

## LED and LASER Diode Characteristics with Digital Meters

### Model : SA-131DM

**SINCOM SA-131DM LED & LASER Diode Characteristics** with Digital meters is comprehensive remarkable trainer useful to study the V-I characteristics of different colours LEDs and LASER Diode in forward bias mode. The LED and LASER Diode are often used as a visual indicators and as an optical signal source in optical communications. The trainer is simply designed to study V-I characteristics and determine the parameters of the different colours LEDs and LASER Diodes in a simple experimental way. The trainer is equipped with on board Digital voltmeter & Digital Ammeter.

### Features

- ❖ 5mm Diameter LED and 2 pin CAN type LASER Diode package
- ❖ Red, Yellow, Green colors LED and LASER Diodes are provided
- ❖ Convex Front
- ❖ LED used is having transparent Red, Yellow, Green colors, 5mm Diameter.
- ❖ Low power Red color LASER Diode
- ❖ Current controlling resistor in series
- ❖ Facility to vary wide range of applied 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
- ❖ Easy to select the LEDs and LASER Diodes
- ❖ 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

▪ AC Mains Power Supply	: 230V ±10%, 50Hz
▪ DC Power Supply	: IC Regulated Variable 0V to +12V / 500mA
▪ Device Used	: Three LED and One LASER Diodes
▪ Current Controlling Resistor	: MFR 1KΩ, ±5% in series
▪ Maximum Forward Current	: 25mA
▪ Front	: Convex
▪ <b>For Light Emitting Diode (LED)</b>	
• Diodes Used	: Light Emitting Diodes (LEDs)
• Total LEDs Used	: Three
• LEDS color	: Red, Yellow and Green
• LED Diameter	: 5mm
• Operating Voltage	: 2V



An ISO 9001:2015 Co.

• Viewing angle	: 40°
• Maximum Forward Current	: 20mA
<b>▪ For LASER Diode</b>	
• Diodes Used	: LASER Diodes
• Pin Count	: Two
• Diode Package	: CAN type- Hole mounting
• Peak Wavelength	: 650nm
• Typical single supply voltage	: 3.3V
• Operating Temperature range	: -10 to +55°c
• Power Dissipation	: 5mW maximum
▪ Total Digital Meters	: 02 (1 Voltmeter and 1 Ammeter)
▪ Digital Voltmeter	: 0-20V
▪ Digital Ammeter	: 0-20mA
▪ 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 Forward characteristics of Red, Yellow and Green colors Light Emitting Diodes (LED).
- To Observe & Note the Change in the Intensity & Voltage across LEDs w.r.t. applied forward Voltage.
- To Study the Forward characteristics of Semiconductor LASER Diode.
- To plot light Vs Current of a LASER Diode.

### Other Instruments Required : Nil

### Accessories Included

Set of Patch Cords and Details Instruction Manual