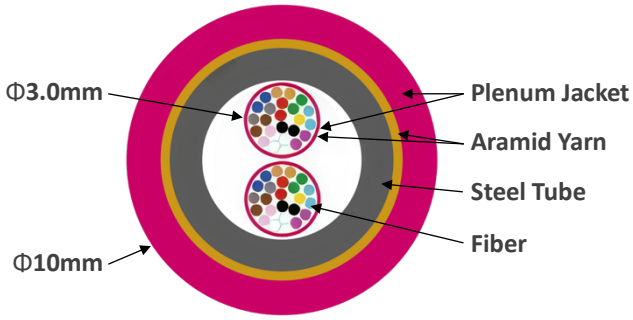
WAVE2WAVE.io
Cabling, Power, Connectivity - Simplified

Armored Optical Fiber Cable

Overview

Wave2Wave Armored MPO/MTP® fiber cables deliver high-density, plug-and-play connectivity for modern data centers and mission-critical environments. Designed to support 12, 16, or 24-fiber terminations, these assemblies replace large bundles of individual fibers with a compact, high-capacity interface optimized for rapid deployment and cable management efficiency.

A flexible, built-in steel armor layer provides superior protection against crushing, bending, rodents, and harsh installation conditions—far exceeding the durability of standard fiber cables. These assemblies can be configured with a full range of connectors, including LC, SC, ST, FC, and MPO/MTP®, enabling seamless integration into existing infrastructure.



Cable Section


48F Armored Optical Cable

Flexible Steel Tube

Features & Benefits

- High-density MPO/MTP® terminations supporting 12/16/24 fibers for compact connectivity
- Flexible steel armor delivers strong protection against crushing, impact, and rodents
- Suitable for harsh areas exposed to dust, oil, gas, or moisture
- Available with LC, SC, ST, FC, and MPO/MTP® connector options
- Lightweight design with durable tensile strength for extended service life
- Factory-tested assemblies with labeling for fast identification and seamless installation

Applications

- Data center networking
- High-density cross-connects
- Backbone and telecom installations
- Enterprise computing and premise networks
- Test labs and engineering facilities
- Equipment rooms and controlled-environment spaces

Optical Fiber Specification

Item				Unit	Fiber Type		
					OM4	OM5	SMF-28e+
Core Diameter				μm	50.0 ± 2.5	50.0 ± 2.5	8.2
Cladding Diameter				μm	125.0 ± 1.0	125.0 ± 1.0	125.0 ± 0.7
Core-Clad Concentricity				μm	≤ 1.5	≤ 1.5	≤ 0.5
Cladding Non-Circularity				%	≤ 1.0%	≤ 1.0%	≤ 0.7%
Core Non-Circularity				%	≤ 5%	≤ 5%	NA
Coating Diameter				μm	242 ± 5	242 ± 5	242 ± 5
Coating-Cladding Concentricity				μm	< 12	< 12	< 12
High Performance EMB Bandwidth			850nm	MHz.km	4700	4700	NA
			953nm		NA	2470	NA
Legacy Performance EMB Bandwidth			850nm	MHz.km	1500	NA	NA
			1300nm		500	NA	NA
Overfilled Modal Bandwidth			850nm	MHz.km	NA	3500	NA
			953nm		NA	1850	NA
			1300nm		NA	500	NA
Attenuation			850nm	dB/km	≤ 2.3	≤ 2.3	NA
			953nm		NA	≤ 1.7	NA
			1300nm		≤ 0.6	≤ 0.6	NA
			1310nm		NA	NA	≤ 0.35
			1550nm		NA	NA	≤ 0.20
Macrobend Loss		Mandrel Radius (mm)	Number of Turns				
	850nm	15	2	dB	≤ 0.10	≤ 0.10	NA
		7.5	2		≤ 0.20	≤ 0.20	NA
	953nm	15	2		NA	≤ 0.10	NA
		7.5	2		NA	≤ 0.20	NA
	1300nm	15	2		≤ 0.30	≤ 0.30	NA
		7.5	2		≤ 0.50	≤ 0.50	NA
	1550nm	16	1		NA	NA	≤ 0.03
	1625nm	30	100		NA	NA	≤ 0.10
Proof Test				kpsi	≥ 100	≥ 100	≥ 100

Note: Use Corning optical fiber.

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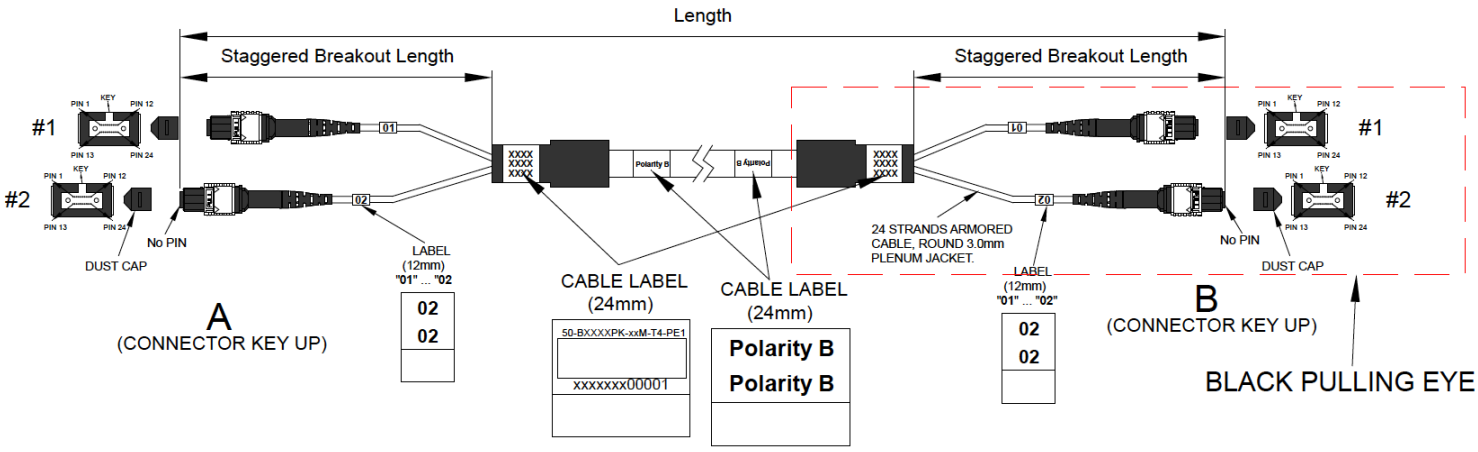
Mechanical Dimension



Patch Cord Specification

Fiber Type		MM Elite	SM
Wavelength (nm)		850 & 1300	1310 & 1550
Polishing		PC	APC
Insertion Loss (dB)	Typical	0.10	0.25
	Max	0.35	0.70
Return Loss (dB)	Max	NA	-55
Compression Resistant Strength		2000N/100mm (Long Term) 3000N/100mm (Short Term)	
Tensile Load		100N (Long Term); 200N (Short Term)	

Product Selection

Part Number: AB-CDEFgK-xxM

AB	C	DE	F	g (optional)	XX
50 (MPO)	3 (SMF) 4 (OM3) 8 (OM4) 9 (OM5)	12 24 48	0 (PC) 1 (UPC) 2 (APC)	P (Plenum) L (LSZH)	Length (Meters)

Standards Compliance

- Telcorida GR-1435
- TIA/EIA-568.3-D
- RoHS

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