

Fiber OM4 50/125

Multimode Optical Fiber

V-Protect offers YOFC MaxBand® OM4 Bend Insensitive Multimode Fibres comply with or exceed ISO/IEC 11801-1 OM4 specifications, IEC 60793-2-10 A1-OM4 specifications, and TIA-492AAAF A1-OM4 specifications.



▣ Features

- Optimized for 850nm VCSEL
- Compatibility with current OM2+/OM3 multimode fibre
- Superior geometry uniformity
- Low attenuation
- High bandwidth
- Low differential mode delay (DMD) curable acrylate
- Very low macro-bending sensitivity
- Coated with YOFC's proprietary dual layer UV curable acrylate

▣ Application

- Data centers
- Data storage networks
- High-performance computing centers
- Office centers
- Local area networks (LAN)
- 1 & 10 & 40 & 100 & 400 Gb/s Ethernet
- Supports the use and installation of optical cables with a small bending radius
- High resistance to micro-bending
- Optimized performance in tight-buffer cable applications
- Stable performance over a wide range of environmental conditions

▣ Fiber characteristics

	Multimode	OM4 50/125
■ Fiber type		
■ Composition		
Coating		Dual layers of UV-cured acrylate
■ Geometrical Characteristics		
Core Diameter		50±2.5 µm
Core Non-Circularity		≤ 5.0 %
Cladding Diameter		125.0 ± 1.0 µm
Cladding Non-Circularity		≤ 1.0 %
Coating Diameter		245 ± 7 µm
Coating/Cladding Concentricity Error		≤ 10.0 µm
Coating Non-Circularity		≤ 6.0 %
Core/Cladding Concentricity Error		≤ 1.0 µm
Delivery Length		up to 8.8 [km/reel]
■ Optical Characteristics		
Attenuation	850 nm	≤ 2.4 dB/km
	1300 nm	≤ 0.6 dB/km
Overfilled Modal Bandwidth	850 nm	≥ 3500 MHz·km
	1300 nm	≥ 500 MHz·km
Effective Modal Bandwidth	850 nm	≥ 4700 MHz·km
Application support distance on		
100GBASE-SR10 ¹	850nm	170m
40GBASE-SR4	850nm	170m
10GBASE-SR	850 nm	550 m
1000BASE-SR	850 nm	1100 m
DMD Specification	Compliant with and more stringent than the requirements of IEC60793-2-10	

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Optical fiber

Numerical Aperture		0.200±0.015	
Group Refractive Index	at 850 nm	1.482	
	at 1300 nm	1.477	
Zero Dispersion Wavelength, λ_0	1295-1340 nm		
Zero Dispersion Slope, S_0	$1295 \leq \lambda_0 \leq 1310$ nm	≤ 0.105	[ps/(nm ² ·km)]
	$1310 \leq \lambda_0 \leq 1340$ nm	$\leq 0.000375 (1590 - \lambda_0)$	[ps/(nm ² ·km)]
Macrobending loss ² :			
	for 2 turns at a 15 mm mandrel radius	≤ 0.1 dB at 850 nm	
		≤ 0.3 dB at 1300 nm	
	for 2 turns at a 7,5 mm mandrel radius	≤ 0.2 dB at 850 nm	
		≤ 0.5 dB at 1300 nm	

¹ - Support distances considering maximum cable attenuation of 3.0 dB/km at 850 nm, maximum total splice/connector loss of 1.0 dB and VCSELs maximum RMS spectral width ≤ 0.45 nm.

² - The launch condition for the macrobending loss measurement fulfils that described in IEC 61280-4-1

Mechanical Characteristics

Fiber proof test level		≥ 9 N
		≥ 1 %
		≥ 100 kpsi
Coating strip force	typical average force	1.5 N
	peak force	$\geq 1.3, \leq 8.9$ N
Dynamic Stress Corrosion Susceptibility		
Parameter (n_d , typical)		20

Backscatter Characteristics

Step (Mean of Bidirectional Measurement) 1300nm		≤ 0.10 dB
Irregularities Over Fibre Length and Point Discontinuity	1300nm	≤ 0.10 dB
Attenuation Uniformity	1300nm	≤ 0.08 dB/km

