

Quick Start Guide for Volocity

IQS013 - Rev 01

Issue Date: 06/01/2021

1 Integrated CoolLED Products:

- pE-300^{white}, pE-300^{ultra}
- pE-4000

This manual will demonstrate how to setup up the pE-300^{ultra} and pE-300^{white} in [Volocity software from Quorum Technologies](#). The setup is similar for the pE-4000 and the steps outline below remain the same, albeit with more options.

2 Setting up your CoolLED Illumination System COM Port via USB

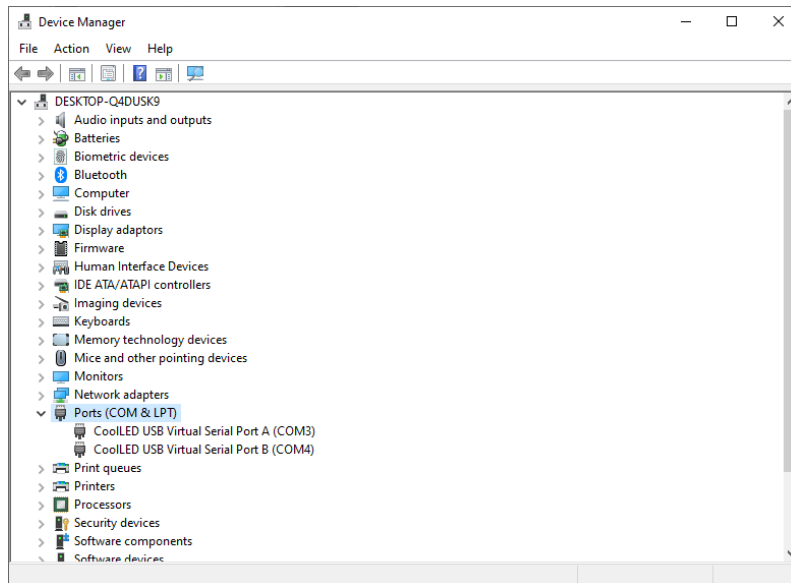
The CoolLED driver file should be downloaded from the CoolLED website:
<http://www.cooled.com/product-detail/imaging-software/>

N.B. This is a general driver for Windows machines and all USB controlled CoolLED Illumination Systems (pE-300 Series & pE-4000).

Save the files (.inf and certification files) to a preferential location on your Computer (e.g. Desktop).

When the CoolLED Illumination System is plugged in, it will appear with a driver required warning (Yellow exclamation mark). Right click and 'update' the driver, pointing it to the previously downloaded directory containing the .inf file.

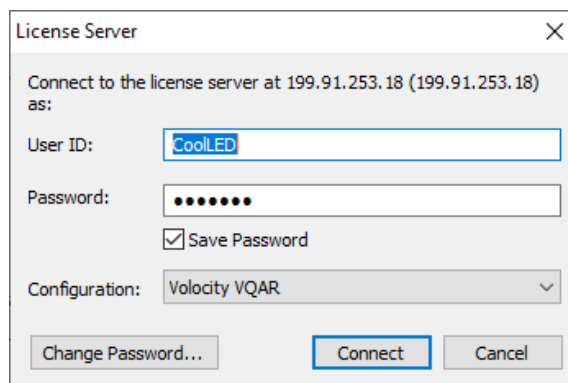
Once the CoolLED Illumination System has been successfully installed into Windows, check the Virtual COM ports assigned by going into Device Manager. The CoolLED Illumination System should be listed under 'Ports' (COM & LPT).



