This trainer has been designed with a view to provide practical and experimental knowledge of advance elementary fiber optics on SINGLE PCB.

**SPECIFICATIONS**

1. Transmitter: 2 No. Fiber optic LED's (Peak Wavelength of emission 660nm)
2. Receiver: 2 No. Fiber optic Photo Detectors
3. Modulation Technique:
   - a. Direct Amplitude Modulation & Demodulation
   - b. Frequency Modulation & Demodulation
   - c. Pulse width Modulation & Demodulation
4. Full duplex analog and Digital transmitter & receiver.
5. Single module covering large nos. of experiments including experiments with optical power meter.
   - 660nm & 950nm channels with Transmitter and Receiver
6. Drivers: Analog & Digital for both channels
   - Analog Bandwidth: 350 KHz
   - Digital Bandwidth: 2.5 MHz
7. Function Generator:
   - a. 1 KHz Sine Wave (Amplitude adjustable)
   - b. 1 KHz Square Wave (TTL)
8. Crystal controller clock.
9. Function blocks indicated on board mimic.
10. Fiber optic Cable:
    - a. Connector Type Standard SMA.
    - b. Sub miniature assembly duly polished fiber at both ends for max. Transmission & perfect round spot for numerical aperture measurement
11. Core refractive index: 1.492
12. Clad refractive index: 1.406
13. Power Supply: 230V +/-10%, 50 Hz

In keeping view of SIGMA policy of continuous development and improvement, the Specifications may be changed without prior notice or obligation.

**Sigma Trainers and Kits**

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**Dealer:**
1. To transmit and receive analog signal using fiber optic cable.
2. To transmit and receive digital signal using fiber optic cable.
3. To transmit and receive Frequency modulated signal using fiber optic cable.
4. To transmit and receive Pulse width modulated signal using fiber optic cable.
5. To transmit and receive voice signal using fiber optic cable. Setting up Fiber optics Analog Link
6. Study or propagation loss in optical fiber
7. Study of bending loss
8. Measurement of Numerical aperture
9. Characteristic of Fiber optic Communication Link
10. Measurement of propagation loss in optical Fiber Power Meter
11. Setting of Fiber Optic Voice link using AM
12. Setting of Fiber Optic Voice link using FM
13. Setting of Fiber Optic Voice link using PWM
14. Setting of fiber optics voice link using PWM
15. PC-PC Communication using 2 channel Rs232