



An ISO 9001:2015 Co.

Photo Transistor Characteristics with Digital Meter

Model : SA-123DM

SINCOM SA-123DM Photo Transistor Characteristics with Digital meters is comprehensive remarkable trainer useful to study characteristics of Photo Transistor under different light conditions. The Photo Transistor are basic building element of an Optical remote control and an Optical receiver circuits. The trainer is simply designed to study the Photo Transistor characteristics and determine its various parameters in a simple experimental way. The trainer is equipped with on board Digital voltmeter & Digital Ammeter and variable light intensity source.

Features

- ❖ Plastic/ Metal Package Silicon NPN Photo Transistor
- ❖ Convex Front
- ❖ Fast response time , High photo sensitivity and Small junction capacitance
- ❖ Current controlling resistor in series
- ❖ Facility to vary wide range of applied reverse DC input voltage
- ❖ In-Built Variable regulated DC Power Supply
- ❖ Multi color Circuit Diagram printed on the front of the white board
- ❖ Enclosed in an attractive, light weight, High Quality, Poly Coated Imported Pine Wooden cabinet
- ❖ On Board 3^{1/2} Digit Digital Voltmeter and Ammeter
- ❖ On Board 60W Lamp load with variable light intensity
- ❖ User friendly Designed
- ❖ Very Easy for Operation
- ❖ Interconnections by 2mm high quality banana sockets and pins
- ❖ Maximum Test points to explore all the corners of experiment
- ❖ 1 Year Warranty

Technical Specifications

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|--------------------------------|---|
| ▪ AC Mains Power Supply | : 230V ±10%, 50Hz |
| ▪ DC Power Supply | : IC Regulated variable 0V to +12V / 500mA |
| ▪ Photo Transistor Used | : Silicon NPN Photo Transistor |
| ▪ Pin Count | : Three |
| ▪ Front | : Convex |
| ▪ Viewing angle | : 70° @ |
| ▪ Dark Current | : 10-100µA @ |
| ▪ Maximum Forward Current | : 50mA |
| ▪ Maximum Operating Voltage | : 15V |
| ▪ Current Controlling Resistor | : MFR 100Ω, ±5% in series |
| ▪ Light Source | : 60W Lamp load max-Variable Intensity control |
| ▪ Digital Voltmeter | : 0-20V |
| ▪ Digital Ammeter | : 0-200mA |
| ▪ Meter Display | : Red Color, 3 ^{1/2} Digit , LED Display |
| ▪ Weight | : 2.0 kg (approx) |



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- Dimensions (mm) : L 220 x W 270 x H 110
- Interconnections : 2mm Banana sockets
- Operating Temperature : 0-50⁰C, 80% RH

Learning Scope

- To Study the characteristics of Photo Transistor w.r.t. light intensity.
- To Determine the Dark Current of Photo Transistor .
- To Observe & Note the Change in Photo Current & Voltage across Photo Transistor w.r.t. change in the intensity of light & applied Voltage.

Other Instruments Required : Nil

Accessories Included

Set of Patch Cord, Lamp Load 60W with variable light intensity and Details Instruction Manual