



Sciencetech 2505 Study of Wavelength Division Multiplexing is designed for understanding WDM technique and Chromatic Dispersion measurement .

Wavelength-Division Multiplexing is a technology which simultaneously transmits multiple optical channels (wavelength) through a single fiber. Today WDM technique is as much a part of optical networking as the fiber itself. The application of WDM technology has spread over cable TV, optical networking, communication, EDFA and many other areas. WDM is a simple and reliable technique which is free from effect of electromagnetic interference and capable of supporting broadband communications.

It carries both analog and digital information over separate wavelengths. In WDM two or more channels are combined or split to ensure bi-directional communication over a single fiber. Chromatic Dispersion can also be measured using the same setup with optional fiber optic cable of 25Km.

Features

- Self contained product
- 15 Bit Data Generators
- 1310nm & 1550nm Laser sources with external signal modulation facility
- Functional Block Indicated on-board mimic
- Comprehensive learning solution
- PC Interface

Scope of Learning

- Study of Wavelength-Division Multiplexing and De-multiplexing
- Data Communication using WDM
- PC to PC communication using WDM
- Study and measurement of Chromatic Dispersion (Optional)

Technical Specifications

Data Generators	:	2 nos. (15 Bit Data)
Comparators	:	2 nos. (5V TTL Output)
Light Sources	:	2 nos, Laser Diode, Power Output -3dB
Optical Detectors	:	2 nos, Photo Diode, Measuring Range +3dB -50dB
WDM Coupler	:	2X1, Coupling Ratio 50:50,
Operating Wavelengths (all)	:	1310nm & 1550nm
Connector types (all)	:	FC
Fiber Optic Cable	:	Single Mode, 25Km (Optional)
PC-PC Communication	:	Using 2 Channels (USB)
Advance Fiber optics Lab	:	2 Kg approximately
Fiber Spool 25Km (Optional)	:	3 Kg approximately
Power Supply	:	230 V 10%, 50/ 60Hz
Power Consumption	:	3.5 VA approximately
Weight	:	2.3 Kg approximately
Dimensions (mm)	:	W 450 x D 280 H 113

Package contains:

Patch cord 16" (2mm)	:	10 nos.
Mains cord	:	1 no.
FC-FC Fiber optic Adaptor	:	1 no.
USB Cable, Length 1 meter	:	2 nos.
Fiber Optic Cable FC/PC- FC/PC glass fiber 1meter		
Fiber Optic Spool, Length 25 Km (Optional)		
Scientech Pulse Generator (Optional)		