



LED and LASER Diode Characteristics

Model : SA-131

SINCOM SA-131 LED & LASER Diode Characteristics is very 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 without meters and has the facility to connect the external analog or digital voltmeter and ammeter in the circuit

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
- ❖ Facility to connect the external Digital/ Analog 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

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



An ISO 9001:2015 Co.

- Viewing angle : 40°
- Maximum Forward Current : 20mA
- **For LASER Diode**
 - 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
- 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

SINCOM Digital VI meter (DVI) : Model DVI-01 Range V-20V, I-20mA DC.

Accessories Included

Set of Patch Cords and Details Instruction Manual