



REAL OPTIC

Technical Data Sheet

OM3LTGYA06UBK - OM3LTGYA12UBK

Cable Description	24F /48F /72F /96F /144F FIBRE SINGLE SHEATH DUCT CABLE
Type of Fibre	Multi Mode, OM3

Introduction

All dielectric Duct optic cable containing upto 144F LWP-SMF in full compliance with OM3. The offered cables are fully compliant to the relevant IEC specifications.

Cable Design

- * Upto 144 multi mode fibers in full compliance with OM3
- * Non-metallic and anti-buckling element FRP rod used as Central Strength Member
- * Loose buffer tubes fully filled with Thixotropic Jelly & Fibers
- * Loose buffer tubes S-Z Stranded
- * S-Z core is Dry & Wrapping with Water Swellable Tape
- * Glass yarn as peripheral strength member
- * UV Stablized, LSZH Outer sheath, black

Application

- * Suitable for Duct installation
- * Suitable for Indoor / Outdoor use

Special Features

- * Single layer stranded construction
- * Offers exceptional strength for Duct application
- * Flexible buffer tubes provide easy fibre routing inside closure
- * All dielectric construction

Cable Physical Characteristics

Fibre Count	24	48	72	96	144	
Number of Fibres in each Loose Tube	12					
Number of Loose Tube in each cable	2	4	6	8	12	
Number of Filler (if Required)	4	2	0	0	0	
Cable Diameter (mm)	10.5	10.5	10.7	11.8	14.5	
Tolerance $\pm$ (mm)	0.5					
Nominal Cable Weight (kg/km)	110	110	120	145	200	
Standard Length (meters)	4000 $\pm$ 5%					

Cable Mechanical & Environmental Characteristics

Test	Standard	Product Performance				
Temperature Range (°C)	[IEC 60794-1-2-F1]	Operation: -20 °C to +70 °C, Installation: -5 °C to +45 °C & Storage: -20 °C to +70 °C				
Cable Bending Radius (mm)	[IEC 60794-1-2-E11 A & B]	20 X D , D= Cable diameter				
Kink Resistance (mm)	[IEC 60794-1-2-E10]	10 X D , D= Cable diameter				
Tensile Force (N)	[IEC 60794-1-2-E1]	2400 N	2400 N	3200 N	4300 N	5000 N
Impact Resistance (Nm)	[IEC 60794-1-2-E4]	Height 500 mm, Weight = 2.5 Kg, 3 Nos				
Crush Resistance (N)	[IEC 60794-1-2-E3]	2000 N (100 X 100 mm)				
Torsion Resistance	[IEC 60794-1-2-E7]	10 Cycle ($\pm$ 180°) 2.5 Kg Weight, L= 2 Mtr				
Water Penetration	[IEC 60794-1-2-F5 B]	1 Meter Water Head, 3 Meters Cable Sample, 24 Hours				

Note: After the Test, Change in Attenuation shall be $\leq$ 0.5 dB/Km. No Fibre Break & Damage or Crack on the Cable

Cable Transmission Characteristics

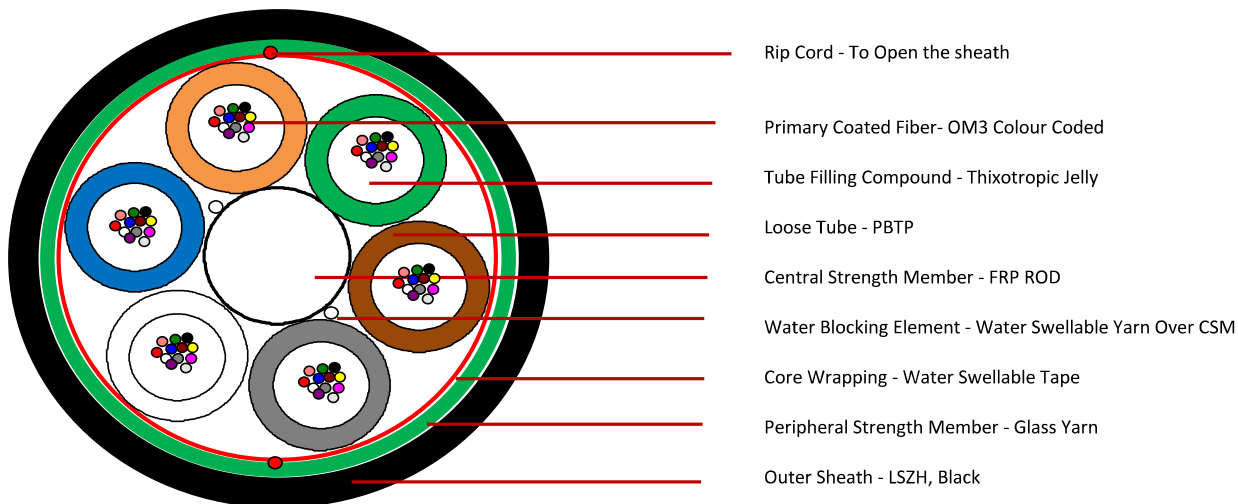
Fibre Type		Attenuation Coefficient (dB/Km)				PMD	Cable Cut-Off	MFD
		850	1300	1310	1550	ps/sqrt.km	nm	μ m
Multi Mode	OM3	$\leq$ 3.2	$\leq$ 1.2	-	-	-	-	-

