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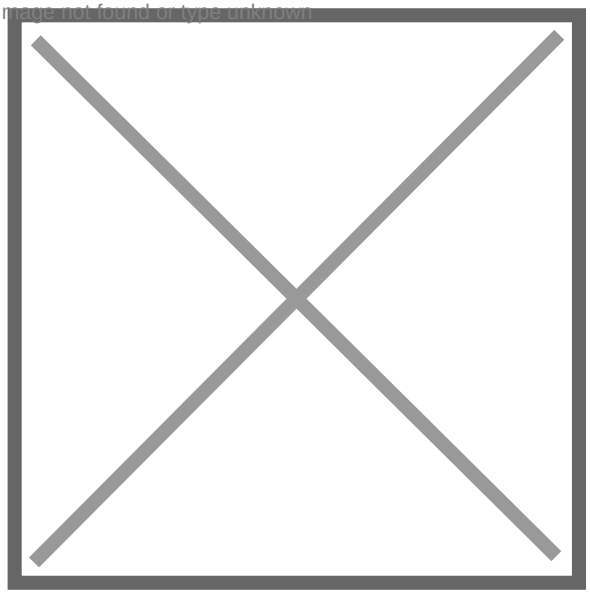
Product Name :

Apparatus for studying the reflection of light from different surfaces and the refraction of light in different environments

Product Code :

SCL-577/043

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Description :

Apparatus for studying the reflection of light from different surfaces and the refraction of light in different environments (Product Code: SCL-577/043) is a sensor-based optics experiment kit used to compare light reflected by various surfaces and to measure refraction through glass in school physics labs. Its light sensor reads (0–2 000) or (0–30 000) lux and linksto a touch-controlled smartboard. The set is made by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, an OEM manufacturer, at its own factory in Ambala, India.

Specifications

Parameter	Detail
Light sensor range	(0–2 000) lux / (0–30 000) lux
Sensor resolution	0.5 lux / 10 lux
Sampling frequency	Over 1000 measurements per second
Display and control	Connects to a smartboard; controlled by touch
Power source	1–14 V AC/DC, 6 A
Refraction block	Flat lens with parallel faces, (50 x 20) mm
Other glass optics	Glass lens grinder and glass spoon lens (names as listed)
Angle measurement	Standard-type protractor (listed as a rapporteur) with 50 cm base
Model	Model of window phenomenon guide (as listed)
Product code	SCL-577/043
Manufacturer	Jain Scientific Equipments Pvt Ltd (ScienceLab) — OEM
Country of origin	India (made in Ambala, Haryana)

What Is the Light Reflection and Refraction Apparatus Used For?

For the reflection part, students aim a light beam at sample surfaces such as a mirror, white card, black card or foil, and record the reflected illuminance with the sensor at a fixed distance and angle. The low range, with 0.5 lux resolution, suits weak reflections from dark matt surfaces, while the high range handles bright direct beams. Because the sensor sends over 1000 readings per second to the smartboard, the whole class can watch values change as a surface is tilted.

For refraction, the parallel-faced glass block is placed on the 50 cm protractor, a narrow ray is directed at it, and the angles of incidence and refraction are read so that the refractive index can be calculated from n = sin i / sin r. Students also see that the ray leaving the block runs parallel to the incoming ray but shifted sideways. As optics lab equipment, the set gives clearer readings in a darkened room, and the glass parts should be handled by their edges to keep faces clean.

What to Specify When Ordering

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