

Emissivity Measurement Apparatus



Product Categories: [Engineering Equipment](#), [Heat Transfer Lab](#)

Product Page: <https://www.labappara.com/product/emissivity-measurement-apparatus/>

Product Description

Emissivity Measurement Apparatus

Technical description:

The present set-up is designed to measure the emissivity of test plate. The test plate comprises of a mica heater sandwiched between two circular plates. Black plate is identical with test plate, but its surface is blackened. As all the physical properties, dimension and temperature are equal; heat losses from both plates will be same except radiation loss. Hence the input difference will be due to difference in emissivity. Both plates are supported on individual brackets in a enclosure with one side glass to ensure steady atmospheric conditions. Temperature sensors are provided to measure the temperature of each plate and surrounding. Electric supply is given to heaters through separate variacs so that temperatures of both can be kept equal and is measured with digital voltmeter and digital ammeter.

Technical specification:

Table for set-up support.

Test plate diameter : 160 mm (approx.)

Black plate dia. : 160 mm (approx.)

Heater (2 nos.): ni-chrome wire heater.
(one each for test plate & black plate)

Control panel comprising of

Digital voltmeter. : 0-300 volt.

Digital ammeter. : 0-2 amps.

Dpdt selector switches: for digital voltmeter & digital ammeter.

Variacs: 0-230 v, 2 amps, (2 nos.)

(one each for test plate and black plate).

Digital temp. Indicator: 0-3000c, with multi-channel switch

Temperature sensors: rtd pt-100 type.

With standard make on/off switch, mains indicator etc.

Instruction manual : an english instruction manual will be provided along with the apparatus

Cabinet to accommodate the slab assembly with front window of glass/acrylic.

The whole set-up is mounted on a powder coated base plate.

Control panel:

Standard make on/off switch, mains indicator.