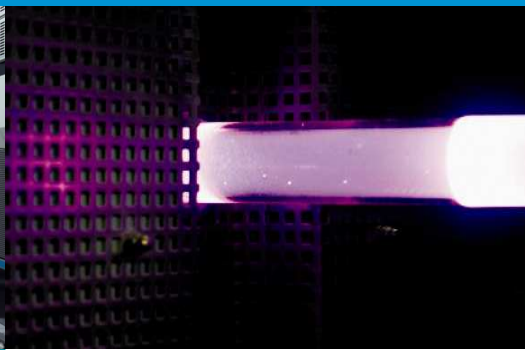
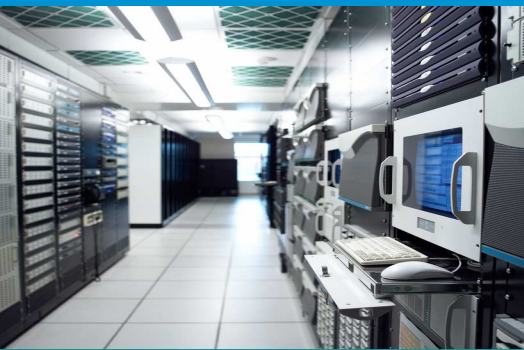


MaxCap-OM2⁺ – 10 Gb/s GIMM Optical Fiber (Formerly known as MaxCap150)

High-speed laser-launch multimode fiber (OM2⁺)



Multimode Fiber

Product Type: 50 / 125 / 242 μ m Multimode Fiber (OM2⁺)
Coating Type: Dual layer Primary Coating (DLPC9)

Issue date: 09/09
Supersedes: 07/09

For premises cabling in Datacom networks

- Innovative products for Local Area Network (LAN) and Data Center applications



Value Innovation is a way of looking at the world. How we can help our customers do more, make more, save more, achieve more.

Key Industry Leading Milestones

- 2001 In cooperation with IBM, Draka set a world record: 20 Gb/s over 1 km.
- 2003 First OM3 type fiber with an extended reach using 10 Gb/s over 550 m: MaxCap-OM4 multimode fiber.

850 nm Laser-Optimized 50 μ m Multimode Fiber for 10 Gb/s application over 150 meters (OM2⁺)

To support, low-cost, short reach 10 Gb/s applications Draka has developed a 850 nm laser-optimized 50 μ m multimode fiber: MaxCap-OM2⁺ multimode fiber, formerly known as MaxCap150. These applications are in particular Local Area Networks (LAN) backbones up to 150 m (10GBASE-SX), Storage Area Networks (SAN), and Central Office connections. The MaxCap multimode fibers are produced by the proprietary Plasma-activated Chemical Vapor Deposition process (PCVD), acknowledged worldwide as offering the best core profile accuracy in multimode fiber.

Application in other LAN systems

Thanks to the special bandwidth performance of the MaxCap-OM2⁺ multimode fiber, a broad range of legacy and 10 Gb/s applications can be supported. Together with other multimode fiber products produced by Draka, this range of multimode products offers end-users the best possible optimization of their networks in the most flexible way.

The MaxCap-OM2⁺ multimode fiber complies with or exceeds IEC 60793-2-10 type A1a.1 Optical Fiber Specification, ISO/IEC 11801 OM-2 specification, TIA/EIA-492AAAB detail specification and Telcordia GR-20-CORE and GR-409-CORE specifications.

Features	Benefits
OM2 ⁺ type MMF	The MaxCap-OM2 ⁺ fully supports 850 nm (SX) serial 10 Gb/s applications over 150 m. An effective modal bandwidth (EMB) of 950 MHz.km at 850 nm under laser launch is ensured by means of 850 nm DMD specifications.
The overfilled launch (OFL) bandwidth of the MaxCap-OM2 ⁺ Multimode fiber at 850 nm is ≥ 700 MHz.km; at 1300 nm the OFL bandwidth is ≥ 500 MHz.km	OFL bandwidth performance gives strong support to legacy applications. The MaxCap-OM2 ⁺ Multimode fiber offers a smooth, low-cost migration path for premises backbone cabling from 10 Mb/s up to 10 Gb/s over 150 m
No need to use expensive mode-conditioning patch cords for 1300 nm laser based systems such as 1000BASE-LX	Reduced system costs
Coated with the dual layer UV Acrylate DLPC9	MaxCap-OM2 ⁺ Multimode fibers have excellent micro-bending behavior, which results in easy cabling and installation, supporting the maximum cabled attenuation at 850 nm of 3.0 dB/km