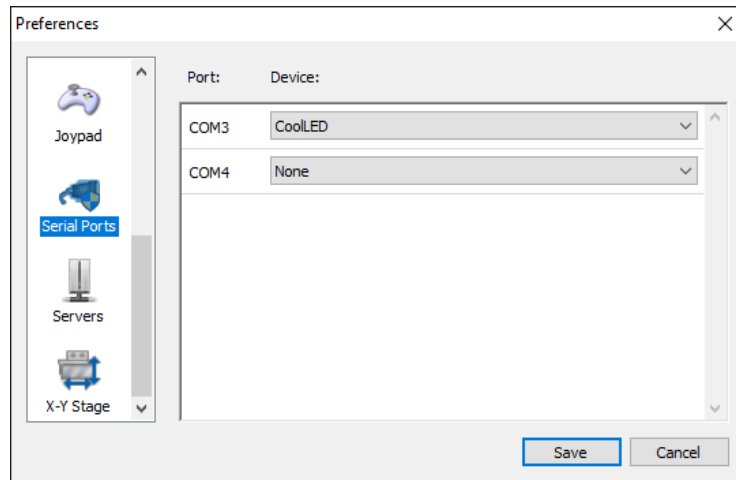
Either COM port may be used for control. The creation of two COM ports is to allow for multiple uses (for example: one could be used for controlling the CoolLED Illumination System whilst the other is used for command testing). Additionally, it allows for ease of use if there is a COM port conflict.

3 Configuring a CoolLED Illumination System in Volocity

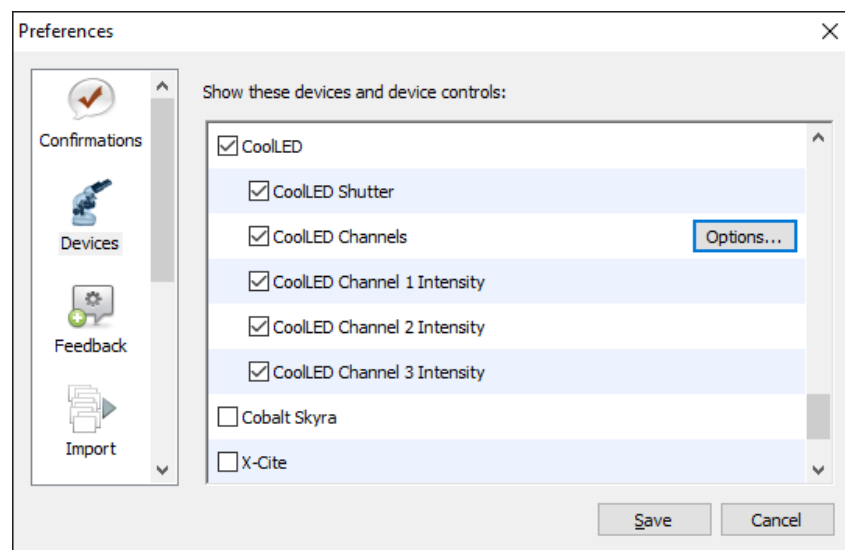
Open Volocity and input your 'User ID' and password:



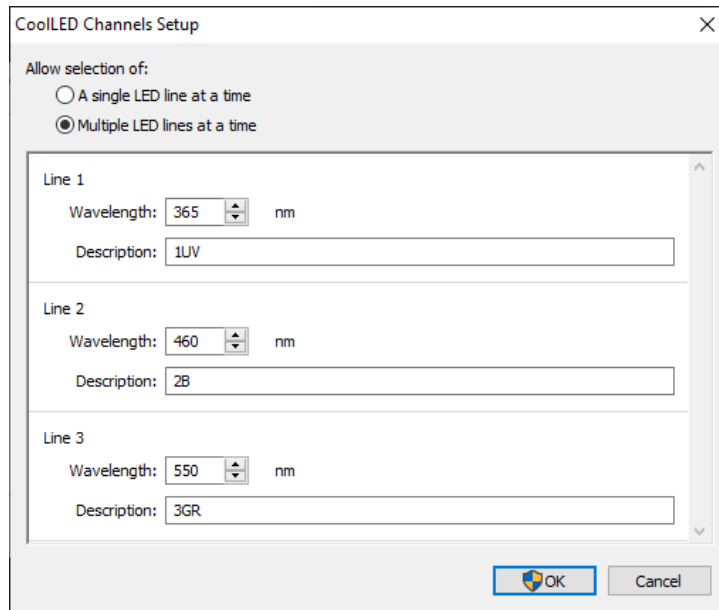
In Volocity on the toolbar go to Edit and Preferences. In here, scroll down on the left-hand side to 'Serial Ports' and select the CoolLED device on one of the ports that have been given to the pE-300 Series.



Scroll up again and select 'Devices' and from the selection on the right-hand side CoolLED can be checked. This includes the Shutter, Channel selection and the intensity control for the three channels.

