

**Product Code . JL-FOT-1542**

## Laser Diode Intensity Modulation and Demodulation Trainer



### Description

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#### Laser Diode Intensity Modulation and Demodulation Trainer

##### Experiments:-

##### Characterisation of a Laser Diode:-

Optical Power ( $P_o$ ) of a Laser Diode Vs Laser Diode Forward current ( $I$ ).F

Monitor Photodiode Current ( $I$ ) Vs Laser Optical Power Output ( $P_o$ ). M

##### Study of Automatic Current Control (ACC) or Automatic Power Control (APC) Modes of Operation :

Comparison of ACC and APC Modes of Operation

##### Design and Evaluation of an Laser Diode (LD) Analog I System M :

$V_o$  Vs  $V_{in}$  at Specified Optical Carrier Power Levels,  $P_o$

Determination of  $V_{in}$  (max) at Specified  $P_o$  for Distortion-free  $V_o$

##### Design and Evaluation of Laser Diode LD Digital Transmission System :

Risetime and Falltime Pulswidth Distortions and Determination of Propagation Delay

##### Transmission of Laser through an Optical Fibre:

To measure loss in dB of Step-index Multimode plastic Fibre Patchcord

To measure loss in dB of Graded-Index, Multimode Glass Fibre Patchcord

To measure loss in dB of Two Patchcords connected by the in-line Adaptor

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**Laser Free Space Communication :**

Analogue Free Space Communication System

Digital Free Space Communication System

**Determination of Numerical Aperture of PMMA Fibre Cable**

**The Trainer consists of the following built-in parts:**

**Laser Diode Transmitter unit having following built-in parts :**

Laser Diode Transmitter Module

6V DC at 100mA, IC Regulated Power Supply internally connected

SPDT switch to select Automatic Current Control (ACC) or Automatic Power Control (APC)

Potentiometer to set power output

Adequate no. of other electronic components

Mains ON/OFF switch, Fuse and Jewel light

**Laser Diode Receiver unit having following built-in parts :**

Laser Diode Receiver Module

PIN Diode for measuring power of Laser Diode

Potentiometer to set voltage output

Adequate no. of other Electronic Components

6V DC at 100mA, IC Regulated Power Supply internally connected

**Special Feature :**

Two-metres PMMA Plastic Fibre Patchcord (Cable-1)

Two-metres GI/mm Glass Fibre Patchcord (Cable-2)

In-line SMA Adaptor

Numerical Aperture measurement Jig

Mandrel

The units are operative on 230V  $\pm 10\%$  at 50Hz A.C. Mains

Adequate no. of Patch cords stackable 4mm spring loaded plug length  $\frac{1}{2}$  metre

Good Quality, reliable Terminal/Sockets are provided at appropriate places on panel for connections / observation of waveforms

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Strongly supported by detailed Operating Instructions, giving details of Object, Theory, Design Procedures, Report Suggestions and Book References

**Weight:-** 4 Kg. (Approx)

**Dimension:-** W 340 x H 110 x D 210

**Other Apparatus Required:**

AF/RF Generator 10Hz to 1 MHz

Three Digital Multimeter

Cathode Ray Oscilloscope 20MHz

**Modulation and Demodulation Trainer Manufacturer India, Modulation and Demodulation Trainer Exporters, Electronics Modulation and Demodulation Trainer, Buy Modulation and Demodulation Trainer, Buy Modulation and Demodulation Trainer Online India, Lab Exporters India, Didactic, Didactic Electronics Equipments For School Lab, Electrical Training Equipment Exporters and Educational Equipments, Electrical Training Equipment Suppliers, Electronics Instruments and Equipments Manufacturers.**

{ "@context": "http://schema.org/", "@type": "Product", "name": "Laser Diode Intensity Modulation and Demodulation Trainer", "image": "[https://www.jlabexport.com/images/catalog/product/76431965\\_2017-10-03.jpg](\"https://www.jlabexport.com/images/catalog/product/76431965_2017-10-03.jpg\")", "description": "Characterisation of a Laser Diode:- Optical Power (Po) of a Laser Diode Vs Laser Diode Forward current (I). F Monitor Photodiode Current (I) Vs Laser Optical Power Output (Po). M Study of Automatic Current Control (ACC) or Automatic Power Control (APC) Modes of Operation : Comparison of ACC and APC Modes of Operation Design and Evaluation of an Laser Diode (LD) Analog I System M : Vo Vs Vin at Specified Optical Carrier Power Levels, Po Determination of Vin (max) at Specified Po for Distortion-free Vo Design and Evaluation of Laser Diode LD Digital Transmission System : Risetime and Falltime Pulswidth Distortions and Determination of Propagation Delay Transmission of Laser through an Optical Fibre: To measure loss in dB of Step-index Multimode plastic Fibre Patchcord To measure loss in dB of Graded-Index, Multimode Glass Fibre Patchcord To measure loss in dB of Two Patchcords connected by the in-line Adaptor Laser Free Space Communication : Analogue Free Space Communication System Digital Free Space Communication System Determination of Numerical Aperature of PMMA Fibre Cable The Trainer consists of the following built-in parts: Laser Diode Transmitter unit having following built-in parts : Laser Diode Transmitter Module 6V DC at 100mA, IC Regulated Power Supply internally connected SPDT switch to select Automatic Current Control (ACC) or Automatic Power Control (APC) Potentiometer to set power output Adequate no.of other electronic components Mains ON/OFF switch, Fuse and Jewel light Laser Diode Receiver unit having following built-in parts : Laser Diode Receiver Module PIN Diode for measuring power of Laser Diode Potentiometer to set voltage output Adequate no.of other Electronic Components 6V DC at 100mA, IC Regulated Power Supply internally connected Special Feature : Two-metres PMMA Plastic Fibre Patchcord (Cable-1) Two-metres GI/mm Glass Fibre Patchcord (Cable-2) In-line SMA Adaptor Numerical Aperature measurement Jig Mandrel The units are operative on 230V  $\pm 10\%$  at 50Hz A.C. Mains Adequate no. of Patch cords stackable 4mm spring loaded plug length  $\frac{1}{2}$  metre Good Quality, reliable Terminal/Sockets are provided at appropriate places on panel for connections / observation of waveforms Strongly supported by detailed Operating Instructions, giving details of Object, Theory, Design Procedures,

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Report Suggestions and Book References Weight:- 4 Kg. (Approx) Dimension:- W 340 x H 110 x D 210 Other Apparatus Required: AF/RF Generator 10Hz to 1 MHz Three Digital Multimeter Cathode Ray Oscilloscope 20MHz Modulation and Demodulation Trainer Manufacturer India, Modulation and Demodulation Trainer Exporters, Electronics Modulation and Demodulation Trainer, Buy Modulation and Demodulation Trainer, Buy Modulation and Demodulation Trainer Online India, Lab Exporters India, Didactic, Didactic Electronics Equipments For School Lab, Electrical Training Equipment Exporters and Educational Equipments, Electrical Training Equipment Suppliers, Electronics Instruments and Equipments Manufacturers.", "brand": "JLab Export", "sku": "5", "gtin8": "5", "gtin13": "5", "gtin14": "5", "mpn": "5", "aggregateRating": { "@type": "AggregateRating", "ratingValue": "5", "bestRating": "5", "worstRating": "0", "ratingCount": "5" } }

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