



**Product:** [FMLU71HA144BKAA-C](#)

Universal OFC MLT: Dry Tubes (12F/T), Dry Core, Glass Yarn + CST + LSZH Outer Jacket (black) 144f SM G.657.A1. IEC 60332-3-24 rated.

Product Description

Universal (Indoor/Outdoor) Dry tubes (12F/T), Dry core, optical fiber Multi Loose Tube cable with Glass Yarn strength member, Corrugated Steel Tape armor and Low Smoke Zero Halogen outer jacket (black), 144 fibers SM G.657.A1. IEC 60332-3-24 rated.

Technical Specifications

Product Overview

|                        |   |
|------------------------|---|
| Product Category:      | Fiber Multi-Loose Tube Cable  |
| Suitable Applications: | For outdoor/indoor use in structured (data) wiring systems such as industrial backbone, campus backbone, building backbone cabling. For outdoor/indoor use in networks for industrial, telecom, cable TV and/or broadcast. Easy to install in ducts, tunnels and trenches and/or tubes. Suitable for Direct Burial. |

Fiber Specifications

|                      |                                  |
|----------------------|----------------------------------|
| Fiber Type:          | OS2, G.657.A1, G.652.D           |
| Fiber Core Diameter: | 9 µm                             |
| Fiber Diameter:      | 125 µm                           |
| Buffer Material:     | PBT – Polybutylene Terephthalate |
| Fiber Count:         | 144                              |
| Fiber Color Coding:  | TIA-598-D                        |

Cable Construction

|                            |                            |
|----------------------------|----------------------------|
| Number of Active Subunits: | 12                         |
| Fibers Per Subunit:        | 12                         |
| Subunit Waterblocking:     | Gel Free                   |
| Subunit Color:             | TIA-598-D                  |
| Central Strength Member:   | GRP                        |
| Cable Core Waterblocking:  | Waterblocking Yarns + Tape |

Armor Specifications

|                          |                             |
|--------------------------|-----------------------------|
| Armor Type and Material: | CST - Corrugated Steel Tape |
|--------------------------|-----------------------------|

Outer Jacket Specifications

|                  |   |
|------------------|---|
| Jacket Material: | LSZH - Low Smoke Zero Halogen (Flame Retardant) |
| Nom. Diameter:   | 16.4 mm (0.646 in)                              |
| Color:           | Black   |

Optical Characteristics

| Wavelength          | 1310 nm    | 1550 nm    |
|---------------------|------------|------------|
| Max. Attenuation    | 0.36 dB/km | 0.22 dB/km |
| Mode Field Diameter | 9.0 µm     | 9.8 µm     |

Mechanical Characteristics

|                                       |               |
|---------------------------------------|---------------|
| Min. Bend Radius During Installation: | 20 x Cable OD |
| Min. Bend Radius During Operation:    | 10 x Cable OD |

|  |  |
|--|--|
| Max. Tensile Strength During Installation: | 2700 N (610 lbf)                                       |
| Max. Tensile Strength During Operation:    | 900 N (200 lbf)  |
| Crush Resistance:                          | 2200N/100mm for Short Term & 1100N/100mm for Long Term |

Mechanical Tests

| Description   | Tested Standard    |
|---|--------------------|
| Cable Min. Bend Radius Installation (Short Term)      | IEC 60794-1-21-E11 |
| Cable Min. Bend Radius Operation (Long Term)          | IEC 60794-1-21-E11 |
| Cable Max. Tensile Strength Installation (Short Term) | IEC 60794-1-21-E1  |
| Cable Max. Tensile Strength Operation (Long Term)     | IEC 60794-1-21-E1  |
| Cable Max. Crush Resistance Installation (Short Term) | IEC 60794-1-21-E3  |
| Cable Max. Crush Resistance Operation (Long Term)     | IEC 60794-1-21-E3  |
| Cable Impact Resistance                               | IEC 60794-1-21-E4  |
| Waterblocking   | IEC 60794-F5       |

|                    |                            |
|--------------------|----------------------------|
| Bulk Cable Weight: | 271 kg/km (182 lbs/1000ft) |
|--------------------|----------------------------|

Temperature Range

|                              |                  |
|------------------------------|------------------|
| Operating Temperature Range: | -40 °C to +70 °C |
| Storage Temperature Range:   | -40 °C to +70 °C |

Standards and Compliance

|                                  |  |
|----------------------------------|--|
| Environmental Suitability:       | Indoor/Outdoor, Indoor, Outdoor, Non-Halogenated, Burial   |
| Flammability / Reaction to Fire: | IEC 60332-3-24   |
| ISO/IEC Compliance:              | IEC 60793-1-1IEC 60794-1-1, IEC 61034-2 - Smoke Density Min Transmittance = 60%  |
| European Halogen Free Standards: | IEC 60754-2 - Halogen Acid Gas Amount - Max. Conductivity = 10 , IEC 60754-2 - Halogen Acid Gas Amount - Min. pH = 4.3 |
| European Directive Compliance:   | EU Directive 2011/65/EU (RoHS 2)   |

History

|                      |  |
|----------------------|--|
| Update and Revision: | Revision Number: 0.6 Revision Date: 07-18-2024 |
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