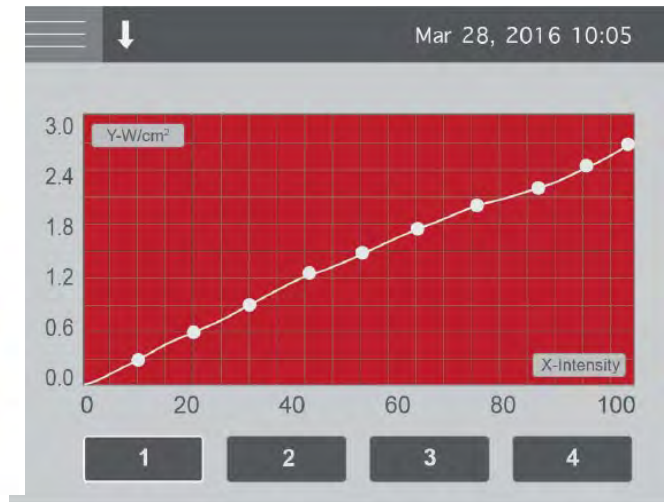


## How to calibrate an Excelitas OmniCure UV DEL Head

**\*\*CAUTION\*\*** Do not stare directly at the light emitted from the LED array. This may be harmful, resulting in eye injury. Always use UV protective eyewear.



Calibration screen of the LX500 UV LED controller

The calibration process requires an Excelitas Technologies LS100 radiometer, or an LS100P radiometer. The LS100 is an irradiance only sensor that will calibrate the heads in  $W/cm^2$ . The LS100P is a power only sensor that will calibrate the heads in W. Ensure the usage of the proper sensor for your application.

To calibrate the UV LED Heads connected to the LX500 controller:

1. Securely fixture the UV LED head you wish to calibrate.
2. Plug the LS100 or LS100P into the Radiometer connector on the front panel of the Controller.
3. Ensure the Door Jumper connector is securely connected the PLC connector.
4. Position the HeadLS100 over the LS100/LS100P sensor.
5. For best results make sure the UV LED output is centred on the LS100 aperture.
6. On the Calibration screen, use the arrow keys to choose the appropriate Head number, then press Select The Calibration Preparation Screen will appear. This screen allows for alignment of the head with the sensor, ability to clear the calibration, and cancelling out of the screen if only a radiometer was desired.
7. Press the start/stop button to turn on and off the head. Only the head selected for calibration will turn on and off. The head must be turned on in this screen before a calibration can occur, a reference reading is required for the calibration process. If the maximum intensity box is empty, the calibration will not be accessible.
8. The current LS100 reading in  $W/cm^2$ , or LS100P reading in W, will appear along with the Maximum LS100/LS100P reading detected since this screen was entered. Use these values to ensure that the LS100 sensor is in the optimal position.



9. The up/down arrows can be used to increase or decrease the current set intensity of the head selected.
10. When properly aligned, pressed the Start Cal button to begin calibration.
11. The calibration can be cleared, also the screen can be exited with no modification to the current calibration. If either of these options are selected, the head will be turned off.

The progress of the calibration can be seen on the graph. Do not remove the LS100/LS100P while the UV LED head is being calibrated.

Once the calibration complete message appears, the calibration is complete. The intensity displayed on the “Main Control Panel” will be in W/cm<sup>2</sup> if calibrated with an LS100. If calibrated with an LS100P, the main control panel will show a decimal number and W for watts.

If a UV LED Head is moved to a different channel or unit, the calibration will be cleared. However, the calibration will return if that head is plugged back into the original channel, as long as the head has not exceeded its calibration hours. Calibration hours will continue to decrement even when connected to a controller and/or head port it was not calibrated for.

The calibration information will be cleared after 100 hours.

The Calibration Preparation screen can also be used to clear the calibration of any head.

### Viewing Log Files

The LX500 maintains two log files on a user-supplied micro SD card inserted on the front of the Controller (refer to [Figure 1](#)). If no SD card is inserted, no log file is generated or updated. All log files are automatically created in the root directory of the SD card, when an SD card is present.

- Log File (LX5-LOG.CSV) – This log file is updated each time the unit is turn off or on, settings are changed or a calibration has been performed. Each entry will have a time stamp. If there is no log file on an SD card, the LX5 will create one.
- Calibration Log File (LX5CALLG.CSV) – If an SD card is present during a calibration, a calibration log file will be created. All SD card files are in an Excel-compatible .csv format.

Extract of User Manual of OmniCure LX500, page 26 and 27 (035-00628R rev 1)

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