MaxCap-OM2⁺ – 10 Gb/s GIMM Optical Fiber (Formerly known as MaxCap150)

High-speed laser-launch multimode fiber (OM2⁺)

Product Type: 50 / 125 / 242 μm Multimode Fiber (OM2⁺)

Issue date: 09/09

Coating Type: Dual layer Primary Coating (DLPC9)

Supersedes: 07/09

Characteristics	Conditions	Specified Values	Units
Optical Specifications (Uncabled fiber)			
Attenuation Coefficient	850 nm	≤ 2.2 ≤ 2.3 ≤ 2.4	dB/km
	1300 nm	≤ 0.4 ≤ 0.5 ≤ 0.6	dB/km
Overfilled Modal Bandwidth ¹	850 nm	≥ 700	MHz.km
	1300 nm	≥ 500	MHz.km
Effective Modal Bandwidth	850 nm	≥ 950	MHz.km
Fiber capacity	850 nm; 10 Gb/s	≤ 150	m
DMD	850 nm	See Note 2	
Numerical Aperture		0.200 ± 0.015	
Chromatic Dispersion			
Zero dispersion wavelength, λ ₀		1295 ≤ λ ₀ ≤ 1340	nm
Zero dispersion slope, S ₀	1295 nm ≤ λ ₀ ≤ 1310 nm	≤ 0.105	ps/nm ² .km
	1310 nm ≤ λ ₀ ≤ 1340 nm	≤ 0.000375 (1590 - λ ₀)	ps/nm ² .km
Bending Loss	850 nm, 1300 nm / 100 turns, 75 mm diam.	≤ 0.5	dB
Backscatter Characteristics ³	1300 nm		
Point Discontinuity ⁴	850 nm, 1300 nm	≤ 0.1	dB
Irregularities over fiber length	850 nm, 1300 nm	≤ 0.1	dB
Reflections	850 nm, 1300 nm	Not allowed	
Group Index of Refraction (Typ.)	850 nm	1.482	
	1300 nm	1.477	
Geometrical Specifications			
Core Diameter		50 ± 2	μm
Core Non-Circularity		≤ 5	%
Core/Cladding Concentricity Error		≤ 1	μm
Cladding Diameter		125.0 ± 1.0	μm
Cladding Non-Circularity		≤ 0.7	%
Coating Diameter		242 ± 5	μm
Coating Non-Circularity		≤ 5	%
Coating/Cladding Concentricity Error		≤ 6	μm
Length	Standard lengths up to	8.8	km
Environmental Specifications			
Temperature Dependence	850 nm, 1300 nm / -60°C to 85°C	≤ 0.1	dB/km
Temperature and Humidity Cycling	850 nm, 1300 nm / -10°C to 85°C, 90% RH	≤ 0.1	dB/km
Watersoak Dependence	850 nm, 1300 nm / 20°C, 30 days	≤ 0.1	dB/km
Damp Heat Dependence	850 nm, 1300 nm / 85°C; 85% RH, 30 days	≤ 0.1	dB/km
Mechanical Specifications			
Proof test	Off line	> 0.7 (100)	GPa (kpsi)
Dynamic Tensile Strength (median value)	0.5 meter gauge length unaged and aged ⁵	> 3.8 (550)	GPa (kpsi)
Fatigue Parameter (Typ.)	Dynamic fatigue, unaged and aged ⁵	n _d ≥ 25	
Coating Strip Force	Average strip force, unaged and aged ⁶	1 to 3	N
	Peak strip force, unaged and aged ⁶	1.3 to 8.9	N

¹ The modal bandwidth is linearly normalized to 1 km, according to IEC 60793-2-10.

² DMD specification [ps/m]:

DMD Templates	DMD Inner Mask (Radius 0 to 18 μm)	DMD Outer Mask (Radius 0 to 23 μm)
1	≤ 0.70	≤ 0.70

Note: A minimum effective system modal bandwidth-length product of 950 MHz.km is achieved when combining this 50 μm fiber with transmitters meeting the following transmitter power distribution: Encircled Flux at radius 4.5 μm: ≤ 30 % and Encircled Flux at radius 19 μm ≥ 86 %. (Ref: TIA/EIA-492AAAC or IEC 60793-2-10)

³ OTDR measurements with 0.5 μs pulse width.

⁴ Mean of bi-directional measurement.

⁵ Aging at 85°C, 85% RH, 30 days.

⁶ Aging: • 23°C, 0°C and 45°C

• 30 days at 85°C and 85% RH

• 14 days water immersion at 23°C