



GridLink Optical Cables for Smart Grid Communication Systems

Low Smoke Zero Halogen • CST Armoured Cable • NGTS 3.8.32 Style



Document Information

Datat Sheet Number LCM240124B-V1
Date 24/01/2024
Notes / Changelog First Release

Cable Construction

Fibre Optics

Fibre Optics OM1, OM3 & OS1 Fibres

Containment

Fibres Contained in Dry Construction Waterblocking Loose Tubes

Layup

6 Tubes (Populated/Unpopulated) Laid up with Fillers Around Central Element and Surrounded by Reinforced Waterblocking Fibreglass Yarn Strength Members

Ripcord

Easy-Strip Ripcord Installed to Aid Stripping Whilst Avoiding Damage to the Inner Components

Inner Sheath

Extruded LSZH (Low Smoke Zero Halogen)

Armour

Corrugated Steel

Ripcord

Easy-Strip Ripcord Installed to Aid Stripping Whilst Avoiding Damage to the Inner Components

Outer Sheath

Extruded LSZH (Low Smoke Zero Halogen)

Colours & Identification

Fibres Colour Code
TIA/EIA 598

Inner Sheath Colour
Black

Tubes Colour Code
TIA/EIA 598

Outer Sheath Colour
Black

Properties & Standards

Standards

NGTS 3.8.32 Style IEC 60794-1-21
 TIA/EIA 598 IEC 60794-1-22

Temperature

Operating Temperature Range -30 to +70 °C
 Instalation Temperature Range -10 to +50 °C

Physical

Minimum Fixed Bend Radius 15 x Ø
 Minimum Installation Bend Radius 20 x Ø
 Maximum Impact 20 J
 Maximum Crush 5000 N/10cm
 Maximum Installation Tensile Load 3700 N

OS1 Optical Characteristics

Attenuation Coefficient (@1310nm) ≤ 0.35 dB/Km
 Attenuation Coefficient (@1383nm) ≤ 0.35 dB/Km
 Attenuation Coefficient (@1460nm) ≤ 0.25 dB/Km
 Attenuation Coefficient (@1550nm) ≤ 0.21 dB/Km
 Attenuation Coefficient (@1625nm) ≤ 0.23 dB/Km
 Group Index of Refraction (@1310nm) 1.467
 Group Index of Refraction (@1550nm) 1.468

OM1 Optical Characteristics

Attenuation Coefficient (@850nm) ≤ 3.0 dB/Km
 Attenuation Coefficient (@1300nm) ≤ 0.7 dB/Km
 Group Index of Refraction (@850nm) 1.496
 Group Index of Refraction (@1300nm) 1.491

OM3 Optical Characteristics

Attenuation Coefficient (@850nm) ≤ 2.4 dB/Km
 Attenuation Coefficient (@1300nm) ≤ 0.7 dB/Km
 Group Index of Refraction (@850nm) 1.482
 Group Index of Refraction (@1300nm) 1.477

Fire Performance

Flame Retardance IEC 60332-1
 Flame Retardance IEC 60332-3
 Halogen Gas Content IEC 60754-1
 Gas Acidity IEC 60754-2
 Smoke Emission IEC 61034-2
 Minimum CPR Rating Cca s1b d2 a2

Construction & Dimensions

No. of Fibres	Fibre Type	Optics (µm)	Populated Tubes / Fibres	Outer Ø (mm)
24	OM1	62.5/125	2 x 12	19
24	OM3	50/125	2 x 12	19
16	OM3	50/125	2 x 8	19
12	OM3	50/125	3 x 4	19
12	OS1	9/125	3 x 4	19