pE-4000 Troubleshooting Guide
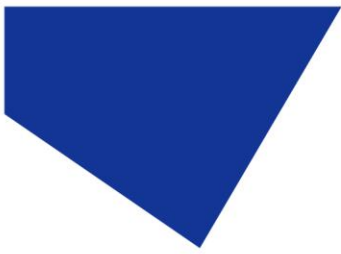
Contents

## 1) The unit doesn't power up (nothing appears on the Control Pod).

- Is the power connector fully inserted into the pE-4000 Light Source?

- Is the mains lead fully inserted into the power supply?

- Is the mains supply switched on?

- Does the indicator LED on the power supply illuminate?

  ◊ If this doesn't illuminate then there may be a fault with the power supply.

2) The Control Pod display doesn't respond to button presses.

- Is the Pod connector fully inserted into the Light Source?

- Was the Control Pod connector inserted after power up?

  ◊ If so, cycle the power and ensure the Control Pod is connected before power up.

- Ensure that the Control Pod connector has not sustained any damage to the pins.

3) The illumination appears weak.

- Check that the intensity settings on the Control Pod are set at an appropriate level.

- Has the microscope been setup correctly?

  ◊ Check that apertures are open.

  ◊ Check for any ND filters in the optical path.

  ◊ Check that an appropriate filter cube set is being used with the selected excitation wavelength.

- Ensure that the light guide is fully inserted into both the Light Source and the pE-Universal Collimator (shown in Section 4 of the User Manual).

- Ensure that there are no sharp bends or kinks in the light guide.

- If the pE-4000 is being used with the pE-Universal Collimator, confirm that this has been optimized (procedure is listed in the pE-Universal Collimator User Manual).
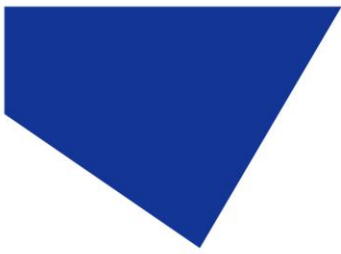
## 4) Illumination is not flat and even at the sample (homogenous).

- Has the pE-Universal Collimator been optimized for the microscope (procedure is listed in the pE-Universal Collimator User Manual).

5) Illumination is not centralized over the field of view.

- Rotate the pE-Universal Collimator in the epi-port whilst observing the field of view.
  - ◊ If the offset moves with the rotation of the Collimator then this has lost its alignment. This will need to be returned to CoolLED to be adjusted.
  - ◊ If the offset does not move with the rotation of the Collimator then the issue is with the optical path of the microscope. A person that is competent in microscope servicing will need to investigate this cause.

6) No light is illuminating the sample.

- Ensure that a wavelength is selected and in the ON state on the Control Pod. The intensity bar on the Control Pod will be filled if so.
- Confirm whether the LEDs are illuminating. This can be done by removing the light guide from the Collimator and shining at a wall or desk (take care not to directly view the light output or shine at others). Please note that most of the light output from the UV and NIR wavelengths are not visible to the eye. The UV can be viewed by shining at white paper, causing it to fluoresce. The NIR will need to be viewed in a darkened room.
  - ◊ If the LEDs are illuminating then check the optical path of the microscope. Confirm that any shutters are open and that the filter sets are compatible with the excitation wavelengths being used.
  - ◊ If the LEDs still don't appear to be illuminating, confirm whether the LEDs are moving into position correctly. This can be checked by changing between two wavelengths on the channel in question (using the Control Pod). Listen to hear if the stepper motor is moving the LED in to position or not.
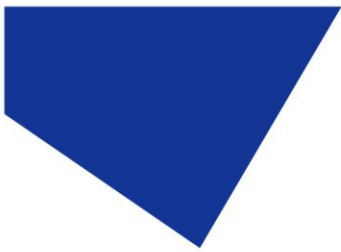
7) The light guide doesn't fully insert into the Light Source.

- Ensure that the fixing grub screw is loosened sufficiently before inserting the light guide (shown in Section 4.5 of the User Manual).

8) How do I view the system's firmware version on the Control Pod?

- Whilst in Advanced mode, press the settings button once. Then press the + button on the global intensity control once.

9) CoolLED contact information

If the advice in this document has been unable to solve your issue, or the issue that you are experiencing is not listed then please contact the CoolLED support team at support@coolled.com. They will be able to offer further advice and explain the repair procedure.