Manufacturer:
Dymax

Product Name:
Dymax ACCU-CAL™ 50 UV Radiometer for Measuring UV Curing Flood Lamps and Conveyors

Manufacturer Part Number:
39561

▶ Click here for more details on the Dymax ACCU-CAL™ 50 UV Radiometer for Measuring UV Curing Flood Lamps and Conveyors

ACCU-CAL™ 50
Radiometer User Guide

Contact the professionals at Fiber Optic Center for a quote or to get more details.

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Introduction

The enclosed ACCU-CAL™ 50 UV Radiometer was developed and manufactured by the Dymax team, driven by a desire to best serve your needs. Before shipping, your ACCU-CAL™ 50 Radiometer was calibrated and tested against standard UV light sources to ensure accurate performance.

The operation of this radiometer in conjunction with a UV light-curing system will maximize safety and user-friendly performance and provide optimum yield of your technological process.

Therefore, we encourage you to read, understand, and follow all safety and operating instructions and recommendations compiled in this and other related manuals prior to setting up and operating this instrument and any associated UV light-curing systems.

Par conséquent, nous vous encouragez a lire, comprend, et suivre tout sécurité et instructions d'opération et conseillations rédiger dans cette et autre manuels etablir un lien avant de mettre en place et de faire marcher cette nouveau système de lampe de tache ou cettes composants individuel.

Safety

General Safety

⚠ **WARNING!** This symbol alerts you to the possibility of serious injury or death if you do not follow the instructions.

CAUTION! *Always wear protective goggles or face shield when working near the front of any unit which emits UV light! The rear of some units also emit stray UV light.*

WARNING! *Always observe safety requirements!*

PRÉ-CAUTION! *Toujours faisez de l'usage des lunettes de protection ou protéger de visage marche près du devant d'élément!*

PRÉ-CAUTION! *Risque de décharge électrique quand le couvert est enlever!*

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USER GUIDE | ACCU-CAL™ 50 RADIOMETER

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ACHTUNG! *Tragen Sie immer eine Sicherheitsbrille oder einen Gesichtsschutz, wenn Sie nahe an der UV Lichtquelle arbeiten. Die Rückseite des Gerätes emittiert gestreutes UV Licht!*

WARNHINWEIS! *Bitte beachten Sie immer die Sicherheitshinweise!*

Safety

The ACCU-CAL™ 50 Radiometer is designed to be used in conjunction with Dymax UV light-curing equipment that is properly set up, with components correctly connected, and operated in accordance with relevant instructions.

Safety Recommendations:

When working with UV light sources, use the goggles provided, or a face shield approved for UV protection to protect your eyes.

Long-sleeved shirts, or a lab coat, are recommended to protect the arms, and use of UV opaque gloves will protect the hands.

Sécurité

L'équipment être concu pour être utilisé correctement constituer, avec composants brancher correctement, et marché en conformément avec instructions important. Le plan étais developer pour render au maxime opérateur sécurité et minimiser expositon à ultraviolette.

Recommander de sécurité:

Emploi lunettes, ou un protéger de visage pour protection de ultraviolet pour protéger vous oeux.

Chemises à manche long, ou manteau de labo, sont recommander pour protéger les bras, et utilisation de ultraviolette gants opague vais protéger les mains.

Sicherheitshinweise

Dieses Gerät wurde so entwickelt, dass es nur vollständig, alle Komponenten korrekt miteinander verbunden, in Übereinstimmung mit relevanten Instruktionen betrieben wird. Bei der Entwicklung wurde weiterhin großen Wert auf die Benutzersicherheit und minimale UV Belastung gelegt.

Sicherheitshinweise:

Tragen Sie immer die mitgelieferten Sicherheitsbrille oder speziellen Gesichtsschutz, der Ihre Augen vor UV Licht schützt.

Wir empfehlen Langarm - Hemden oder einen Laborkittel zu tragen, um die Arme zu schützen. Für die Hände empfehlen wir UV- geblockte Handschuhe.

Product Overview

The ACCU-CAL™ 50 Radiometer is a microprocessor-based measurement instrument designed to measure UVA radiation in the range of 320-390 nm.

The ACCU-CAL™ 50 uses two AA batteries.

Environmental Considerations

- Optical measurement instruments are sensitive to extremes in environmental conditions like high temperature, humidity, and contamination. Protect the device and its detector(s) from high humidity, high temperature, direct sunlight, and contamination.

- Do not use the ACCU-CAL™ 50 immediately after moving it from a cold to a warm environment. Under certain circumstances, condensation could develop and may cause inaccurate measurement results. Allow the device to adjust to room temperature before use.

- Do not use the ACCU-CAL™ 50 in powerful magnetic, electromagnetic, and electrostatic fields. These disturbances may influence measurement results.

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Unpacking

When your radiometer arrives, inspect the box for damage and notify the shipper of box damage immediately.

