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## **BUILD SPECIFICATIONS FOR EXTREME MIL-TAC DEPLOYABLE PRE-TERMINATED FIBER OPTIC ASSEMBLIES - CUSTOM MADE IN USA BY QUICKTREX®**

### **BUILD FEATURES**

- All multi-strand fiber assemblies will be constructed using a breakout made with 2mil Polyurethane (PUR with Kevlar) buffer furcation tubing and sequential numbers for each leg. The buffer tubes will be securely fastened to the outer jacket using tactical epoxy breakout kit.
- The standard breakout will be an even 36" for all strand counts.
- The mesh protective sleeve is made of abrasion and UV resistant Tech Flex. Twice the length of material needed is used and fold it back on itself to double the amount of material thickness. The folded edge becomes the leading edge and the other end is secured to the cable jacket behind the epoxy breakout with high quality adhesive.
- Epoxy filled transitions are constructed from a high temp skeletal frame and mil-spec covering with an assembled durometer hardness Shore D 90.
- One wrap around label is to be attached to each end of the cable assembly for identification. The label text includes the cable part#, and a unique serialized number.

### **APPLICATIONS:**

- These metal-free tactical cables have been designed for de-spooling and re-spooling repeatedly.
- Support computer network applications such as FDDI, Gigabit Ethernet and ATM.
- Easy to install. Not recommended for direct burial.

### **JACKET FEATURES:**

- Extremely strong, rugged, survivable tight-buffered cables for severe environments.
- These cables are halogen free, flame retardant and watertight and therefore suitable for indoor and outdoor use.
- Helically stranded cable core for flexibility and outstanding mechanical protection for the fibers.
- Core-bonded Polyurethane inner and outer jacket providing simple installation.
- Glass-rovings between inner and outer jacket for improved mechanical strength.
- Predicted lifetime > 30 years.

### **TESTING**

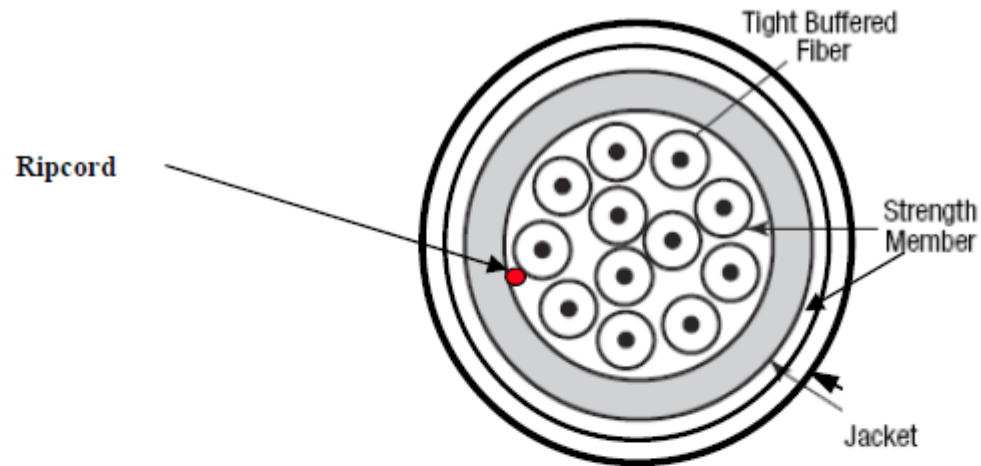
All fiber ends are visually inspected with a fiberscope of 400 power or better for surface defects including, cracking, pitting, and scratches, on the glass surface of the connector. All ends are tested utilizing a Loss Test Set to the following standards:

*Multimode OM3: IL Max 0.3db, Min -.01db..*

*SM: IL – Max 0.3dB Min - .01dB - ORL (optical return loss) - 55dB*

\* All test results will be included on the QuickTrex sticker found on the inside of the Schill Reel or included with the assembly if not on reel.

## CABLE CONSTRUCTION & DIMENSIONS:



### **Cable Specifications** (construction in accordance with IEC 60794)

1. Primary coated optical fibres:  $\text{Ø } 280 \pm 15 \mu\text{m}$ .
2. Tight buffered fibres:  $\text{Ø } 0.9 \pm 0.1 \text{ mm}$ . Colour coding of the buffered fibres:  
white – red – blue – yellow – green – violet – brown – black – orange– turquoise – pink – grey.  
the secondary coating of fibres 1 – 12 is coloured  
the primary coating of fibres 13 – 16 is coloured and the secondary coating is transparent.
3. Swellable aramid yarns as common strength members and for the longitudinal watertightness.
4. **Black Polyurethane** inner jacket with (polyester) rip cord..
5. Swellable glassyarns as additional **strength members**.
6. **Black Polyurethane** outer jacket.

