

## **EXPERIMENT # 6**

### **MEASURING DIFFERENT PARAMETERS USING LUX METER, MICRO POWER MONITOR AND INFRARED THERMOMETER.**

#### **OBJECTIVE:**

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#### **Lux Meter**

The lux (symbol: lx) is the SI unit of illuminance and luminous emittance, measuring luminous flux per unit area. It is equal to one lumen per square metre. In photometry, this is used as a measure of the intensity, as perceived by the human eye, of light that hits or passes through a surface.

#### **Features:**

The following are features of lux meter:

- Precise and easy readout
- High accuracy in measuring
- Auto zero adjustment
- Data-hold function for holding measurements.
- Permits a wide range of light measurements.
- LCD display provides low power consumption.
- Compact, light-weight, and excellent operation.
- LCD display can clearly read out even in high ambient light.
- Range: 1-50,000 Lux



## Micro Power Monitor

Effective power monitoring allows for the capture of critical power and energy usage and efficiency information. This data enables users to improve the effectiveness of critical systems, analyze plan and relocate demand, isolate power issues and schedule maintenance/upgrades. It measures the *watt, current, voltage, frequency, time accumulated, power consumed, CO<sub>2</sub> emission, power factor* of the load which we connect it to the power monitor.

## Methods of Monitoring Power:

The most direct and effective way to monitor power is by utilizing a suitable power meter like the Micro Power Monitor. These meters have the power monitoring parameters to collect a detailed and granular picture of the power usage and characteristics, allowing users to make educated decisions and plan new procedures.



## Infrared thermometer

Infrared thermometer is also called **laser thermometers** as a laser is used to help aim the thermometer, to describe the device's ability to measure temperature from a distance. By knowing the amount of infrared energy emitted by the object and its emissivity, the object's temperature can often be determined. .



**APPARATUS:**

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**PROCEDURE:**

**For Lux Meter:**

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**For Micro Power Monitor:**

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**For Infrared Thermometer:**

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**OBSERVATIONS AND CALCULATIONS:**

**Lux Meter:**

S.No	Lux	Power	Lux per watt

**Micro Power Monitor:**

S.No	Appliance Used	Power (Watt)	Current (Ampere)	Voltage (Volt)	Frequency (Hz)	Power factor	Power consumed (KWh)

**Infrared Thermometer:**

S.No	Temperature to be measured for	Temperature in °C	Temperature in °F

**CONCLUSION:**

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