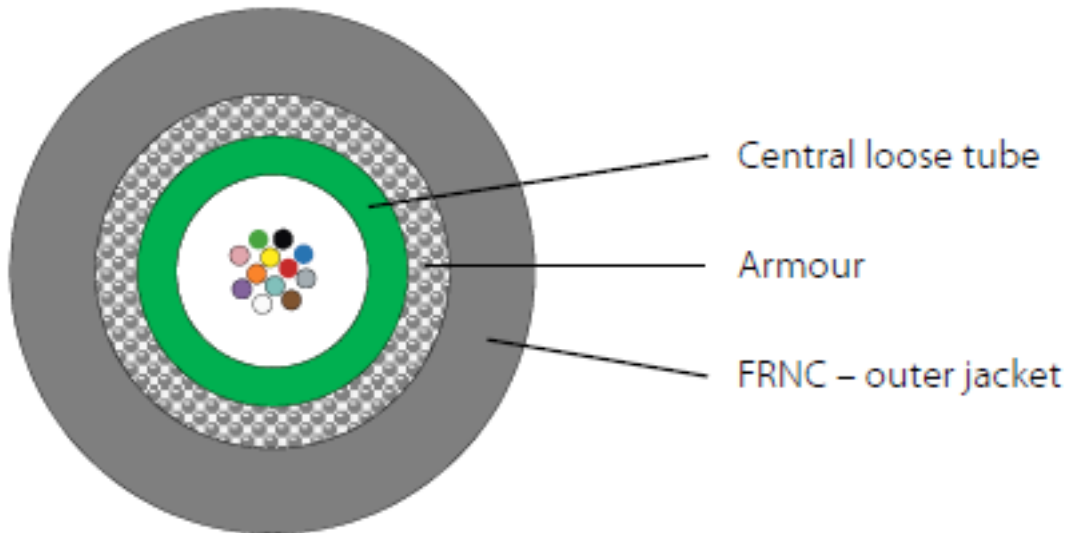


DATASHEET

INFRALAN® U-DQ(ZN)BHxx CPR Dca 1750N



Specifications

Application:

- for fixed installation indoor and outdoor, in cable ducts, tubes and also suitable for interconnections
- mechanical installation by winch is permitted only when using force meters with recording function
- not suitable for underground laying (direct buried)

Characteristics:

- universale cable
- longitudinally waterproof
- non-metallic rodent protection
- non-metallic, halogenfree, gel free
- suitable for connector assembly

Technical data

Loose tube:

- jelly filled loose tube
- outer diameter 3.5 mm with 2-12 optical fibres
- outer diameter 4.0 mm with 14-24 optical fibres
- Tube colour: yellow (E9/125), green (G50/125), blue (G62.5/125)
- Colour code fibres (1-12): red, green, blue, yellow, white, grey, brown, violet, turquoise, black, orange, pink
- Colour code fibres (13-24): red, green, blue, yellow, white, grey, brown, violet, turquoise, transparent, orange, pink (always with black ring marking, except transparent)

Armour:

- Multifunctional E-glass yarns, wrapped in two layers (left and right spin), as strain relief elements and nonmetallic rodent protection

Outer jacket:

- EURO Flame resistance class: Dca
- Halogen-free and flame-retardant material (FRNC)
- wall thickness approx. 1.1 mm
- outer diameter max. 12 fibres: 7.0 mm
- outer diameter max. 24 fibres: 7.5 mm
- Colour: black



| | | | | | |
|-------------|-------------------------------------|---------------|------------------------|---------|------------|
| Art.-No. | 54xxx.1L-CPR_1750 | File | 54xxx.1L-CPR_1750.indd | | |
| Description | Infralan® U-DQ(ZN)BHxx CPR Dca 1750 | | | | |
| Created | Date | Last Revision | Date | Checked | Date |
| BF | 29.06.201 | BF | 23.08.2017 | JB | 23.08.2017 |

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Specifications Multimode fiber

