

Mahindra TERI Centre of Excellence (MTCoE) For Sustainable Habitats



TC-8746



Premier laboratory for
THERMAL PARAMETER TESTING

The Mahindra TERI Centre of Excellence (MTCoE) for Sustainable Habitat is a joint research initiative of Mahindra Lifespaces and TERI. It focuses on developing science-based solutions for India's future-built environment, intending to reduce the energy footprint of the real estate industry.



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WHY MTCoE?



Accredited Quality Systems:
IS/ISO/IEC-17025:2017,
ISO 9001 Certified

**Advanced equipments with
excellent precision and
accuracy**



NABL accredited lab

**Enhanced product
credibility**



**Well organized
"state-of-the-art" facility**

**Special consideration for
Academic Institutions**



**Platform to boost product
outreach amongst stakeholders**

**Supplementary benefits in
bulk quantity testing**



OUR MATERIAL TESTING SERVICES

Thermal
Conductivity
(*K-Value*)

Thermal
Diffusivity
(*α-Value*)

Specific Heat
Capacity (*C*)

Thermal Emittance
(*ε-Value*)

Thermal
Transmittance
(*U-Value*)

Thermal Resistance
(*R-Value*)
and **more....**

BRICKS & BLOCKS



POWDER



GELS



LIQUIDS



MATERIAL ASSEMBLIES



GLAZING & **MORE..**



Tested more than 150 vernacular, contemporary and innovative materials such as:

Strawclay Brick, Afghanistan Traditional, Brick, Insulating Fabric, Low Carbon Plaster, Agrowaste Cube, Glass Tile and **many more....**



HOT DISK THERMAL CONSTANT ANALYSER



Thermal Constant Analyser rapidly and accurately measures the thermal conductivity, thermal diffusivity and specific heat capacity of a wide range of materials and encompasses high level of accuracy with material size flexibility.

The material testing by Transient Plane Source technology is based on ISO:22007-2.



GUARDED HOT BOX

The Guarded Hot Box is used to measure the Thermal Transmittance (U-value) and Thermal Resistance (R-value) of building material assemblies by steady-state method as per ASTM C 1363.



EMISSOMETER



The existing Emissometer model AE1 with the Scaling Digital Voltmeter is a special purpose instrument for measuring hemispherical emittance in compliance with ASTM C1371. The instrument is applicable for both flat as well as non-flat surfaces for thermal emittance (ϵ -value) measurements. For installed surfaces emittance can be measured in place.



SKY SCANNER

Sky Scanner is used to study the radiation contribution of the diffuse sky which is an important parameter for building automation, building design, daylight software modeling and light pollution research.

The sensor with two highly sensitive detectors, and viewing angle of 11 degrees captures the hemisphere in 145 sequential steps. Two-axis control of the sensor and precise tracking mechanism helps in achieving a high durability and repeatability.

Measurements are based on the CIE108-1994 recommendation (CIE - International Commission on Illumination, IDMP - International Daylight Measurement Program) and Standard Test Method ISO 9060:2018

The luminance values are measured per kcd/m^2 and radiance value per $\text{W}/\text{m}^2/\text{sr}$.

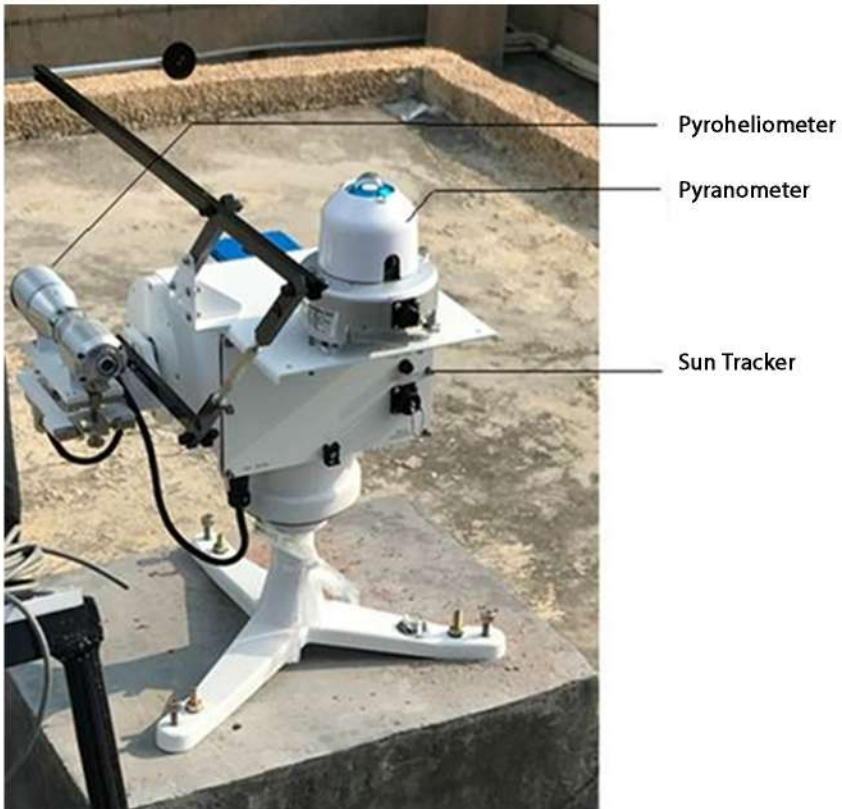


SOLAR MONITORING UNIT

The Solar Monitoring Unit consists of a pyranometer and a pyrheliometer on a sun-tracking mechanical system.

The Pyroheliometer measures the Direct Normal Irradiance (DNI) of the sun, whereas the Pyranometer measures the Diffuse Horizontal Irradiance (DHI) of the sky as per ISO 9060: 2018 standard test method.

Using these recorded parameters, an empirical model of sky brightness can be computed for the Indian sky.



CONTACT US

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Mahindra
LIFESPACES

