# ENVIRONMENTAL EQUIPMENTS



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**Temperature: - 40 to 158°F**
**- 40 to 70°C**
**Humidity: 0 to 100%RH**

**Data loggers**: Map internal/ex... ...perature and relative humidity in an indoor/outdoor environment

No of Units purchased: 05

### Specification:

| Specifications | Range | Resolution | Accuracy (%rdg+digits) |
|---|---|---|---|
| Temperature | -40 to 158°F | 0.1°F/°C | ±1.8°F (14 to 104°F) |
| | | | ±3.6°F (all other ranges) |
| | -40 to 70°C | | ±1.0°C (-10 to 40°C) |
| | | | ±2.0°C (all other ranges) |
| Humidity | 0 to 100%RH | 0.1%RH | ±3%RH (40 to 60%) |
| | | | ±3.5%RH (20 to 40 & 60 to 80%) |
| | | | ±5%RH (0 to 20 & 80 to 100%) |
| Datalogging interval | 1 second to 24 hours | | |
| Memory | Temperature: 16,000 points; Relative Humidity: 16,000 points | | |
| Dimensions | 3.7 x 1.9 x 1.2" (94.4 x 48.9 x 31.2mm) | | |
| Weight | 3.2oz (90.7g) | | |

Usage on field:

C E

Monitors Humidity and Temperature levels in warehouse, storage rooms, freezers, shipping vans, and offices

USB connector easily plugs into a computer for data analysis of Temperature and Humidity

**Infrared Thermometer**: Map surface temperatures

No of units purchased: 01

Specifications:

| Specifications | |
| --- | --- |
| IR Temperature Range | -4 to 752°F (-20 to 400°C) |
| Basic Accuracy | ±2% of reading or ±3.6°F/2°C |
| Max resolution | 0.1°F/°C |
| Distance to Target | 12:1 |
| Emissivity | 0.1 to 1.00 (adjustable) |
| Dimensions | 6.8x3.8x1.8" (172x97x46mm) |
| Weight | 8oz (226g) |

Usage on field

**Compact non-contact InfraRed (IR) Thermometer measures up to 752ºF (400°C) built-in laser pointer to identify target area and improve aim. Adjustable emissivity better accuracy when measuring temperature on different surface materials**

Test for temperature in HVAC systems

Checking for heat loss around windows and doors

Detect hot spots in breaker panels

**Environmental Meters:**



**Anemometer: Measures air velocity**

**No of units Purchased: 01**

**Specifications:**

- Measures air velocity: 80 to 3936ft/min,
  1.1 to 20m/s, 0.8 to 72km/h,
  0.9 to 45 MPH, and 0.8 to 39 knots



**Sound Level Meter: Measures sound in decibels**

**No of units purchased: 01**

**Specifications:**

- Measures Sound Level from 40 to 130dB with
  A Frequency Weighting for human hearing and fast
  response time of 125mS



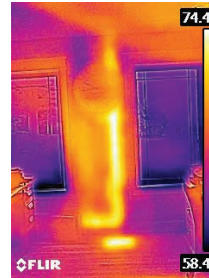**Lux Meter: Measures daylight**

**No of units Purchased:02**

**Specifications:**

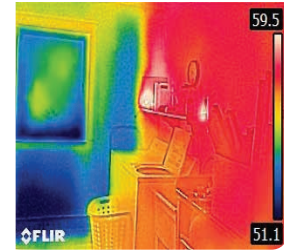- Measures light intensity up to 4000Fc/40,000Lux
  with measuring rate of 1.5 times/second

**Thermal imaging Ca...**
**behaviour of buildin...**

**No of units purchased: 81**

Warm Drain Pipe in Wall

Uninsulated Outside Wall

## Specifications:

### Imaging Specifications

| Imaging and Optical Data | |
| --- | --- |
| IR sensor | 80 × 60 (4,800 measurement pixels) |
| Thermal Sensitivity | <0.10°C |
| Field of view | 41° × 31° |
| Minimum focus distance | Thermal: 0.15 m (0.49 ft.)<br>MSX: 1.0 m (3.3 ft.) |
| Image frequency | 9 Hz |
| Focus | Focus free |
| Spectral range | 7.5–14 µm |
| 3" Display (color) | 320 × 240 pixels |
| Auto orientation | Yes |
| Touch screen | Yes, capacitive |
| **Image presentation modes** | |
| Thermal image | Yes |
| Visual image | Yes |
| MSX | Yes |
| Gallery | Yes |
| **Measurement** | |
| Object temperature range | −10°C to +150°C (14 to 302°F) |
| Accuracy | ±2°C (±3.6°F) or 2%, whichever is greater, at 25°C (77°F) nominal |
| **Measurement Analysis** | |
| Spotmeter | On/off |
| Emissivity correction | Yes; matte/semi/glossy + user set |
| Measurments correction | Reflected apparent temperature<br>Emissivity |
| **Set-up** | |
| Color palettes | Iron, Rainbow, Rainbow HC, Gray |
| Storage media | Internal memory stores at least 500 sets of images |
| Image file format | Standard JPEG, 14-bit measurement data included |
| **Video Streaming** | |
| Non-radiometric IR-video streaming | Yes |
| Visual video streaming | Yes |
| **Digital Camera** | |
| Digital camera | 640 × 480 pixels |
| Digital camera, focus | Fixed focus |
| **Additional Information** | |
| USB, connector type | USB Micro-B: Data transfer to and from PC, iOS and Android |
| Battery | 3.7 V Rechargeable Li-ion polymer battery |
| Battery operating time | 2 h |
| Charging system | Charged inside the camera |
| Charging time | 1.5 h |
| External power operation | AC adapter, 90–260 VAC input<br>5 V output to camera |
| Power management | Automatic shut-down |
| Operating temperature range | −10°C to +50°C (14 to 122°F) |
| Storage temperature range | −40°C to +70°C (−40 to 158°F) |
| Weight (incl. Battery) | 0.13 kg (0.29 lb.) |
| Size (L × W × H) | 125 × 80 × 24 mm (4.9 × 3.1 × 0.94 in.) |
| **System Includes** | |
| Infrared camera<br>Battery (inside camera)<br>Lanyard<br>Power supply/charger with EU, UK, US, CN and Australian plugs<br>Printed Getting Started Guide<br>USB memory stick with documentation<br>USB cable | |

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Protection

**Air Quality Meters:**



**Portable indoor air quality meter (Co2) : Measures quantity of Co2(carbondioxide) in air.**

**No of units purchased: 01**

**Specifications:**

| Specifications | Range | Resolution |
|---|---|---|
| Carbon Dioxide ($CO_2$) | 0 to 5,000ppm | 1ppm |
| Temperature | 14 to 140°F (-10 to 60°C) | 0.1°F/°C |
| Humidity | 0.0 to 99.9% | 0.1% |
| Dimensions/ Weight | 7.9x2.7x2.3" (200x70x57mm)/ 6.7 oz. (190g) | |



**Portable indoor air quality meter (Co): Measures quantity of Co (carbon monoxide) in air.**

**No of units purchased:01**

**Specifications:**

| Specifications | Range | Resolution |
|---|---|---|
| Carbon Dioxide ($CO_2$) | 0 to 5,000ppm | 1ppm |
| Temperature | 14 to 140°F (-10 to 60°C) | 0.1°F/°C |
| Humidity | 0.0 to 99.9% | 0.1% |
| Dimensions/ Weight | 7.9x2.7x2.3" (200x70x57mm)/ 6.7 oz. (190g) | |