Multimode fiber G50/125 according to IEC 60 793-2-10

Geometric/mechanical properties

| | | | |
|------------------------|----------|--|------------------------------------|
| Core diameter [μm] | 50 ± 2,5 | Cladding non-circularity (%) | < 1 |
| Cladding diameter [μm] | 125 ± 1 | Core/cladding concentricity error [μm] | < 1.5 |
| Coating diameter [μm] | 245 ± 10 | Excentricity of coating [μm] | < 10 |
| Core non-circularity | < 5 % | Screen test | 1 % expansion for 1 s (Δ 100 kpsi) |

| Transmission properties | Fiber type F | | Fiber type I | | Fiber type J | |
|-------------------------------------|----------------------------------|-------|----------------------------------|-------|----------------------------------|-------|
| | (OM2) IEC 60793-2-10 A1a.1 | | (OM3) IEC 60793-2-10 A1a.2 | | (OM4) IEC 60793-2-10 A1a.3 | |
| Wavelength [nm] | 850 | 1300 | 850 | 1300 | 850 | 1300 |
| Attenuation max. [dB/km] | 3.0 | 1.0 | 2.5 | 0.7 | 2.5 | 0.7 |
| Bandwidth OFL min. [MHz × km] | 500 | 500 | 1500 | 500 | 3500 | 500 |
| Bandwidth EMB min. [MHz × km] | | | 2000 | | 4700 | |
| Effective group index of refraction | 1.483 | 1.478 | 1.483 | 1.478 | 1.483 | 1.475 |
| Numerical aperture | 0.200 ± 0.020 | | 0.200 ± 0.015 | | | |

Applications and link lengths

| | G50/125 | | | | | | | |
|---|---------|---------|---------|---------|---------|-------|---------|---------|
| | F | G | H | I | J | X | V | W |
| Type according to ISO 11801: 09/2002 | OM2 | OM2+ | OM2++ | OM3 | OM4 | OM2BI | OM3BI | OM4BI |
| Gigabit Ethernet 1000BASE-SX (850 nm) | 500 m | 525 m | 750 m | 1,000 m | 1,040 m | 500 m | 1,000 m | 1,040 m |
| Gigabit Ethernet 1000BASE-LX (1300 nm) | 550 m | 1,000 m | 2,000 m | 550 m | 600 m | 550 m | 550 m | 600 m |
| 10 Gigabit Ethernet 10GBASE-SX (850 nm) | | | | 300 m* | 550 m | | 300 m | 550 m |
| 10 Gigabit Ethernet 10GBASE-LX4 (1310 nm WDM) | | | | 300 m | 300 m | | 300 m | 300 m |

* 10 GE link length acc. to ISO 11801.2

Specifications Singlemode fiber

Singlemode fiber E9/125

according to ITU-T Rec. G.652.D, ITU-T Rec. G.657.A1, ITU-T Rec. G.657.A2/B2 G.657.A2/B2, ITU-T Rec. G.657.B3 and IEC 60 793-2-50

Bendintensive Fiber

Geometric/mechanical properties

| | | | |
|--------------------------|-----------|--|------------------------------------|
| Cladding diameter [μm] | 125 ± 0.7 | Mode field/cladding concentricity error [μm] | < 0.5 |
| Coating diameter [μm] | 245 ± 10 | Excentricity of coating [μm] | < 12 |
| Cladding non-circularity | < 1 % | Screen test | 1 % Expansion for 1 s (Δ 100 kpsi) |

| Transmission properties | Fiber type A (tight buffered fiber) resp. B (multi fiber loose tube) | | Fiber type E resp. Fiber type P | |
|--|--|--------|--|--------|
| | according to ITU-T G.652.D and ISO 11801 Type OS 2 IEC 60793-2-50 B1.3 | | according to ITU-T G.657.A1 IEC 60793-2-50 B6_a1 | |
| Wavelength [nm] | 1310 | 1550 | 1310 | 1550 |
| Attenuation max. [dB/km] | | | 0.36 | 0.22 |
| Attenuation tight buffered fibers (fiber type A) max. [dB/km] | 0.38 | 0.28 | | |
| Attenuation multi-fiber loose tube (fiber type B) max. [dB/km] | 0.36 | 0.22 | | |
| Dispersion coefficient max. [ps/nm × km] | 3.5 | 18 | 3.5 | 18 |
| Zero dispersion wavelength [nm] | 1302 – 1322 | | 1302 – 1322 | |
| Zero dispersion slope [ps/nm ² × km] | ≤ 0.090 | | ≤ 0.092 | |
| Cut-Off wavelength (cabled) [nm] | ≤ 1260 | | ≤ 1260 | |
| Polarization mode dispersion [ps/√km] | ≤ 0.2 | | ≤ 0.2 | |
| Effective group index of refraction | 1.4695 | 1.4701 | 1.4695 | 1.4701 |
| Mode field diameter at 1310 μm [μm] | 9.2 ± 0.4 | | 8.9 ± 0.4 | |



