

# Photo Diode and Photo Transistor Characteristics with Digital Meters

**Model : SA-124DM**



**SINCOM SA-124DM Photo Diode and Photo Transistor Characteristics** with Digital meters is comprehensive remarkable All-In-One trainer useful to study characteristics of Photo Diode and Photo Transistor under different light conditions. The Photo Diode and Photo Transistor are basic building element of an Optical remote control and an Optical receiver circuits. The trainer is simply designed to study their 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 Photo Diode and Photo Transistor
- ❖ 5mm Diameter Photo Diodes
- ❖ 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<sup>1/2</sup> 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



An ISO 9001:2015 Co.

## Technical Specifications

▪ AC Mains Power Supply	: 230V $\pm$ 10%, 50Hz
▪ DC Power Supply	: IC Regulated variable 0V to +12V / 500mA
▪ Photo Device	: 5mm Photo Diode and Silicon NPN Photo Transistor
▪ Front	: Convex
▪ Viewing angle	: 70° @
▪ Dark Current	: 10-100 $\mu$ A @
▪ Maximum Forward Current	: 50mA
▪ Maximum Operating Voltage	: 15V
▪ Current Controlling Resistor	: MFR 100 $\Omega$ , $\pm$ 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 <sup>1/2</sup> Digit , LED Display
▪ Weight	: 2.0 kg (approx)
▪ Dimensions (mm)	: L 220 x W 270 x H 110
▪ Interconnections	: 2mm Banana sockets
▪ Operating Temperature	: 0-50°C, 80% RH

## Learning Scope

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