Open the box and check for equipment damage. If parts are damaged, notify the shipper and submit a claim for the damaged parts.

Check that the parts included in your order match those listed below.

Figure 1.
Spot Radiometer (PN39560)

Figure 2.
Flood Radiometer (PN39561)

Parts List - Spot Configuration

- ACCU-CAL 50 Radiometer
- ACCU-CAL 50 Radiometer User Guide
- 3-mm, 5-mm, 8-mm Adapters
- Lightguide Simulator (PN 38408)

Parts List - Flood Configuration

- ACCU-CAL 50 Radiometer
- ACCU-CAL 50 Radiometer User Guide

Note: The ACCU-CAL™ 50 Radiometer detector and optometer are calibrated together and are a matched pair. Switching the detector or optometer to pieces which were not calibrated as a matched pair will lead to inaccurate readings.

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Operation

1. The ACCU-CAL™ 50 Radiometer may be used to measure UV intensity from Flood Lamps or UV intensity from the end of a 3-mm, 5-mm, or 8-mm lightguide used with a Spot Lamp. For Flood Lamp use, attach the Detector to the Radiometer as shown in Figure 3.

2. For Spot Lamp use, select an Adapter that matches the size of the Lightguide that is installed on the Spot Lamp. 3-mm, 5-mm, and 8-mm Adapters are available.

   Note: Lightguide Adapters are included in the spot version (PN 39560) of the ACCU-CAL™ 50 or available separately.

3. Install the Lightguide Adapter on the end of the Detector using the two, 2 mm screws provided.

4. Attach the Lightguide Adapter to the Spot Lamp Lightguide by inserting the Lightguide into the Lightguide Adapter until it bottoms out. Tighten the set screw when the Lightguide is installed.

5. Press and release the On/Off Key on the Face Plate to turn the Radiometer on and off.

6. Press and release the Light Source Key to select the light source being measured. The different light source options are:

   - **Flood Lamp** - For use when measuring UV intensity of a flood-lamp light source.
   - **3-mm Lightguide** - For use when measuring UV intensity at the end of a 3-mm lightguide.
   - **5-mm Lightguide** - For use when measuring UV intensity at the end of a 5-mm lightguide.
   - **8-mm Lightguide** - For use when measuring UV intensity at the end of a 8-mm lightguide.

7. Press and release the Mode Key to select an operating mode. The different operating modes are:

   - **Peak Intensity** - Shows the highest UV intensity in mW/cm² seen by the detector during the measurement.
   - **Intensity** - Shows the UV intensity in mW/cm² at the detector during the measurement.
   - **Dose** - Shows the total UV dose in mJ/cm² at the detector during the measurement.
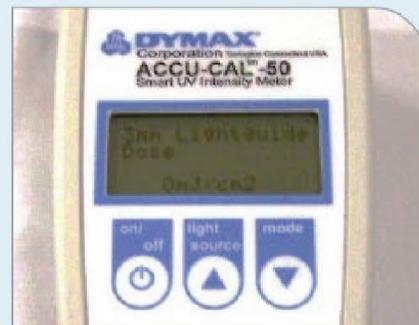
Figure 3.
Radiometer with Detector

Figure 4.
Adapter Installation

Figure 5.
Attach Lightguide Adapter to Lightguide (Step 4)

Figure 6.
Face Plate

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Maintenance

The ACCU-CAL™ 50 was designed to operate with minimum maintenance. Follow the schedule below to assure top unit performance.

- Calibrate the instrument at least annually. Calibration service is available through Dymax Customer Service or Dymax Product Repair.

- Change the batteries when a low battery warning is received. The ACCU-CAL™ 50 uses two AA-type batteries. The battery compartment is on the back of the instrument.

- Keep the detector head's sensing element clean and free of contaminants. The detector head may be cleaned with a clean tissue wetted with isopropyl alcohol.

- To increase battery life, turn unit power off after use. The unit will not automatically power off.

Figure 7.
Battery Compartment (Closed & Open)

Spare Parts and Accessories

Item	Part Number
Adapter Kit – Flood to Spot Model (includes parts listed below)	39554
Lightguide Simulator	38408
8-mm Lightguide Adapter	39558
5-mm Lightguide Adapter	39557
3-mm Lightguide Adapter	39556

Specifications

CE

Property	Specification
Power	Two AA size batteries
Display	LCD Graphic Display 97x 32 Pixel Display area: 0.56 in x 1.41 in (14.3 mm x 35.8 mm)
Detector Interface	9-Pin MDSM9 socket, 4 inputs
Measurement Ranges	Four modes of operation Auto range within each operating mode
Front Panel Control	3 buttons
Temperature	Operating: 5 to 40°C Storage: -10 to 50° C
Size	5.71 in x 2.48 in x 1.18 in (145 mm x 63 mm x 30 mm)
Weight	0.33 lbs (150 g)

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