### MECHANICAL DATA:

<b>No. of fibres</b>	<b>2</b>	<b>4</b>	<b>12</b>	<b>16</b>
Ø Inner jacket nom. (mm)	5.8	5.8	8.2	8.3
Ø Outer jacket nom. (mm)	9.2	9.2	10.9	11.1
Max. pulling tension (N)				
Long term	1600	1600	2200	2200
Short term	2400	2400	3300	3300
Energy of flame (kJ/m)	1180	1256	2270	2512
Weight (kg/km)	61	88	113	175

**OPTICAL CHARACTERISTICS (SINGLE-MODE)**

Fibre-Type	Mode-Field /Cladding Diameter (um)	Wave-length (nm)	Attenuation average/ max. (dB/km)	Dispersion (ps/(nm-km))	PMD (ps/km)	Cable Cut-off Wave-length (nm)
9/125 G.652D Patch cord quality	9.2 ± 0.4 125 ± 0.3	1310 1550	0.34 / 0.50 0.21 / 0.30	≤ 3.5 ≤ 18	≤ 0.2	≤ 1260
9/125 G.655	8.4 ± 0.6 125 ± 1	1550	0.25 / 0.30	3.5 – 8.5	≤ 0.1 <sup>A</sup>	≤ 1260
9/125 G.657A	8.9 ± 0.4 125 ± 0.3	1310 1550 1625	0.35 / 0.5 0.21 / 0.3 0.24 / 0.4	≤ 3.5 ≤ 18	≤ 0.2	≤ 1260

**OPTICAL CHARACTERISTICS (MULTI-MODE)**

Fibre-Type	Core/ Cladding Diameter (um)	Wave-length (nm)	Attenuation average/ max. (dB/km)	Bandwidth (MHz·km)	Ethernet Performance (m)		Num. Apert. (um)
					1GBE	10 GBE	
62.5/125 OM1	62.5 ± 2.5 125 ± 1	850 1300	2.7 / 3.2 0.6 / 1.1	≥ 200 ≥ 600	275 550	33 n.a.	0.275 ± 0.015
50/125 OM2	50 ± 2.5 125 ± 1	850 1300	2.4 / 3.0 0.7 / 1.0	≥ 500 ≥ 500	600 600	82 n.a.	0.20 ± 0.015
50/125 OM2	50 ± 2.5 125 ± 1	850 1300	2.3 / 2.8 0.6 / 0.9	≥ 600 ≥ 1200	600 600	82 n.a.	0.20 ± 0.015
50/125 OM2e	50 ± 2.5 125 ± 1	850 1300	2.3 / 2.8 0.6 / 0.9	≥ 600 ≥ 1200	750 2000	110 na	0.20 ± 0.015
50/125 OM3	50 ± 2.5 125 ± 1	850 1300	2.5 / 3.0 0.5 / 1.0	≥ 1500 ≥ 500	900 550	300 n.a.	0.20 ± 0.015
50/125 OM3 Flex	50 ± 2.5 125 ± 1	850 1300	2.5 / 3.0 0.5 / 1.0	≥ 1500 ≥ 500	900 550	300 n.a.	0.20 ± 0.015
50/125 OM4	50 ± 2.5 125 ± 1	850 1300	2.5 / 3.0 0.5 / 1.0	≥ 6000 ≥ 500	900 550	550 n.a.	0.20 ± 0.015
50/125 OM4 Flex	50 ± 2.5 125 ± 1	850 1300	2.5 / 3.0 0.5 / 1.0	≥ 6000 ≥ 500	900 550	550 n.a.	0.20 ± 0.015

**MECHANICAL, PHYSICAL, AND ENVIRONMENTAL CHARACTERISTICS**

<b>Requirements</b>		
<b>Temperature range</b> according to IEC 60794-1-2-F1 Transport/storage Installation Operation		-70 to + 85 °C -5 to + 50 °C -55 to + 85 °C
<b>Pulling tension</b> according to IEC 60794-1-2-E1		See table with dimensions
<b>Bending radii for fibres</b> Installation/operation (all fiber): Only for G657A:  Only for OM3 Flex and OM4 Flex:		>25 mm Max. increase 0.02 dB/tum @1550nm with 32 mm Max. increase 0.20 dB/tum @1550nm with 20 mm Max. increase 0.20 dB/tum @850nm with 7.5 mm Max. increase 0.50 dB/tum @1300nm with 7.5 mm
<b>Strippability</b> Secondary coating only Secondary + primary coating		≤ 10 cm ≤ 10 mm
<b>Watertightness</b> according to IEC 60794-1-2-F5		Yes
<b>Crush resistance</b> according to IEC 60794-1-2-E3 Tight buffer Cable		≤ 4000 N/ m ≤ 50 kN/ m
<b>Bending radii cable</b>  Static according to IEC 60794-1-2-E11 Dynamic according to IEC 60794-1-2-E6	15 x Ø 20 x Ø	Only for G657A, OM3 Flex, OM4 Flex fiber: 4 x Ø 8 x Ø
<b>Flame retardancy</b> according to: IEC 60332-2 (EN 50265-2-2)		Pass
<b>Repeated bending</b> according to IEC 60794-1-2-E6		> 700.000 times