



Product: [FMLU71HA048BKAA-C](#)

Universal OFC MLT: Dry Tubes (12F/T), Dry Core, Glass Yarn + CST + LSZH Outer Jacket (black) 48f 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), 48 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:	48
Fiber Color Coding:	TIA-598-D

Cable Construction

Number of Active Subunits:	4
Number of Fillers:	2
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:	12.2 mm (0.480 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:	148 kg/km (99.5 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
----------------------	--

© 2024 Belden, Inc

All Rights Reserved.

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described here in are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability.

Belden provides the information and specifications herein on an "ASIS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

All sales of Belden products are subject to Belden's standard terms and conditions of sale.

Belden believes this product to be in compliance with all applicable environmental programs as listed in the data sheet. The information provided is correct to the best of Belden's knowledge, information and belief at the date of its publication. This information is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it becomes a part of. The Product Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.