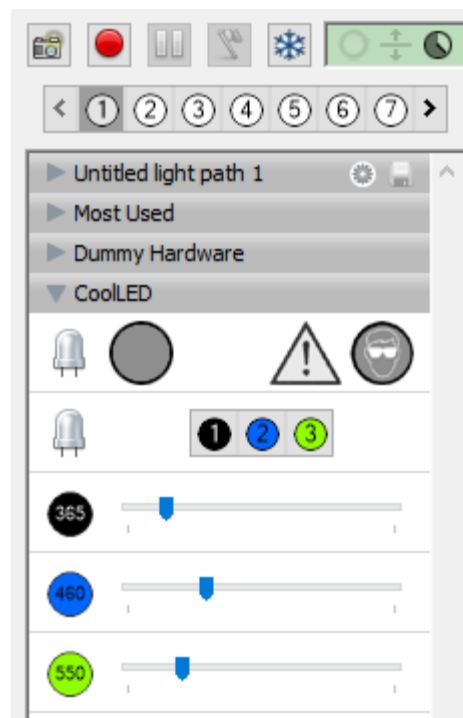


By clicking 'Options' next to 'CoolLED Channels' the LED wavelengths can be input. Allowing 'Multiple LED lines at a time' can also be selected to allow up to all three LEDs to be used at once.



Click OK and go back to the Volocity screen that appeared when it first opened. If not already done so, click 'Video Preview' on the left-hand side and the right-hand side will appear with further options.

On the right-hand side a drop-down titled 'CoolLED' should now be available. On here, each of the individual LEDs can be turned on and off and their intensities changed.

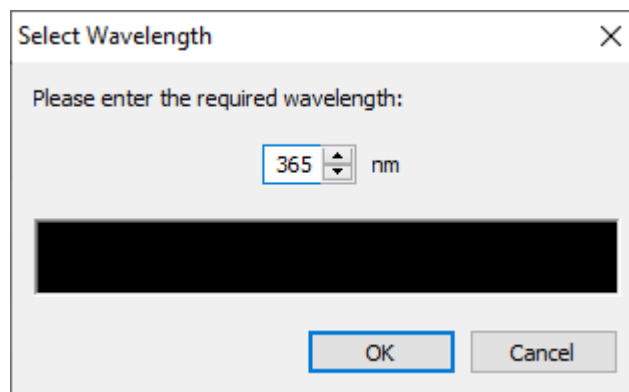
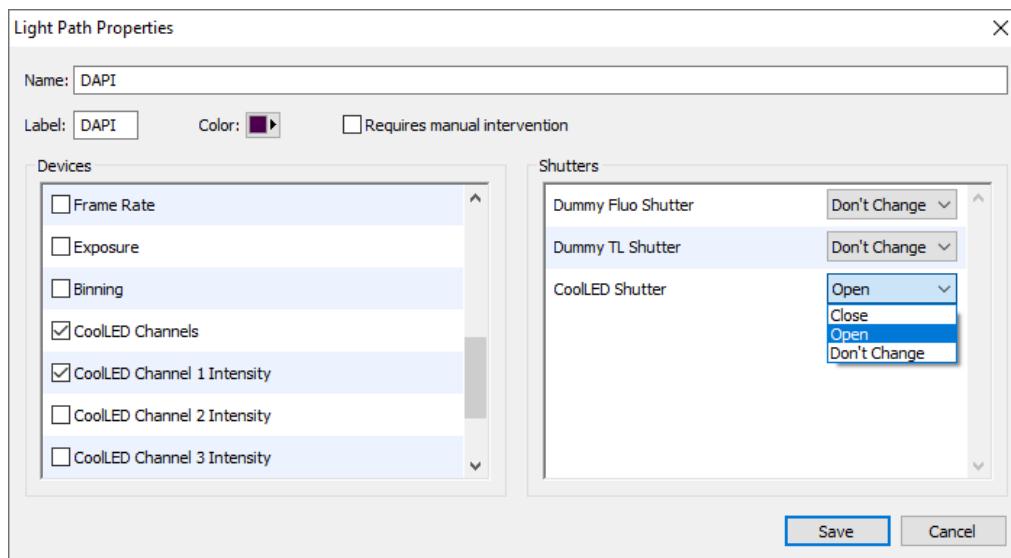


