

UV RADIOMETER UM-10

An easy-to-use instrument for measuring ultraviolet radiation. Choose from three different high-sensitivity receptor heads according to your application.



MAIN FEATURES

Easy operation

Wide total measuring range (0.1 to 199,900 μ W/cm²) with automatic range selection

Choice of three different receptor heads to match specific applications

Compact, handheld design

Digital (RS-232C) and analog output terminals

MAIN APPLICATIONS

Fields Utilizing Photochemical Reactions

- Checking exposure of photoresists in semiconductor manufacturing
- Checking exposure of emulsions for printing or platemaking
- Testing fading due to UV exposure
- Evaluating characteristics of solar cells
- Testing deterioration of products due to UV exposure

Fields Utilizing Biological Applications of UV Exposure

- Diagnosis of erythema and other skin pigmentation problems
- Treatment of white skin spots or oversensitivity to light
- Optimization and control of breeding conditions for fish and domestic animals
- Suppressing growth of useless shoots on plants
- Monitoring conditions for photosynthesis

Fields Utilizing the Photoelectric Effect

- Electrophotography
- Electrographic etching

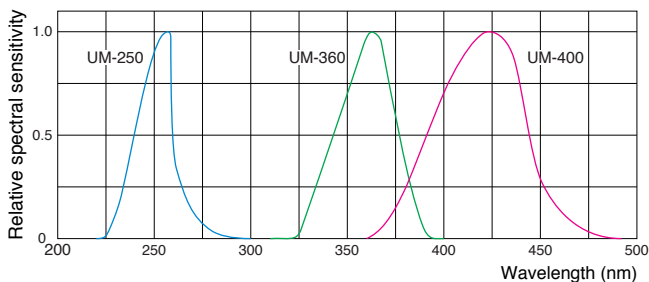
Fields Requiring Use of Sterilization Lamps

- Food processing
- Beauty treatment
- Scientific research

Other fields which require adjustment, monitoring, or research of ultraviolet light and light sources

THREE DIFFERENT RECEPTOR HEADS

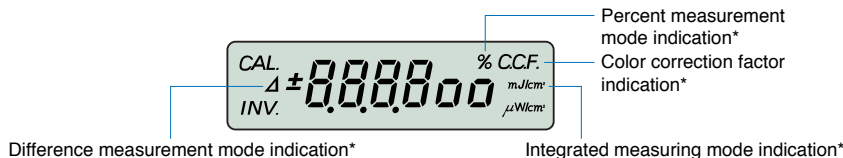
Receptor Head UM-250 (220 to 300nm) **Receptor Head UM-360 (310 to 400nm)** **Receptor Head UM-400 (360 to 480nm)**



EXAMPLES OF SUBJECT LIGHT SOURCES

- Fluorescent health lamps
- High-pressure mercury lamps
- Ultra-high-pressure mercury lamps
- Photopolymerization lamps
- Blacklight lamps
- Copier lamps
- Xenon lamps
- Fluorescent lamps
- Sterilization lamps

EXAMPLES OF SUBJECT LIGHT SOURCES



* Available only when optional Expansion Keyboard **UM-A25** is attached.

OPTIONAL ACCESSORIES



Expansion Keyboard **UM-A25**

With Expansion Keyboard **UM-A25** attached, the following functions are added.

Integrated irradiance

The total irradiance received over a period of time can be measured.

Maximum integrated irradiance

Approx. 1,000,000,000mJ/cm

Maximum integration time: 999.900sec

Color correction factor

By setting the appropriate color correction factor, the **UM-10** can be adjusted to more accurately measure the irradiance of different lamp types.

Irradiance difference

The difference between a measured irradiance and a target irradiance* stored in memory can be determined.