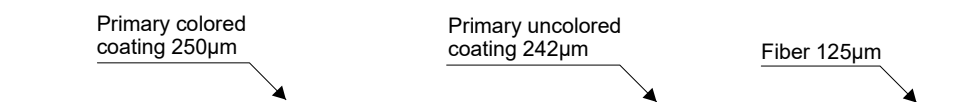
Environmental Characteristics

Induced attenuation at 850 nm and 1300 nm:		
from -60°C to +85°C temperature cycling		≤ 0.10 dB/km
-10~+85°C / 4%~98 % RH temperature humidity cycling		≤ 0.10 dB/km
+85°C dry heat		≤ 0.10 dB/km
+85°C, 85% RH damp heat		≤ 0.10 dB/km
+23°C water immersion		≤ 0.10 dB/km

▣ Packing

■ Fiber type	Multimode	OM4 50/125
■ Length on spool [km]		up to 8,8 km
■ Spool dimension		
	Flange diameter [mm]	234.5
	Barrel diameter [mm]	152.0
	Inner width [mm]	96.0
	Outer width [mm]	116.0
	Bore diameter [mm]	25.4

▣ Fiber construction

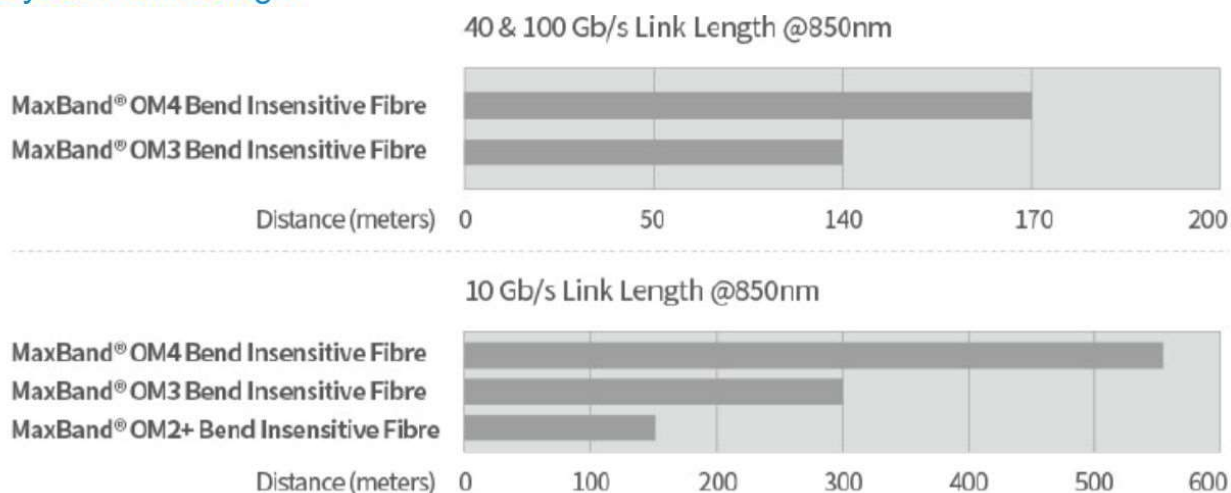


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Optical fiber

System Link Length



Order code

OC-F54-x

Fiber color

00 - neutral, **01** - red, **02** - green, **03** - blue, **04** - yellow, **05** - white, **06** - grey, **07** - brown, **08** - violet, **09** - aqua, **10** - black, **11** - orange, **12** - pink, **13** - neutral/black, **14** - red/black, **15** - green/black, **16** - blue/black, **17** - yellow/black, **18** - white/black, **19** - grey/black, **20** - brown/black, **21** - violet/black, **22** - aqua/black, **23** - black/white, **24** - orange/black, **25** - pink/black

Standard colours:

Fiber type	G.652.D	G.657.A1,A2,B3	OM1 62,5/125	OM2 50/125	OM3 50/125	OM4 50/125	OM5 50/125
Fiber colour	Yellow	White	Blue	Orange	Aqua	Violet	Green
RAL	1021	9010	5015	2003	6027	4005	6001

Label on the spool contain

Tape of fiber
Length

Warranty

V-Protect warrants that the delivered fibers meet this specification. If the fibers fail to meet this specification, V-Protect agrees to replace such failed fibers. V-Protect makes no warranty, however, as to the results to be obtained from the use of these fibers. In no event shall V-Protect be liable for removal or installation costs or other indirect or consequential damages.