



ACCU-CAL™ 160 RADIOMETER PRODUCT BULLETIN



ACCU-CAL™ 160 Radiometers

Simplify Validation and Monitoring of Your UV or LED Light-Curing Process

Consistent light curing requires periodic monitoring of light intensity or dose. The ACCU-CAL™ 160 radiometer is available in both a UV and LED model and can measure UV or LED light up to 10 W/cm² emitted from stationary light-curing flood lamps or lamps used in conveyorized processes. This radiometer can be used to determine intensity (measured in mW/cm²) or total energy as derived from intensity and exposure time (measured in mJ/cm²). When compared to the ACCU-CAL™ 150 radiometer, the ACCU-CAL™ 160 offers a number of improved features and benefits including a longer calibration cycle (12 months instead of 6), an easier-to-use set-up screen, and a graphical display that is clearer and easier-to-read. The unit is simple to operate and can be controlled manually via four buttons on the faceplate or by a USB remote interface. Measurement results are displayed on the integrated LCD display or transmitted by the USB remote interface to a computer. A data download kit is included with each radiometer at no charge and downloads easily into Microsoft Excel.

Reasons to Use a Radiometer

Validating and Maintaining a Light-Curing Process – A radiometer provides a quantifiable measurement that verifies if the light-curing process is operating within the qualified parameters. Since all UV bulbs degrade over

time, the radiometer will reveal the optimal time for bulb replacement in an UV light-curing device. Radiometers provide the same monitoring control for light-curing processes that thermometers provide for thermal processes.

Measuring Transmission Rates Through Substrates – A radiometer can be used to measure the transmission rates of various wavelengths through substrates that sometimes absorb various frequencies of energy. To assure an effective curing process it is critical to measure the light intensity reaching the cure site below any intervening substrate.

SPECIFICATIONS	
Part Number	PN 41590 ACCU-CAL™ 160 Radiometer – UVA PN 41585 ACCU-CAL™ 160 Radiometer - LED
Light Sources	UV or LED light-curing flood lamps and conveyor systems
Spectral Sensitivity	315 nm – 400 nm (UVA model) 355 nm – 455 nm (LED model)
Intensity Range	1.0 mW/cm ² to 10 W/cm ²
Accuracy	+/- 0.5%
Resolution	Intensity (1 mW/cm ²) Dose (1 mJ/cm ²)
Calibration Period	12 months
Operating Temperature Ranges	0-75°C internal temperature; tolerates high external temperatures for short periods (audible alarm indicates when temperature has exceeded tolerance)
Measurements	Peak intensity (mW/cm ²) Dose (mJ/cm ²)
Power Supply	Lithium polymer battery, 800 mAh, charged via USB interface (Mini-B), 5 VDC, 500 mA
Battery Life	10 hours (backlight on, no operation) or 6 hours (backlight on, full operation)

RADIOMETER CALIBRATION

Dymax recommends calibrating the ACCU-CAL™ 160 radiometer every 12 months to ensure proper operation of the instrument. Calibration services are available at Dymax. Please contact Dymax Customer Support for more information.



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