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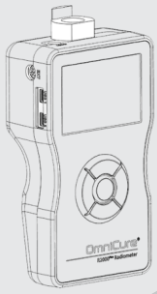
OmniCure® R2000Plus Radiometer

Quick Start Guide



Overview

The OmniCure® R2000Plus is a hand-held radiometer designed for precise measurement of optical power and irradiance across the 250–1000 nm wavelength range.

The R2000Plus offers:

- Highly accurate broadband light measurements.
- Integrated modes for Power, Irradiance, Absolute, and Relative readings.
- Compatibility with S2000 series UV Spot Curing Systems
- USB connection for PC communication.
- Standard RS-232 communication via a 3.5 mm audio-style jack for logging and control of S2000 series UV Spot Curing System.

WARNING: Refer the following documents prior to use

OmniCure and X-Cite Safety Precautions (035-00636R)

R2000Plus Radiometer User Guide (035-00771R)

Manual, R2000/R2000Plus Programmers Reference (035-00247R)

Software, R2000 Control Panel (032-00058R, V1.3)

Features

- **Auto-ranging** for optimal dynamic response.
- **Absolute & Relative Modes**:
  - Absolute: Standard calibrated values.
  - Relative: Percentage relative to a reference.
- **Real-time Mode**: Tracks changing light output.
- Supports standard **2 to 8 mm light guides**.
- **RS-232 Interface**: For PC connection and calibration of S2000 series UV spot curing systems.
- **NIST-traceable** calibration.

Controls & Component Options	
ON Button	Power on/off
Relative/Absolute Option	Switch measurement modes
Power/Irradiance Selection	Selects reading units
External Selection	Access external sensors
STORE	Saves measurements to memory
LCD Display	Shows readings and icons
USB Connection	PC communication
RS-232 Communication	Logging and control of S2000 Elite UV Spot Curing System
Light Guide Adapter Port	Accepts standard light guide adapters

Start Up and Calibrating S-Series Light Sources

Navigation

- Use the fascia buttons to navigate the menus.

Power ON

- Charge before use.
- If the device is being charged, the unit should be on.
- If not connected to a PC, press and release the center button.
- When the device is being charged, a battery icon is displayed on the screen. Press the center power button to turn on the device.

Light Guide Attachment

- Insert the correct light guide adapter (3 mm-red, 5 mm-blue, 8 mm-green, custom diameter-black) into the port.
- Attach the light guide and tighten the thumb screw.
- The radiometer will auto-detect guide diameter.

Connect the radiometer to the light source

- Plug in the phono-style cable between the R2000^{Plus} and the S-Series light source.
- Ensure the light source is powered ON.

Navigate to Calibration

- From the **Measure** screen, press the **Right Arrow** button.
- The **Calibration** screen will appear.

Warning: You may see "**Error: Timed Out**" even if the status bar shows communication established. This means the R2000^{Plus} is not receiving feedback from the light source during calibration.

Start Calibration

- Press the **Center** button.
- Status will change to "**In Progress.**"
- Buttons will remain locked until calibration finishes.

Confirm Completion

- Successful calibration displays: "**Completed without errors.**"

Troubleshooting

"No Communication" or "Timed Out"

- Check that the phono cable is fully inserted at both ends.
- Confirm the light source is turned ON.
- Replace the phono cable if needed.

"No Light Guide"

- Ensure the light guide and adapter are fully inserted.
- Clean the light guide adapter if necessary.

PC & OmniCure Integration

- Compatible with OmniCure curing systems for calibration and power settings.
- Refer to User Guide for using the R2000^{Plus} Radiometer with a PC.
- Connect via USB to a PC for data logging and advanced control.

Measurement Modes

Mode	Description
Power	Measures total optical power (mW or W)
Irradiance	Measures power per unit area (mW/cm² or W/cm²)
Absolute	Standard calibrated readings
Relative	Percent relative to reference reading Press clean source → set reference → switch to Relative for comparative monitoring

Data Storage

- The R2000^{Plus} Radiometer can store measurements and S series calibration results (if enabled) based on what is being detected when the save function is activated.
- When the measured reading is within the valid range, the "Save" function becomes available. Press the center button to save a reading.
- Refer to User Guide for other storage and retrieval options.

R2000Plus Radiometer Calibration

- If the display shows CAL on startup, calibration is due.
- It is recommended that the R2000Plus Radiometer be calibrated every 12 months to ensure valid measurements. The calibration is traceable to NIST, and a calibration certificate is included at each calibration cycle.
- Calibration must be performed exclusively by an authorized, certified Excelitas service center. Using third-party calibration providers carries a significant risk of inaccurate or improper calibration. When calibration is due, contact an Excelitas service center for a return materials authorization number (RMA).

Care & Maintenance

- Store in a dry, clean environment
- Avoid extreme temperatures and moisture
- Calibrate annually for accuracy
- Handle optical surfaces carefully

Regulatory Information

The R2000Plus Radiometer has been tested and found to comply with product safety and electromagnetic compatibility requirements. For a complete list of tests and for certification details, please contact your OmniCure representative or refer to the User Guide.

Council Directive 2014/35/EU	Low Voltage Directive	CE
Council Directive 2014/30/EU	EMC Directive	
Council Directive 2012/19/EU as amended by (EU) 2024/884	WEEE Directive	
Council Directive 2011/65/EU as amended by (EU) 2015/863	RoHS Directive	
Council Regulation (EU) 2023/1542	Batteries Regulation	

China RoHS

RoHS

WEEE Directive

CE Markings

Care & Maintenance

For accessories, service, or calibration:

Excelitas Canada Inc.

2260 Argentia Road, Mississauga, ON

Phone and support details are listed in the User Guide 035-00771R