ACCU-CAL™ 50-LED Radiometer

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

Consistent light curing requires periodic monitoring of light energy intensity and dosage levels. The ACCU-CAL™ 50-LED radiometer is simple to operate and offers accurate measurement of curing energy. The ACCU-CAL™ 50-LED can measure energy levels emitted from lightguides (3 mm, 5 mm, and 8 mm), BlueWave® QX4® LED heads, LED flood lamps, and line-pattern curing systems. A spectral sensitivity range of 350 - 450 nm and intensity measurement from 1 mW/cm^2 to 40 W/cm^2, makes this unit ideal for measuring LED curing source energy levels. A specially designed photo-sensor assembly provides repeatable measurements and protection from high temperatures associated with some LED systems on the market.

Three Reasons to Use a Radiometer

- **Maintaining a Reliable Light-Curing Process** – A radiometer helps to ensure that a light-curing system is providing the intensity and dosage levels required for successful curing.
- **Providing a Worker Friendly Light-Curing Process** – The ACCU-CAL™ 50-LED is sufficiently sensitive to measure the intensity of stray or reflected energy (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 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.

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Specifications

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Spectral Sensitivity	350 to 450 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) Peak Intensity (mW/cm^2) Dose (mJ/cm^2)
Light Sources	Lightguides (3 mm, 5 mm, and 8 mm), BlueWave® QX4® LED Heads, LED Flood Lamps
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	145 mm x 63 mm x 30 mm (Length x Width x Thickness)

Radiometer Calibration

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

Ordering Information

Product	Part Number	Description
ACCU-CAL™ 50-LED for LED Spot and Flood Units	40505	Complete radiometer with 3 mm, 5 mm, and 8 mm lightguide adapters, lightguide simulator*, and an optical adapter for use with the BlueWave® QX4® and BlueWave® MX-275; includes storage/carrying case
ACCU-CAL™ 50-LED for LED Flood Units	40519	Complete radiometer for LED flood and conveyor systems; 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*
Lightguide Adapter	39556	Fits 3 mm ID lightguides (5 mm OD)
	39557	Fits 5 mm ID lightguides (7 mm OD)
	39558	Fits 8 mm ID lightguides (10 mm OD)
Lightguide Simulator	38408	Lightguide simulator (Fits all standard lightguide entrance fittings)
BlueWave® QX4® Optic Adapter Upgrade Kit	42218	This option is for customers who already own an ACCU-CAL™ 50-LED. The kit includes the optic adapter and updated software and calibration for your existing radiometer. The customer's radiometer must be returned to Dymax for programming and calibration.
Line Optic Adapter Upgrade Kit for the BlueWave® QX4® and BlueWave® MX-275	43383	This option is for customers who already own an ACCU-CAL™ 50-LED. The kit includes the optic adapter and updated software to allow your radiometer to measure line-pattern systems. It also includes calibration for your existing radiometer. The customer's radiometer must be returned to Dymax for programming and calibration.

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

ACCU-CAL™ 50-LED for measuring floods lamps only PN 40519

ACCU-CAL™ 50-LED for measuring LED spots and flood lamps PN 40505

DYMAX®

www.dymax.com

Americas
USA | +1.860.482.1010 | info@dymax.com

Europe
Germany | +49 611.962.7900 | info_de@dymax.com
Ireland | +353 21.237.3016 | info_ie@dymax.com

Asia
Singapore | +65.67522887 | info_ap@dymax.com
Shanghai | +86.21.37285759 | dymaxasia@dymax.com
Shenzhen | +86.755.83485759 | dymaxasia@dymax.com
Hong Kong | +852.2460.7038 | dymaxasia@dymax.com
Korea | +82.31.608.3434 | info_kr@dymax.com

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