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Cable Constructional Details

Cable Cross Sectional Diagram of 72F Cable [Drawing not to scale]



Identification Fibre & Loose Tube Colour

Fibre Colour	Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Pink	Aqua
Loose Tube Colour	Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Pink	Aqua

Proposed Printing Details & Method at every meters

Printing Method & Colour	Inkjet & White	CABLE ID Customer/Project Name Telephone Symbol, Laser Symbol, Number of Fibres, Type of Fibre Type of Cable YYYY Manufacturer Name Sequential Meter Marking
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Proposed Stenciling on Drum

Every length will be delivered on non-returnable wooden drums. Generally the cable drum flange will be marked with following: (These details can also be customised.)	* Arrow showing the direction, the drum can be rolled. * Country of origin. * The manufacturer's name * Number of fibers. * Nominal cable length in meters * Net and gross weight. * Drum number
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Design no.	BEPB/TDS/2226 (OM3)
Reference	BEPB/TDS/2226 (OM3)
Issue no. & Date	Dated 04-08-19



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Specification of Multi Mode 50 microns Graded Index Type Optical fibre

Customer Name	Mumbai Office [Chile]	
Design no.	2721	
Reference	Mail Dated 03.04.2020	
Fibre Make	OFS, U.S.A.	
Properties	Unit	Values
Transmission		
Attenuation at 850 nm	dB/km	≤ 2.2
Attenuation at 1300 nm	dB/km	≤ 0.6
OM2 Overfilled Band Width at 850 nm**	MHz-Km	≥ 500
OM2 Overfilled Band Width at 1300 nm**	MHz-Km	≥ 500
OM3 Overfilled Band Width at 850 nm**	MHz-Km	≥ 1500
OM3 Overfilled Band Width at 1300 nm**	MHz-Km	≥ 500
OM3 EMB at 850 nm**	MHz-Km	≥ 2000
OM3 EMB at 1300 nm**	MHz-Km	≥ 500
OM4 Overfilled Band Width at 850 nm**	MHz-Km	≥ 3500
OM4 Overfilled Band Width at 1300 nm**	MHz-Km	≥ 500
OM4 EMB at 850 nm**	MHz-Km	≥ 4700
OM4 EMB at 1300 nm**	MHz-Km	≥ 500
Point discontinuity	dB	≤ 0.08
Geometrical		
Core Diameter	μm	50 ± 2.5
Core noncircularity	%	≤ 5
Cladding Diameter	μm	125 ± 0.8
Cladding noncircularity	%	≤ 0.7
Primary Coating Diameter (uncoloured)	μm	242 ± 5
Core/Clad or Mode Field concentricity error	μm	≤ 1.0
Coating noncircularity	%	≤ 5
Coating / Cladding Concentricity error	μm	≤ 8
Numerical Aperature**		0.20 ± 0.015
Refractive Index at 850 & 1300 nm**	1.483 & 1.479 respectively	
Mechanical**		
Proof Test for minimum strain level	kpsi, Gpa	100, 0.69
Change in Attenuation with Bending		
100 Turns on 75 mm Diameter Mandrel		
at 850	dB	≤ 0.5
at 1300	dB	≤ 0.5
2 Turns on 30 mm Diameter Mandrel		
at 850	dB	≤ 0.1
at 1300	dB	≤ 0.3
2 Turns on 15 mm Diameter Mandrel		
at 850	dB	≤ 0.2
at 1300	dB	≤ 0.5
Strippability force to remove primary coating of fibre	Newton	1.0 to 4.4
Dynamic Fatigue		≥ 18
Environmental**		
Induced attenuation at 850 nm & 1300 nm for		
Temperature & Humidity cycle from -10°C to +85°C at 94 % humidity (min), Reference Temperature 23°C	dB/km	≤ 0.1
Temperature cycle from -60°C to +85°C, Reference Temperature 23°C	dB/km	≤ 0.1
Water Immersion at 23 ± 2°C	dB/km	≤ 0.1
Accelerated Ageing (Temperature) at 85 ± 2°C, Reference Temperature 23°	dB/km	≤ 0

**** Fibre Manufacturer Certificate will be provided**

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