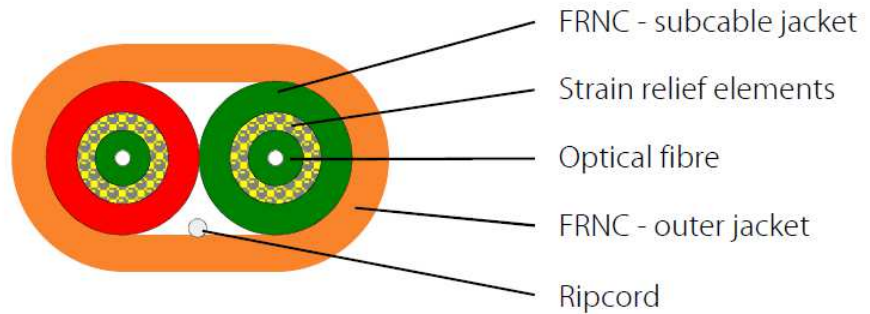
@ 1310 nm 1.4676
@ 1550 nm 1.4682

Backscatter attenuation @ 1ns pulse width:

@ 1310 nm -77 dB
@ 1550 nm -82 dB
@ 1625 nm -83 dB

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H. Jungbäck	12-04-15	P. Maier	12-04-15	001	without	H. Jungbäck	12-04-15



Standards

IEC 60794-2

Structure

Cable core:
buffered optical fiber, outer diameter 0.9 mm
colour: yellow (E9/125), green (G50/125), blue (G62.5/125)
Strain relief elements (aramid) Subcable-jacket halogen-free and flame-retardant material,
wall thickness approx. 0.5 mm,
colour: orange at multi-mode and yellow at single-mode
Outer diameter: 2.8 mm

Outer jacket:
Two break-out subcables parallel
Halogen-free and flame-retardant material (FRNC), wall thickness approx. 0.44 mm
Outer diameter approx. 4.0 mm x 6.8 mm

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

Ripcord under the jacket
Inkjet marking black acc. to separate drawing

Geometrical properties

Number of fibers	Outer diameter [mm]	Weight [kg/km]	Fire load [MJ/m]
2	4.0 x 6.8	32	0.83

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Fiber Optic Cable
I-V(ZN)HH 2x 2.8mm... 900µm

033AXXXX

Mechanical properties

Min. bending radius fixed (static) acc. IEC 60794-1-2 E11A 10 x outside diameter
Min. bending radius during assembly (dynamic), with additional tensile strain acc. IEC 60794-1-2 E6 15 x outside diameter
Max. tensile force acc. IEC 60794-1-2 E1 600 N
Max. crush resistance acc. IEC 60794-1-2 E3, long term 600 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
 Ideal for fiber to the desk

Deliveryform

Disposable drums

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Draft	Date	Approved	Date	Rev.	Engineering change number	Name	Date
P. Maier	03.08.2016	H. Jungbäck	03.08.2016	001	without	Y. Zhang	22.06.2017