



Specifications

- Supports Plastic Fiber - Multimode and Glass Fiber - Single mode /multimode experimental setups
- Configurable source modulation by analog and digital signals

Source 1

- Type : LASER
- Central wavelength : 1310nm
- Spectral width : 1nm
- Output power : 1.5mW
- Receptacle housing : SC

Source 2

- Type : Visible LED
- Central wavelength : 660nm
- Spectral width : 25nm
- Receptacle housing : "Connector-less" style package

Detector 1

- Type : InGaAs PIN photo diode
- Spectral Bandwidth : 1250nm ~ 1600nm
- Responsivity : 0.9 A/W @ 10 μ W of 1310nm
- Bandwidth : 1.5 GHz
- Return loss : 14 dB

Detector 2

- Type : Silicon photo transistor
- Spectral bandwidth : 400 nm ~ 1100nm
- Max. Photosensitivity λ : 850 nm.
- Responsivity : 0.8mA / 10 μ W VCE = 5 V.

Fiber cable

- Type : Glass fiber single & multimode
- Core diameter : 9 μ m and 62.5 μ m
- Clad diameter : 125 μ m
- Length of fiber : 01 meter each
- Type : Plastic optical cable, step index, multimode

Experiments

Optical source characteristics

- To plot the electrical and optical characteristics of different light sources.

Numerical aperture of fiber

- To estimate the numerical aperture of given fiber.

Note: Specifications are subject to change.

Fiber attenuation

- To measure the attenuation of given MM/ SI fiber.
 - a. Propagation loss
 - b. Bending loss.

Optical detector characteristics

- a. Responsivity
- b. To plot the frequency response of detectors with different values of load resistor.

Fiber bandwidth / data rate

- To estimate the bandwidth of given fiber link.

To test a simple fiber optic link for transmission of analog signal.

To test a simple fiber optic link for transmission of digital signal.

Measurement of bit error rate



Jigs for attenuation, coupling loss and numerical aperture

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