

NMGUxxHA

Fiber Optic - Loose Tube – Armored/Single PE Jacket

	<p style="text-align: center;">For more information please call 1-800-Belden1</p> <p style="text-align: center;"><u>See Put-ups and Colors</u></p> <p style="text-align: center;">Related Documents: No.10 for Fiber Optic Cables .pdf</p>
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Cable Characteristics:

DESCRIPTION:

48 to 72 optical fibers, Gel filling loose tubes (12f/T), FRP central strength member, Gel filling cable core, CSTA armor, Single PE jacket (black).

PHYSICAL CHARACTERISTICS:

Fiber Type	125/250 µm
Number of Fibers	48 to 72
Number of Fibers per Tube	12
Fiber Color Code Chart:	
Number	Color
1	Blue
2	Orange
3	Green
4	Brown
5	Grey
6	White
7	Red
8	Black
9	Yellow
10	Violet
11	Pink
12	Aqua
Buffer Tube Diameter	2.6 mm
Buffer Tube Material	PBT – Polybutylene Terephthalate
Buffer Tube Filling Material	Synthetic Thixotropic Gel
Buffer Tube Color Code Chart:	
Number	Color
1	Blue
2	Orange
3	Green

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4	Brown
5	Grey
6	White

STRENGTH MEMBER:

Central Strength Member Material	Fiberglass Epoxy Rod
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OVERALL CABLING:

Overall Cabling Fillers	Polypropylene
Cable Core Filling Material	Synthetic Thixotropic Gel

ARMORING:

Armor Type	Corrugated
Armor Material	Steel Tape
Armor Thickness	0.15 mm

OUTER JACKET:

Outer Jacket Material	PE – Polyethylene
Outer Jacket Nom. Wall Thickness	1.6 mm
Outer Jacket Color	Black

OVERALL DIAMETER:

Overall Nominal Diameter	13.4 mm
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MECHANICAL CHARACTERISTICS:

Operating Temperature Range	- 40°C To + 70°C
Storage Temperature Range	- 40°C To + 70°C
Bulk Cable Weight	164 kg/km
Max. Load for Installation	1500 N, Passes IEC794-1
Max. Load for Long Term Application	600 N, Passes IEC794-1
Min Bend Radius for Installation	20 × Cable OD, Passes IEC794-1
Min Bend Radius for Long Term Application	10 × Cable OD, Passes IEC794-1
Crush Resistance	1000 N/100mm, Passes IEC794-1
Impact Resistance	Passes IEC794-1
Solar Radiation Resistance	Passes IEC794-1
Water Penetration	Passes IEC794-1
Compound Flow	Passes IEC794-1
Cyclic Flexing	Passes IEC794-1

APPLICABLE SPECIFICATION AGENCY COMPLIANCE:

APPLICABLE STANDARDS:

Specification	IEC 60794-1, EIA/TIA-455
EU RoHS Compliant (Y/N)	Y

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EU RoHS Compliance Date	Aug 2007
SUITABILITY:	
Suitability – Indoor (Y/N)	Y
Suitability - Outdoor (Y/N)	Y
Suitability - Aerial (Y/N)	Y
Suitability – Duct (Y/N)	Y
Suitability – Direct Burial (Y/N)	Y
Sunlight Resistance (Y/N)	Y

Optical Characteristics:

SINGLE MODE FIBERS	G652.D (OS2)
Belden Fiber Code	U12
Typical Mode Field Diameter @ 1310nm	9.2 ± 0.4 μm
Typical Mode Field Diameter @ 1550nm	10.4 ± 0.5 μm
Cladding Diameter	125 ± 0.7 μm
Clad Non-Circularity	≤ 0.7 %
Core-Clad Concentricity Error	≤ 0.5 μm
Primary Coating Material	Acrylate
Primary Coating Diameter	245 ± 5 μm
Secondary Color Coating Diameter	250 ± 10 μm
Max. Attenuation @ 1310nm	0.36 dB/km
Max. Attenuation @ 1550nm	0.22 dB/km
Point Loss @ 1310nm & 1550nm	0.05 dB
Zero Dispersion Wavelength	1302 – 1322 nm
Max. Slope @ Zero Dispersion Wavelength	0.090 ps/(nm ² km)
Max. PMD @ Link Design Value	0.1 ps/√ km
Cable Cutoff Wavelength	≤ 1260 nm
Refractive Index @1310nm	1.466
Refractive Index @1550nm	1.467

