
DIGITAL RADIOMETER

The Gould-Bass DLM-1000 Digital Radiometer is a portable, 3-1/2 digit instrument that measures either blacklight intensity in the spectral range of 320-380 nanometers in microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$) or visible light intensity of 380 - 700 nanometers (photometric response) in Lux or in foot-candles, depending on sensor selected.

The latest LSI circuit design and display technology is used to achieve the lowest possible component count. This, in turn, assures reliability, accuracy, stability, and rugged dependability. In combination with its functional and aesthetic design, these radiometers are the easiest to handle blacklight, and incandescent or fluorescent visible light measuring instruments available today. The "DigiGlo" LCD display provides constant fluorescent illumination with no battery draw.



Features

- ◆ Meets AMS, ASTM, & Mil Standards
- ◆ NIST Traceability
- ◆ Includes visible & blacklight sensors
- ◆ Reads accurately 320-380 nm range
- ◆ Visible light Lux or Footcandle sensor option
Reads accurately 380 - 700 nm range
- ◆ Visible sensor corrected to CIE curve
- ◆ Constantly fluorescing LCD
- ◆ Auto zeroing display
- ◆ Compact, space age polymer case
- ◆ Option of incandescent or fluorescent white light calibration
- ◆ Low Battery Indicator

Benefits

- ◆ Compliance for MPI & FPI Processes
- ◆ Assures meter accuracy
- ◆ Interchangeable/Economical
- ◆ Reads full UVA range
- ◆ Satisfies customers visible light sensor requirements
- ◆ Assures photopic response
- ◆ Easy to read in dark with no battery draw
- ◆ No adjustments required
- ◆ Withstands rugged NDT use
- ◆ Customizes instrument to your specific requirements
- ◆ When to replace battery

TECHNICAL DATA MODEL DLM-1000

1. SENSOR

Model DLM-1000 "B" UV Sensor.....320-380 nm(mW/cm²)
 Model DLM-1000 "C" Visible Sensor380-700 nm(foot-candles)
 Model DLM-1000 "D" Visible Sensor.....380-700 (Lux)
 (Photometric Response)

Calibration: Sensors are calibrated using line sources, or if more appropriate for the application, wide bandwidth sources. Calibration is within 5% of a working standard, traceable to the NATIONAL INSTITUTE OF STANDARDS and TECHNOLOGY, formerly NBS.
 Temperature coefficient±0.25%/°C.

2. READOUT UNIT

Display 13mm(.0.5 in.) constant fluorescing
 Liquid Crystal Display (LCD)
 Sampling time.....0.4 seconds

Electrical Specifications:

Range	Resolution	Accuracy	Units
		25° ± 5° C	
0-1999	1	± 2% (+2digits)	FC or Lux
0-19990	10	± 2% (+2 digits)	µW/cm ²

Measurement Units

Spectral Range	Model	Units
320 - 380 nm	DLM-1000 "B" UV sensor	µW/cm ²
380 - 700 nm	DLM-1000 "C" visible sensor	FC
380 - 700 nm	DLM-1000 "D" visible sensor	Lux

3. POWER REQUIREMENT

Battery Operation.....One 9-volt battery provided
 Current Drain.....2 mA(approx)
 Battery Life.....150 - 200 hours

4. TEMPERATURE RANGE

Operation0° - 50° C (32° - 122°F)
 Storage.....10°C - 50°C (14° - 122°F)

5. HUMIDITY RANGE

0 to 100% R.H. non condensing

6. DIMENSIONS

Readout Unit.....108mm x 73mm x 23mm
 (4.3in. x 2.9in. x 0.9in.)
 Sensor Head.....70mm x 52 mm x 17 mm
 (2.8in. x 2.0 in. x 0.7 in.)

7. WEIGHT

Readout Unit.....160 g (0.36 lb.)
 Sensor.....90 g (0.20 lb.)

8. USAGE

"B" UV sensor is used to measure blacklight output UVA.

"C" visible sensor is used to measure incandescent light output and to test for visible light which may be emitted by a Blacklight. This sensor is calibrated to read in footcandles.

"D" visible sensor is the same as the "C" sensor, except it is calibrated to read in Lux. (Optional)

Operation

- Slide the "POWER" switch to the "ON" position.
- Turn the lamp on or apply power to the light source being measured.
- Place the sensor where the irradiance/illuminance is to be measured.
- The value of the irradiance/illuminance will be indicated on the display. If at any time only a "1" appears in the left hand display position, then the measurement is out of range. Indicated values are as follows:

Lux or foot-candles 1 x the display reading

Microwatts/cm² 10 x the display reading

Calibration

The visible and UV sensor radiometer should be returned to the factory every six months for recalibration or a routine check-up. The recommended six month calibration is based upon normal usage of intermittent readings. If the sensors are used continuously, recalibration should be performed more often. Visible sensors are calibrated to accurately read incandescent light sources, unless a fluorescent light calibration is requested.

For further information please contact:



1431 W. Second Street • Pomona, CA 91766
 PHONE (909) 623-6793 • FAX (909) 629-1467

Represented by:

UNLIMITED

NDT

Tel: 800-900-9097
 Fax: 949-582-2723
www.ndtunlimited.com