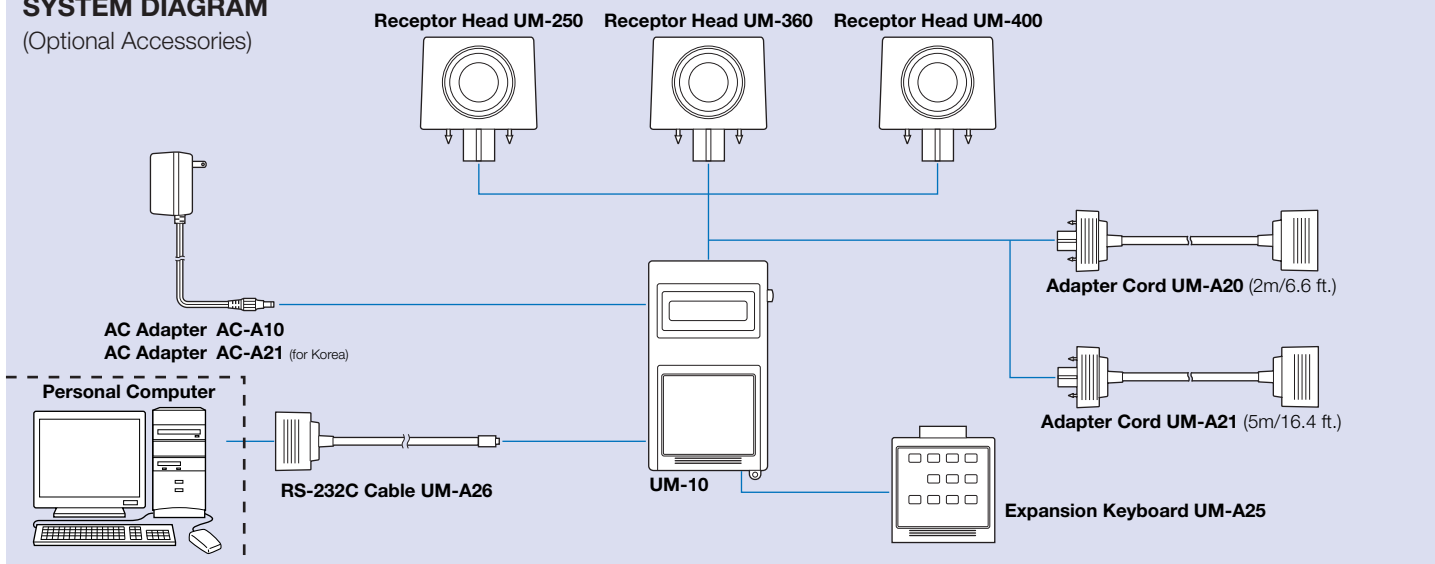
Percent irradiance

The measured irradiance as a percentage of a target irradiance* stored in memory can be determined.

*The target irradiance can be measured or input as numerical values.

SYSTEM DIAGRAM

(Optional Accessories)



SPECIFICATIONS

Type	Irradiance meter with interchangeable receptor heads for measuring UV radiation			
Receptor heads	Receptor	Silicon photodiode		
	Model	UM-250	UM-360	UM-400
	Spectral response	220 to 300nm	310 to 400nm	360 to 480nm
	Peak wavelength	250±10nm	365±5nm	415±5nm
Cosine error	30°	Within ±3%	Within ±3%	Within ±3%
	60°	Within ±15%	Within ±10%	Within ±10%
Measurement modes	Irradiance ;integrated irradiance*and integration time*;irradiance difference*;percent irradiance*			
Irradiance measuring range	0.1 to 199,900μW/cm ² in four automatically selected ranges			
Integrated irradiance range*	Maximum approx.100000mJ/cm ² measurable (in 9999 display cycles)			
Integration time*	999,900sec.(288h)			
Linearity	Within ±5% of reading = 1 digit			
Temperature/humidity drift	Within ±3% ±1 digit (of value displayed at 23°C/73.4°F) within operating temperature/humidity range			
Analog output	0 to 3V;1mV/digit			
Digital output	RS-232C 2400BPS			
Display	4-digit LCD			
Operating temperature/humidity range	0 to 40°C, relative humidity 85% or less (at 35°C) with no condensation			
Storage temperature/humidity range	-20 to 55°C, relative humidity 85% or less (at 35°C) with no condensation			
Power source	One 9V battery or optional AC adapter			
Dimensions	73.5X186X33mm(2-7.8X7-5/16X1-5/16 in)			
Weight	270g(9.5 oz.) including battery			
Standard accessories	Case;Cap;Strap;Analog output plug			

*Available only with optional Expansion Keyboard **UM-A25** attached.
Specifications are subject to change without notice.