MULTI-MODE FIBERS	62.5μm OM1	50μm OM2	50μm OM3
Belden Fiber Code	U62	U50	U53
Typical Core Diameter	62.5 ± 2.5 μm	50.0 ± 2.5 μm	50.0 ± 2.5 μm
Cladding Diameter	125 ± 1.0 μm	125 ± 1.0 μm	125 ± 1.0 μm
Clad Non-Circularity	≤ 1 %	≤ 1 %	≤ 1 %

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Core-Clad Concentricity Error	≤ 1.5 μm	≤ 1.5 μm	≤ 1.0 μm
Primary Coating Material	Acrylate	Acrylate	Acrylate
Primary Coating Diameter	245 ± 7 μm	245 ± 7 μm	245 ± 7 μm
Secondary Color Coating Diameter	250 ± 10 μm	250 ± 10 μm	250 ± 10 μm
Max. Attenuation @ 850nm	3.5 dB/km	3.0 dB/km	3.0 dB/km
Max. Attenuation @ 1300nm	1.0 dB/km	1.0 dB/km	1.0 dB/km
Min. Overfilled Bandwidth @ 850nm	200 MHz.km	500 MHz.km	1500 MHz.km
Min. Overfilled Bandwidth @ 1300nm	600 MHz.km	500 MHz.km	500 MHz.km
Point Loss @ 850nm & 1300nm	0.10 dB	0.10 dB	0.10 dB
Numerical Aperture	0.275 ± 0.015	0.200 ± 0.015	0.200 ± 0.015
Refractive Index @ 850nm	1.496	1.482	1.482
Refractive Index @ 1300nm	1.491	1.477	1.477
Min. G-Ethernet Transmission Distance@850nm	300 m	550 m	1000 m
Min.G-EthernetTransmissionDistance@1300nm	550 m	550 m	600 m

PUT-UPS AND COLORS:

Item	# Fibers	Fiber Type	Cable Description	Put-up * (metre)	Jacket Color
NMGU12HA048BKAA	48	G652.D	LOOSE TUBE CSTA SINGLE PE JACKET	2000	BLACK
NMGU12HA060BKAA	60	G652.D	LOOSE TUBE CSTA SINGLE PE JACKET	2000	BLACK
NMGU12HA072BKAA	72	G652.D	LOOSE TUBE CSTA SINGLE PE JACKET	2000	BLACK
NMGU62HA048BKAA	48	62.5μm OM1	LOOSE TUBE CSTA SINGLE PE JACKET	2000	BLACK
NMGU62HA060BKAA	60	62.5μm OM1	LOOSE TUBE CSTA SINGLE PE JACKET	2000	BLACK
NMGU62HA072BKAA	72	62.5μm OM1	LOOSE TUBE CSTA SINGLE PE JACKET	2000	BLACK
NMGU50HA048BKAA	48	50μm OM2	LOOSE TUBE CSTA SINGLE PE JACKET	2000	BLACK
NMGU50HA060BKAA	60	50μm OM2	LOOSE TUBE CSTA SINGLE PE JACKET	2000	BLACK
NMGU50HA072BKAA	72	50μm OM2	LOOSE TUBE CSTA SINGLE PE JACKET	2000	BLACK
NMGU53HA048BKAA	48	50μm OM3	LOOSE TUBE CSTA SINGLE PE JACKET	2000	BLACK
NMGU53HA060BKAA	60	50μm OM3	LOOSE TUBE CSTA SINGLE PE JACKET	2000	BLACK
NMGU53HA072BKAA	72	50μm OM3	LOOSE TUBE CSTA SINGLE PE JACKET	2000	BLACK

* Other put-ups available upon request.

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