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Product Name :

Focusing Solar Energy Collector

Product Code :

SLE/ESA/05



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Description :

Focusing Solar Energy Collector (Product Code: SLE/ESA/05) is a parabolic-reflector solar concentrator on a mobile frame, used to demonstrate the principles, advantages and limits of focusing solar energy in engineering and renewable energy teaching labs. Students aim a polished stainless steel reflector at the sun and measure how hot copper collectors of four sizes become. It is made by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, an OEM manufacturer, at its own factory in Ambala, India.

Key Details

Parameter	Detail
Design	Focusing solar energy collector on a mobile frame, specially designed for educational use
Reflector	Highly polished stainless steel parabolic reflector
Reflector mounting	Trunnion bearings on a turntable; horizontal and vertical position adjustable
Energy collector	Copper cylinder with an embedded thermocouple that measures cylinder temperature
Collector sizes	Four different sizes supplied, for comparing concentration ratios
Radiation measurement	Solarimeter attached to the reflector carrier measures incident solar radiation
Ambient reference	Extra thermocouple measures ambient temperature
Collector cover	Removable transparent cover for shielded and unshielded collector studies
Product code	SLE/ESA/05
Manufacturer	Jain Scientific Equipments Pvt Ltd (ScienceLab) — OEM
Country of origin	India (made in Ambala, Haryana)

What Is the Focusing Solar Collector Used For?

Concentrating collectors reach higher temperatures than flat panels because a large reflector area focuses sunlight onto a small absorber. With this apparatus, students follow the sun by turning the reflector on its turntable and tilting it on its trunnions until the focus falls on the copper collector, then log collector temperature against ambient temperature and the solarimeter's incident radiation reading.

Changing between the four collector sizes alters the concentration ratio, so groups can relate absorber size to the temperature reached; repeating a run with and without the transparent cover shows how a shielded collector behaves compared with an open one. The mobile frame makes it easy to take the unit outdoors on a clear day. Keep hands and eyes away from the focal point, where

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