Above this, there are several options titled 'Untitled light path'. These can be changed to provide specific settings that are saved and can be selected on and off when required. To

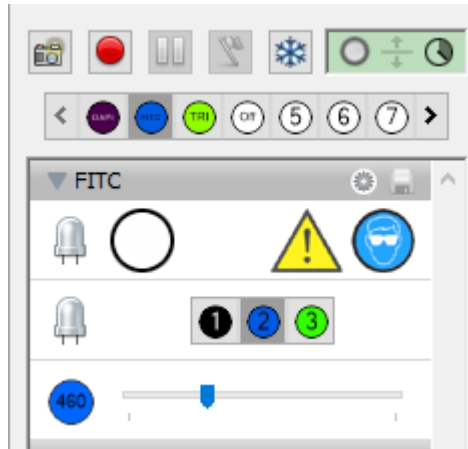
change these, double-click on any of the white numbers, and a 'Light Path Properties' dialog box will appear.

In here, select 'CoolLED Channels' and the intensities of any LEDs to be adjusted. On the right-hand side change 'CoolLED Shutter' to 'Open'.

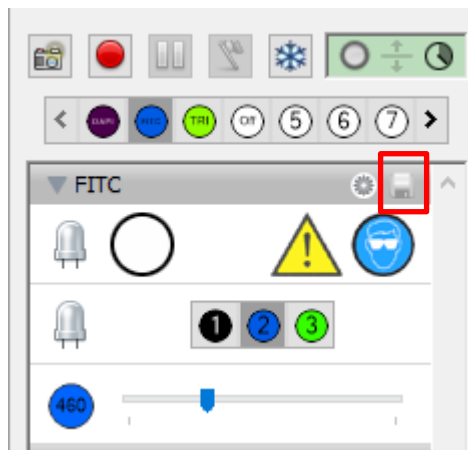
In the below example, the 365 nm LED channel of the pE-300 Series has been selected and the name changed to DAPI. The colour can also be changed on here as well by inputting the wavelength that is being used.



The below image shows four of the 'Untitled light path' numbers now set up with DAPI, FITC, TRITC and one with all LEDs off titled 'Off'.



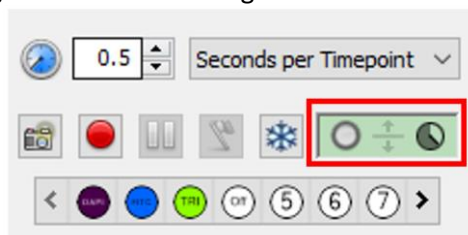
The different LEDs and their intensities can be selected and when decided, the save icon can be clicked to save the setting as a pre-set.



This allows (in this example) the blue highlighted circle now saying 'FITC' to be selected at any time, which will switch on the blue LED (460 nm) at the intensity determined on the scroll bar.

