



Optical Cable Specifications - Pigtail

Application

A pigtail is a fiber optic cable assembly consisting of a connector and an unterminated fiber at the other end. Normally used in applications wherein a splice is convenient for terminating a device with a connector. Also used when the loss characteristics of the connector must be known precisely.

Optical fibers

- ❖ Singlemode 9/125um
- ❖ Multimode 50/125um
- ❖ Multimode 62.5/125um

Connector features

Connector type: LC

Ferrule: Zirconia

Ferrule ID(mm): 0.125 – 0.127

Boot ID(mm): 0.9

Optical performance

Type	Singlemode (UPC)	Multimode (UPC)
Insertion loss	0.1 - 0.3dB	0.1 - 0.3dB
Return loss	≥ 50dB	≥ 25dB
Operating temperature	-40°C to +75°C	

Optical specifications

Fiber Type	Singlemode 9/125um	Multimode 50/125um	Multimode 62.5/125um
Cladding diameter	125.0 ± 0.7µm	125.0 ± 2.0µm	125.0 ± 2.0µm
Mode field diameter (@1310nm)	9.2 ± 0.4µm		
Mode field diameter (@1550nm)	10.4 ± 0.8µm		
Cable cut-off wavelength λ_{cct}	≤ 1260nm		
Attenuation (@850nm)		≤ 2.4dB/km	≤ 2.9dB/km
Attenuation (@1300nm)		≤ 0.7dB/km	≤ 0.6dB/km
Attenuation (@1310nm)	0.33 - 0.35dB/km		
Attenuation (@1550nm)	0.19 - 0.20dB/km		
Chromatic dispersion (@1550nm)	< 18 ps/nm·km	≥ 25dB	≥ 25dB
Numerical Aperture	0.14	0.200 ± 0.015µm	0.275 ± 0.015µm

Dimensional specifications

Fiber Type	Singlemode 9/125um	Multimode 50/125um	Multimode 62.5/125um
Cladding non-circularity	≤ 0.7%	≤ 1.0%	≤ 1.0%
Core-clad concentricity	≤ 0.5µm	≤ 1.5µm	≤ 1.5µm
Coating diameter	245 ± 5µm	245 ± 5µm	245 ± 5µm
Coating-cladding concentricity	< 12 µm	< 12 µm	< 12 µm
Fiber primary coating	Acrylate	Acrylate	Acrylate