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Technical data

Standards:

- Harmonised Standard: EN 50575
- Flame retardant: IEC 60332-3-24 and IEC 60332-1-2
- Halogenfree: IEC 60754-1
- Acidity of the combustion gases: IEC 60754-2
- Low smoke: IEC 61034
- No resistance to oil, petrol, acid and leach

Temperature Range:

- Operation: -20°C ~ 60°C
- Installation: - 5°C ~ 50°C

Mechanical characteristics

| | |
|---|-----------------------|
| Min. bending radius fixed (static) acc. IEC 60794-1-2 E11A | 15 x outside diameter |
| Min. bending radius during assembly (dynamic), with additional tensile strain acc. IEC 60794-1-2 E6 | 20 x outside diameter |
| Max. tensile force acc. IEC 60794-1-2 E1, long term | 1750 N |
| Max. crush resistance acc. IEC 60794-1-2 E3, long term | 1500 N/dm |

Order data

| Nr. | Beschreibung | Beschreibung 2 |
|----------------|--|----------------------|
| 54204.1L-CPR | INFRALAN® U-DQ(ZN)BH 4G 50/125µ OM2 | LSZH schwarz CPR DCA |
| 54208.1L-CPR | INFRALAN® U-DQ(ZN)BH 8G 50/125µ OM2 | LSZH schwarz CPR DCA |
| 54212.1L-CPR | INFRALAN® U-DQ(ZN)BH 12G 50/125µ OM2 | LSZH schwarz CPR DCA |
| 54224.1L-CPR | INFRALAN® U-DQ(ZN)BH 24G 50/125µ OM2 | LSZH schwarz CPR DCA |
| 54404.1L-CPR | INFRALAN® U-DQ(ZN)BH 4E 9/125µ, G657A | LSZH schwarz CPR DCA |
| 54408.1L-CPR | INFRALAN® U-DQ(ZN)BH 8E 9/125µ, G657A | LSZH schwarz CPR DCA |
| 54412.1L-CPR | INFRALAN® U-DQ(ZN)BH 12E 9/125µ, G657A | LSZH schwarz CPR DCA |
| 54424.1L-CPR | INFRALAN® U-DQ(ZN)BH 24E 9/125µ, G657A | LSZH schwarz CPR DCA |
| 54504.1L-CPR | INFRALAN® U-DQ(ZN)BH 4G 50/125µ OM3 | LSZH schwarz CPR DCA |
| 54504.1OM5-CPR | INFRALAN® U-DQ(ZN)BH 4G 50/125µ OM5 | LSZH schwarz CPR DCA |
| 54504.2L-CPR | INFRALAN® U-DQ(ZN)BH 4G 50/125µ OM4 | LSZH schwarz CPR DCA |
| 54508.1L-CPR | INFRALAN® U-DQ(ZN)BH 8G 50/125µ OM3 | LSZH schwarz CPR DCA |
| 54508.2L-CPR | INFRALAN® U-DQ(ZN)BH 8G 50/125µ OM4 | LSZH schwarz CPR DCA |
| 54512.1L-CPR | INFRALAN® U-DQ(ZN)BH 12G 50/125µ OM3 | LSZH schwarz CPR DCA |
| 54512.2L-CPR | INFRALAN® U-DQ(ZN)BH 12G 50/125µ OM4 | LSZH schwarz CPR DCA |
| 54524.1L-CPR | INFRALAN® U-DQ(ZN)BH 24G 50/125µ OM3 | LSZH schwarz CPR DCA |
| 54524.1OM5-CPR | INFRALAN® U-DQ(ZN)BH 24G 50/125µ OM5 | LSZH schwarz CPR DCA |



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