

## Gel-Free Central Loose Tube Cable up to 24 Fibers

Design Type U-BQ(ZN)BH Indoor/Outdoor

### Properties

- Metal free indoor and outdoor cable
- Glass yarn strength member
- Dry tube (Gel-Free)
- Halogen free and non-corrosive fire gases
- Low fire load for high safety requirements
- Longitudinal and transversal water resistant cable

### Cable Construction

1 Fiber	SM (250 μ)
2 Tube Filling Compound	Water Swellable Yarn
3 Loose Tube	LSZH
4 Strength Member	Swellable Glass Yarn
5 Outer Jacket	UV Resistant LSZH

### Sheath Marking

Print Color/Method	Black Jacket: White / Ink-Jet , Other Colors: Black / Ink-Jet	(length marking 1 m intervals)
Cable Printing	Manufacturer name, fiber count, fiber type, product code, cable type, date, meter marking	

### Optical Characteristics and Physical Properties

Fiber Type		SM	OM1	OM2	OM3	OM4
Jacket Color		Black or Yellow	Orange	Orange	Aqua	Violet
Core Diameter (μm)		9.0 ±0.5	62.5 ±2.5	50 ±2.5	50 ±2.5	50 ±2.5
Cladding Diameter (μm)		125 ±5.0	125 ±5.0	125 ±5.0	125 ±5.0	125 ±5.0
Primary Coating Diameter (μm)		245 ±10	245 ±10	245 ±10	245 ±10	245 ±10
Attenuation (max. in cable) (dB/km)	@1310 nm	≤ 0.40	-	-	-	-
	@1550 nm	≤ 0.30	-	-	-	-
	@850 nm	-	≤ 3.4	≤ 3.0	≤ 3.0	≤ 3.0
	@1300 nm	-	≤ 1.0	≤ 1.0	≤ 1.0	≤ 1.0
Bandwidth (overfilled)	@850 nm	-	200 Mhz*km	500 Mhz*km	1500 Mhz*km	3500 Mhz*km
	@1300 nm	-	500 Mhz*km	500 Mhz*km	500 Mhz*km	500 Mhz*km
Serial Ethernet	@850 nm	-	-	-	1000 meters	1040 meters
1 Gigabit	@1300 nm	-	-	-	600 meters	600 meters
Serial Ethernet	@850 nm	-	-	-	300 meters	550 meters
10 Gigabit	@1300 nm	-	-	-	300 meters	300 meters



## Mechanical and Environmental Properties

Test	Test Conditions	Value		Unit	Method
Fiber Count	-	4-12F	24F	-	-
Tube Diameter	-	2.5 ±3%	3.0 ±3%	mm	IEC 60811-203
Approx. Cable Diameter	-	6.1 ±0.2	6.5 ±0.2	mm	IEC 60811-203
Approx. Cable Weight	-	45 ±10%	50 ±10%	kg/km	
Max. Tensile Strength	During Installation (Loaded)	1200		N	IEC 60794-1-2 E1
	In Service (Unloaded)	600			
Min. Bending Radius	During Installation (Loaded)	115		mm	IEC 60794-1-2 E11
	In Service (Unloaded)	85			
Crush Resistance	Short Term	2000		N/dm	IEC 60794-1-2 E3
	Long Term	800			
Impact Resistance	Wp=1.5J	3		Impact	IEC 60794-1-2 E4
Repeated Bending	r=20xD	25		cycles	IEC 60794-1-2 E6
Water Penetration	h=1m, 48h, p < 3m	passed		-	IEC 60794-1-22 F5B
Temperature Range	During installation	0 to +50		°C	IEC 60794-1-22 F1
	In service	-20 to +60			
	In storage	-40 to +70			

## Combustion Properties

Property	Test Conditions	Type	Value	Unit	Result	Method
Fire Load	-	All types	1.5	Mj/m	-	-
Fire Propagation	On a vertical single cable	All types	-	-	passed	IEC 60332-1-2
Smoke Density	-	All types	-	-	passed	IEC 61034-2
Halogen Acid Gas	Jacket material	All types	-	-	passed	IEC 60754-1
Degree of Acidity	Jacket material	All types	-	-	passed	IEC 60754-2

## Cable Coding System

U - 12 - CDT - 61 - DI - A2 - H - BK

Type	Fiber Count	Cable Type	Diameter	Tube Type	Fiber Type	Sheath Mat.	Color
Universal: U	4 Fiber: 04 6 Fiber: 06 8 Fiber: 08 12 Fiber: 12 24 Fiber: 24	Central Dry Loose Tube: CDT	6.1 mm: 61 6.5 mm: 65	Distribution: DI	SM G.652 D: 2D SM G.657 A2: A2 MM G.651 OM1: M1 MM G.651 OM2: M2 MM G.651 OM3: M3 MM G.651 OM4: M4	LSZH: H	Black: BK SM Yellow: YE SM Orange: OG M1 Orange: OG M2 Aqua: AQ M3 Violet: VI M4