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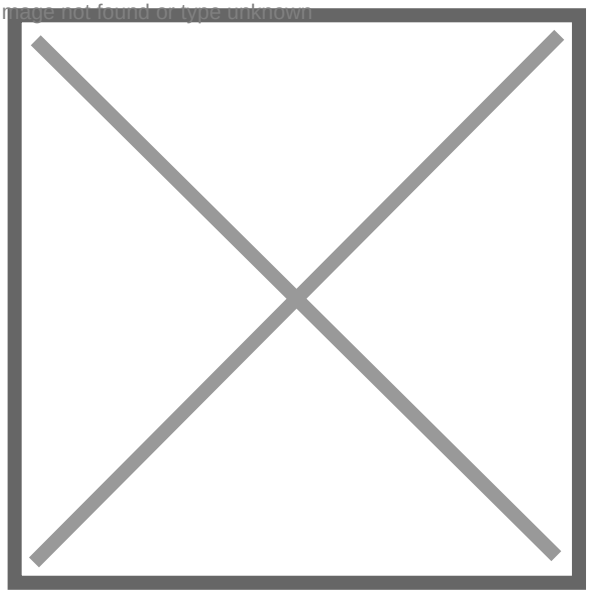
Product Name :

Apparatus for Demonstrating Reflection, Refraction, Polarization and Diffraction Using Microwaves

Product Code :

SCL-203/050

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Description :

Apparatus for Demonstrating Reflection, Refraction, Polarization and Diffraction Using Microwaves (Product Code: SCL-203/050) is a microwave optics set used to show that microwaves reflect, refract, polarize and diffract like light, in college and senior school physics labs. Its Gunn diode transmitter works at 10.7 GHz (? = 2.8 cm) and is paired with a matching receiver, a probe detector, aluminium mirrors and a polarizing mesh. The set is made by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, an OEM manufacturer, at its own factory in Ambala, India.

Specifications

Parameter	Detail
Transmitter	Gunn diode, 10.7 GHz (? = 2.8 cm)
Operating voltage (as listed)	(10–12) V to (2–3.5) V
Transmitter housing	Cylindrical case, diameter 83 mm, length 70 mm; overall length 225 mm
Receiver	Similar in construction to the transmitter
Probe detector	Silicon microwave diode, same as the receiver, mounted on a short vertical non-metallic rod
Probe base	4 sockets for connection to the external circuit; 75 x 50 x 135 mm
Aluminium mirrors	200 x 300 mm; 50 x 300 mm; 300 x 300 mm
Acrylic mirror	300 x 300 mm
Polarizing mesh	190 x 300 mm
Electrical accessories	Power source, diode, speaker, digital multimeter, BNC T cable and BNC cable
Product code	SCL-203/050
Manufacturer	Jain Scientific Equipments Pvt Ltd (ScienceLab) — OEM
Country of origin	India (made in Ambala, Haryana)

What Is the Microwave Optics Apparatus Used For?

Because the wavelength is 2.8 cm rather than a fraction of a micrometre, wave effects that are hard to see with light become easy to measure. Aiming the transmitter at an aluminium mirror and finding the receiver angle of strongest signal confirms the law of reflection. Rotating the polarizing mesh between transmitter and receiver makes the signal rise and fall, showing that the transmitted microwaves are polarized, and the narrow 50 x 300 mm plate can be combined with the wider plates to form slits for diffraction and interference work.

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