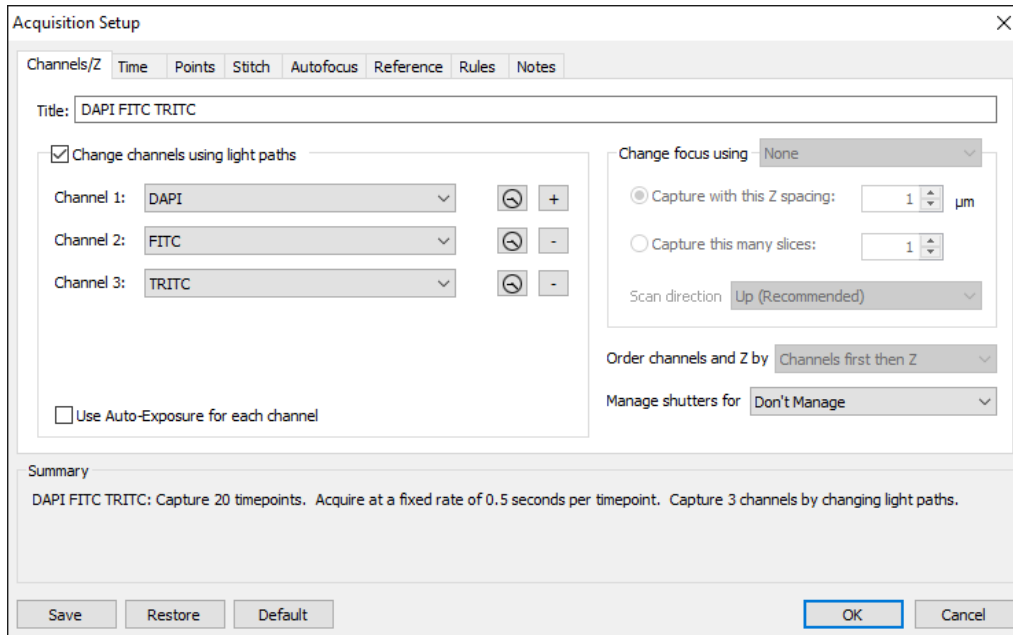
4 Setting up a Time Lapse Experiment

Double click on the highlighted icon in the image below.

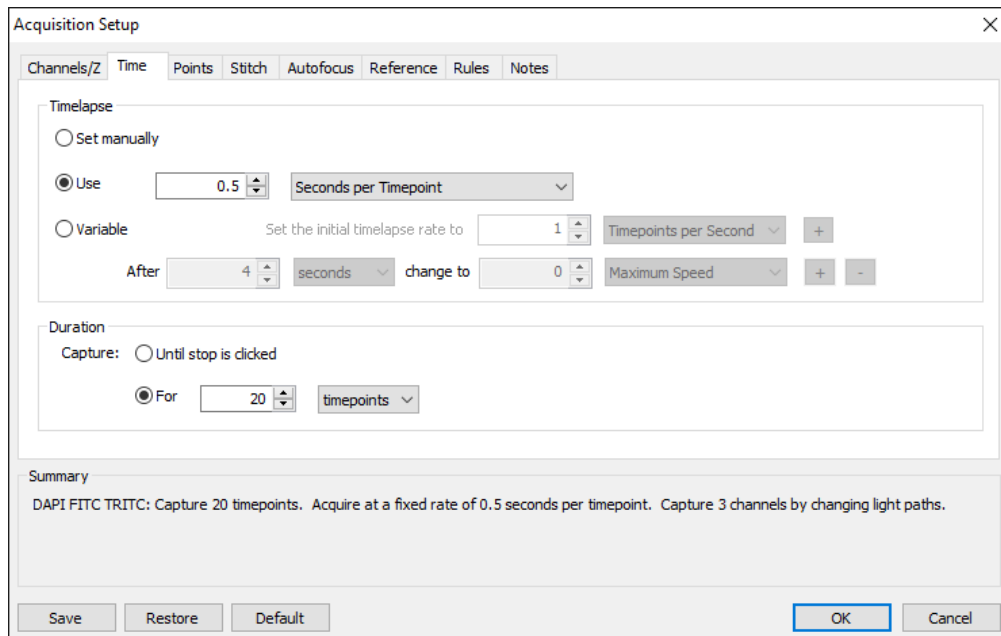


This opens the Acquisition Setup. Within this dialogue box, the channels previously created can be used for a time lapse experiment.

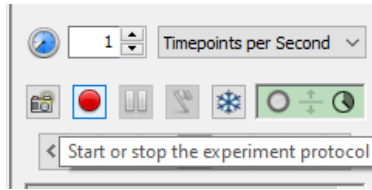
Firstly, set the different channels that are required clicking the '+' sign to add more.



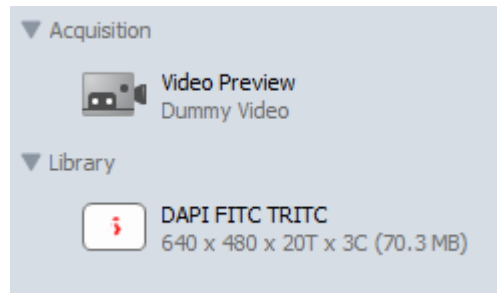
Move along the tabs, adjusting the setting to suit the experimental requirements.



When all the settings have been determined, click OK.
To begin the time lapse, click the red 'Record' button.



The results of this experiment can be viewed in the left-hand side under 'Library'.



If you require any more information, please visit the Quorum Technologies website:
<https://quorumtechnologies.com/volocity>