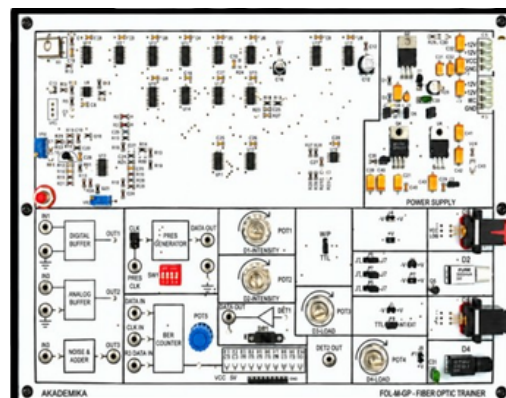


FOL-M-GP

Fiber Optic Trainer Kit for Glass and Plastic Fiber



FEATURES

- Complete Fiber Optic Trainer Kit for Glass and Plastic Fiber
- Supports plastic multimode and glass single-mode / multimode fiber experiments
- Provides analog and digital signal transmission facilities
- Includes dedicated jigs for attenuation, coupling loss and numerical aperture experiments
- Allows study of optical source and detector characteristics
- Supports experiments on fiber loss, bandwidth, data rate and bit error rate
- Clearly marked functional blocks for easy laboratory use and demonstrations
- Multiple optical detector sections for studying and comparing different photo-detection methods
- Designed for measurement-oriented experiments, allowing students to observe and compare transmitter, fiber and receiver behaviour individually
- Enables comparison of the performance of different optical sources, fibers and detectors within the same training platform
- Useful for understanding the complete optical transmission chain—from electrical input to optical transmission and electrical recovery
- Mobile based interactive e-manual

SPECIFICATIONS

Source 1

- Type : LED
- 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 @ 10uW of 1310nm
- Bandwidth : 1.5GHz
- Return Loss : 14 dB

Detector 2

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

Fiber Cable

- Type : Glass fiber single & multimode
- Core Diameter : 9 μ m & 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

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.