

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

▪ 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
• LEDS color	: Red, Yellow and Green
• LED Diameter	: 5mm
• Operating Voltage	: 2V



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• 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