



WAVEOPTICS

OM4

Optical Fiber Specifications

**TECHNICAL
INFORMATION**



WAVEOPTICS FIBER (P) OM4

Optical fiber specifications before cabling

CHARACTERISTICS		WAVEOPTICS OM4
Fiber Code		P
Attenuation	850 nm	≤ 2.3 dB/km
	1300 nm	≤ 0.7 dB/km
	1383 nm	≤ 2.0 dB/km
Attenuation Discontinuities	1300 nm	≤ 0.05 dB
Bandwidth (Overfilled Launch)	850 nm	≥ 3500 MHz*km
	1300 nm	≥ 500 MHz*km
Laser EMB	850 nm	≥ 4700 MHz*km
Numerical aperture		0.2 ± 0.015
Group refractive index	850 nm	1.483
	1300 nm	1.478
Zero dispersion wavelength		$1295 \leq \lambda_0 \leq 1340$ nm
Transmission link distance for 10Gb/s (LX4)	850 nm	400 m
	1300 nm	300 m
Macrobend attenuation 100 turns @ 37.5 mm radius	850 nm	≤ 0.05 dB
	1300 nm	≤ 0.15 dB
Macrobend attenuation 2 turns @ 15 mm radius	850 nm	≤ 0.1 dB
	1300 nm	≤ 0.3 dB
Macrobend attenuation 2 turns @ 7.5 mm radius	850 nm	≤ 0.2 dB
	1300 nm	≤ 0.5 dB



Physical Characteristics

CHARACTERISTICS	WAVEOPTICS OM4
Core diameter	$50 \pm 2.5 \text{ } \mu\text{m}$
Cladding diameter	$125.0 \pm 1.0 \text{ } \mu\text{m}$
Core-cladding concentricity error	$\leq 1 \text{ } \mu\text{m}$
Cladding non-circularity	$\leq 1 \%$
Coating diameter	$242.0 \pm 7 \text{ } \mu\text{m}$
Coating-cladding concentricity error	$\leq 10 \text{ } \mu\text{m}$

Environmental Characteristics

CHARACTERISTICS	CONDITIONS	WAVEOPTICS OM4
Temperature cycling	-60°C to $+85^{\circ}\text{C}$	$\leq 0.1 \text{ dB/km}$
Water immersion	$23^{\circ}\text{C} \pm 2^{\circ}\text{C}$	$\leq 0.1 \text{ dB/km}$
High temperature aging	$85^{\circ}\text{C} \pm 2^{\circ}\text{C}$	$\leq 0.1 \text{ dB/km}$

