

Emissivity Meter TSS-5X-3



Typical Applications

- Easy emissivity measurement at normal room temperature.
- In material research, designing and planning, thermo-analysis, insulation material research etc.
- To ascertain surface condition of material.
- in space research, semi-conductor and nuclear energy research.

Technical Specifications

Measurement system	Reflective infrared energy measurement system
Spectrum range	2 ~ 22 μm
Measurement Range	Emissivity : 0.00 ~ 1.00
Accuracy	less than ± 1
Target size	φ 15mm
Measurement distance	12mm (fixed distance from detection head)
Ambient temperature	10 ~ 40°C (room temperature)
Measurement Display	LED Digital Display
Output	0 ~ 0.1V, 0 ~ 1V Full scale
Operating temperature/RH	10 ~ 45°C · 35 ~ 85% (non-condensing)
Power supply	AC100 ~ 240V, 50 / 60Hz, 30W (2000L mm cord with connector/plug)
Measurement/mass	Detection head: φ 51 × 137L mm, 0.6kg (3000L mm with robot cable)
	Measuring unit 156H × 306W × 230D mm, 5.0kg
Accessory	Emissivity standard piece case 84H × 238W × 185D mm, 1.1kg
	(Emissivity standard) Emissivity 0.06, 0.97 Standard piece One piece each

Emissivity Meter TSS-5X-3 | Structure

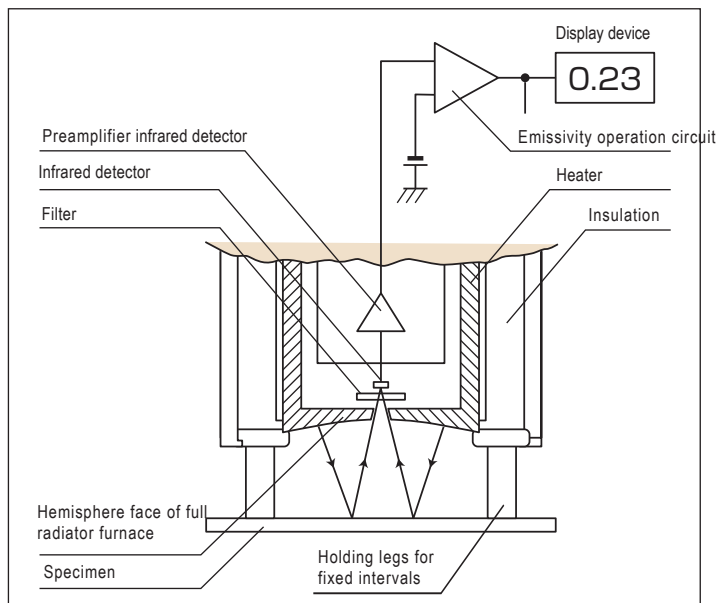
Infrared ray radiation source

On heating hemispheric face of full radiator furnace at a constant temperature, it radiates infrared energy to specimen//target and

Infrared detector

Infrared radiation is reflected by specimen and part of this enter a top hole of hemispheric face of radiator furnace.

Infrared detector detects the energy at constant ratio.



Emissivity Operation Circuit

Emissivity of the specimen/target is calculated from outputs of reflected energy detected.

Note: Related expression of emissivity of specimen/target (γ) and emissivity (ϵ) is :

$$\epsilon = 1 - \gamma$$

Calibration of displayed emissivity value

Calibration of emissivity of the specimen/target can be done using standard blocks. ($\epsilon = 0.06$ and 0.94).

Emissivity Display

Display emissivity of specimen/target with digital.



DUE TO CONTINUOUS PRODUCT IMPROVEMENT, THE DESIGN AND TECHNICAL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE

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