ACCU-CAL™ 50 Radiometer

Consistent UV light curing requires periodic monitoring of UV intensity or dose. The ACCU-CAL™ 50 radiometer is simple to operate and offers repeatable measurement of UV light. The ACCU-CAL™ 50 can measure UV light emitted from lightguides (3 mm, 5 mm, and 8 mm), UV flood systems, and UV conveyors. With a spectral sensitivity from 320 to 395 nm (UVA), the ACCU-CAL™ 50 measures intensities from 1 mW/cm^2 to 40 W/cm^2. A specially designed photo-sensor assembly protects the photo-sensor from the high temperatures sometimes associated with today's high intensity UV spot lamps.

Simple to Operate ■ Set Screw Locks Lightguide in Place ■ PTB and NIST Traceable

ACCU-CAL™ 50 for measuring floods and conveyors only PN **39561**

ACCU-CAL™ 50 for measuring spots, floods, and conveyors PN **39560**

Three Reasons to Use a UV/Visible Radiometer

- **Maintaining a Light-Curing Process** – A radiometer measures whether a light-curing system is providing intensity above the "bulb change" intensity. Radiometers provide the same monitoring control for light curing processes that thermometers provide for thermal processes.
- **Providing a Worker Friendly Light-Curing Process** – The ACCU-CAL™ 50 is sufficiently sensitive to measure the intensity of stray or reflected UV light (as little as 1 mW/cm^2). Dymax recommends that worker UVA exposure not exceed 1 mW/cm^2. For reference, UV (320-395 nm) intensity on a sunny day can range from 2-6 mW/cm^2.
- **Measuring Transmission Rates Through Substrates** – A radiometer can be used to measure the transmission rates of various wavelengths through substrates that absorb UV and/or visible light. To assure an effective curing process it is critical to measure the light intensity reaching the resin below the intervening substrate.

SPECIFICATIONS	
Spectral Sensitivity	320 to 395 nm
Intensity Range	1 mW/cm^2 to 40 W/cm^2
Resolution	Intensity (1 mW/cm^2; to three significant digits) Dose (1 mJ/cm^2)
Calibration Period	12 months
Operating Temperature Ranges	Optometer: +5 to +40°C Detector: 120°C continuous, Peak 200°C
Measurement Modes	Intensity (mW/cm^2 and W/cm^2) Peak Intensity (mW/cm^2 and W/cm^2) Dose (J/cm^2)
Light Sources	Lightguides (3 mm, 5 mm, and 8 mm) Floods/Conveyors
Power Supply	Two (2) AA batteries
Battery Life	250 hours (automatic shutoff after 1 hour)
Sensor Dimensions	Photo-Sensor Diameter = 9 mm Diameter = 37 mm Thickness = 8 mm Cable Length = 1 M
Meter Dimensions	120 mm (Length) x 65 mm (Width) x 23 mm (Thickness)

RADIOMETERS and ACCESSORIES		
Product	**Part Number**	**Description**
ACCU-CAL™ 50 for Flood Lamps and Conveyors	**39561**	Complete radiometer (without lightguide adapters or lightguide simulator*); includes storage/carrying case
ACCU-CAL™ 50 for Spot and Flood Lamps and Conveyors	**39560**	Complete radiometer with lightguide adapters (3 mm, 5 mm, and 8 mm) and lightguide simulator*; includes storage/carrying case
Flood to Spot Adapter Kit	**39554**	Kit includes three lightguide adapters (3 mm, 5 mm, and 8 mm) and a lightguide simulator*
3 mm Lightguide Adapter	**39556**	Fits 3 mm ID lightguides (5 mm OD)
5 mm Lightguide Adapter	**39557**	Fits 5 mm ID lightguides (7 mm OD)
8 mm Lightguide Adapter	**39558**	Fits 8 mm ID lightguides (10 mm OD)
Lightguide Simulator (5 mm)	**38408**	5 mm lightguide simulator with a standard D connection

**A lightguide simulator is used to measure direct spot lamp intensity (required to calculate lightguide transmission)*

RADIOMETER CALIBRATION

Dymax recommends calibrating the ACCU-CAL™ 50 radiometer annually to ensure proper operation of the instrument. Calibration services are available through Dymax. Please contact Dymax Customer Support for more information.

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