



**Above:**  
*Detail of USB socket*

**Below:**  
*Optional wall mounting security bracket*

It is recognised that one of the major causes of damage to works of art, fine furniture, carpets, wall coverings and museum exhibits is light falling on the objects.

Hanwell provide a range of instruments that enable the conservator to measure the levels of Lux and the UV content of light.

The ml4703 Lux & UV radio transmitter is part of the 4000 range of advanced data loggers, allowing monitoring of a site, with historical analysis of data.

The most damaging part of the light is its ultraviolet (UV) content. Hanwell provide a range of instruments that enable the conservator to measure the levels of Lux and the UV content of light. Measurements can be taken of the proportion of UV present ( $\mu\text{W}/\text{lumen}$ ), the total amount of UV ( $\text{mW}/\text{M}^2$ ), and the amount of visible light (Lux).

Lux is measured in the range 10 to 5000 Lux. This is generally sufficient for conservation environments where a Lux level of over 600 is not normally desired, but higher ranges can be supplied on request. The UV range is 20 to 2000  $\mu\text{W}/\text{Lumen}$ .

Each 4000 radio transmitter has enough internal memory to store up to 100000 readings and is in fact continually logging. When an object that is being monitored by a 4000 series transmitter goes out on loan the transmitter can travel with the object. When the object returns home the 4000 series unit can be downloaded via the high speed USB connection directly into the PC software. The environmental data for the time that the object has been away will be added to previously stored data, providing a continuous history for that object.

The moulded case allows easy access to the battery and USB socket, as well as having slots to fit onto secure wall brackets.

The ml4000 range has been designed to comply with the RoHS and WEEE EU directives, and carries the CE mark.



## Lux and UV

**Product Code** ML4703-xxx.xxx\*  
**Series** ml4000

### Typical Applications

Monitoring in:

- ° Laboratories
- ° Hospitals
- ° Pharmaceutical
- ° Warehousing

### Instrument

**Dimensions:** 110 x 80 x 35mm

**Weight:** 200 grams

**Power Supply:** 3.6 Volt AA Lithium battery

**Battery Life:** 8 months

**Case Materials:** ABS & PC

**Operating Humidity Range:** 0...100% non-condensing

**Operating Temperature Range:** -20° to +60°C

**Memory Capacity:** 100000 readings

### Sensor

**Lux Sensor Type:** Photometric diode detector

**Visible Wavelength:** 400 to 700nm

**Visible Power:** 10 to 5000 lux

**Colour Response:** Human eye (CIE curve matched)

**Accuracy:** +/- 1%

**UV Sensor Type:** UV silicon photodiode

**UV Proportion Range:** 20 to 2000  $\mu\text{W}/\text{Lumen}$

**UV Power Range:** 0 to 2000  $\text{mW}/\text{m}^2$

**UV wavelength Range:** 250 to 400nm

**Accuracy:** +/- 1% (calibration spectrum)

**Angular response:** Cosine

### Radio

**\*Radio Frequency:** 434.075MHz

433.920MHz (fixed)

433.875 - 434.650MHz

in 25KHz increments

(synthesised)

**Radio Power:** 10 mW

**Radio Range:** 3 km over open ground

### Accessories

**Code:**

W200 USB logger software

Y119 Wall mounting security bracket

Y055 USB setup communications cable

G129 Replacement 3.6V Lithium AA battery