

Optronics OM1 62.5/125 Multimode Fibre

Optronics specification for standard OM1 62.5/125 graded index multimode optical fibre. Cabled values are given where appropriate. All fibre parameters meet or exceed the following 62.5/125 requirements:

- ISO/IEC 11801 OM-1
- IEC 60793-2-10 type A1b
- Telcordia GR-20-CORE
- TIA/EIA-492AAAA

Applications

- ▶ Gigabit Ethernet in high speed LAN networks over an indicative 275m link length at 850nm wavelength
- ▶ Legacy networks including Ethernet, Fast Ethernet and FDDI
- ▶ All OM1 Optronics cable constructions including tight buffered, loose tube and ribbon
- ▶ Premises cabling in data networks including backbone, riser and horizontal
- ▶ Supports video, data and voice services



Technical Specification

Parameter	Unit	Value
General Characteristics		
Graded index multimode optical fibre with doped silica core and silica cladding. Dual layer UV cured acrylic resin primary coatings.		
Geometrical Characteristics		
Core diameter	µm	62.5 ± 2.5
Core non circularity	%	≤ 6
Cladding diameter	µm	125 ± 2
Cladding non circularity	%	≤ 1.0
Core/cladding concentricity error	µm	≤ 1.5
Coating/cladding concentricity error	µm	≤ 12
External diameter (uncoloured)	µm	245 ± 10
Transmission Characteristics		
Maximum attenuation fibre @ 850 nm	dB/km	≤ 3.0
Maximum attenuation fibre @ 1300 nm	dB/km	≤ 0.7
Maximum attenuation cabled @ 850 nm	dB/km	≤ 3.5
Maximum attenuation cabled @ 1300 nm	dB/km	≤ 1.5
Typical attenuation cabled @ 850 nm	dB/km	≤ 2.9
Typical attenuation cabled @ 1300 nm	dB/km	≤ 1.2
Zero dispersion wavelength λ_0	nm	≥ 1320
		≤ 1365

Parameter	Unit	Value
Zero dispersion slope S_0	ps/(km ² ·km)	≤ 0.11
Numerical aperture (NA)		0.275 ± 0.015
Modal bandwidth @ 850nm overfilled LED	MHz·km	≥ 200
Modal bandwidth @ 1300nm overfilled LED	MHz·km	≥ 500
Group refractive index @ 850 nm		1.496
Group refractive index @ 1300 nm		1.491
Fibre irregularities point and whole length @1300 nm	dB	≤ 0.2
Environmental Characteristics		
Fibre temperature dependence -60°C to +85°C	dB/km	≤ 0.1
Fibre temperature and humidity cycling -10°C to +85 °C, 98% R.H.	dB/km	≤ 0.1
Fibre watersoak dependence 23 °C for 30 days	dB/km	≤ 0.1
Mechanical Characteristics		
Proof test fibre strain for 1 second equivalent	%	1
Bending dependence 100 turns 75 mm diameter 850 nm & 1300 nm	dB	≤ 0.5
Typical mean coating strip force	N	1.5 to 2.7