

Thermal Radiation Training Unit ICF-HL-TR-I02

INTEGRATED CIRCUITS ELECTROINC INDUSTRIES

2024

1.Overview

The ICF-HL-TR-I02 – Thermal Radiation unit is designed for the investigation of thermal and light radiation phenomena. It allows users to study the influence of distance and angle of incidence on radiation intensity through a broad range of experiments. Thermal radiation refers to the transfer of energy via electromagnetic waves, emitted by any object with a temperature above absolute zero. This unit covers the full spectrum of thermal radiation, including ultraviolet (UV), visible light, and infrared (IR) radiation. It provides a comprehensive understanding of non-contact heat transfer and optical energy behavior, making it ideal for educational and research applications in heat transfer and radiative physics.



2.specifications

- Radiation sensor.
- Lux meter.
- Temperature sensors.
- White light observable radiation radiator.
- Color filters in different colors.
- Measuring with angle adjustment.
- Radiation source .
- Illuminated surfaces (diffusing lens, orifice plate).

3.Experiments will be done

- 1. Stefan Boltzmann law experiment.
- 2. Experiment to determine the diffusion of different types of plate surfaces.
- 3. Inverse square rule of light experiment.
- 4. Lambert's direction and distance laws.
- 5. Kirchhoff's laws (absorption, reflection, emission).