



Using the CoolLED precisExcite® with Meta Imaging Series Applications

Abstract

Installing and configuring the CoolLED precisExcite® for use with Meta Imaging Series Applications.

Instructions

NOTE: Please refer to all CoolLED precisExcite® documentation and materials for important safety, unpacking, installation, and operating instructions.

NOTE: For operation with Meta Imaging Series applications, it is not necessary to install the software that comes with the device, or to connect the device to the internet or your network.

The precisExcite® is a LED-based device which can be used to illuminate a sample at different fluorescence excitation wavelengths.

Document ID
T20064

Product
MetaMorph, MetaFluor,
MetaVue

Created
17-Aug-2007

Last Reviewed
17-Aug-2007



An example of the precisExcite® equipment and associated components

Keywords: illumination,LED
Issue Type: Hardware

Interface to Computer

The device is controlled by a MetaMorph parallel port driver that is setting TTL lines connected to a 15pin connector on the back of the precisExcite. There is no Windows level driver from the manufacturer required for Meta Series control.

The manufacturer produces software that connects to the device via an RJ45 connector and an IP address. This cable is not necessary for MetaMorph control of the device.

Cable Configuration:

The cable that connects the parallel port to the CoolLED precisExcite is configured as follows:

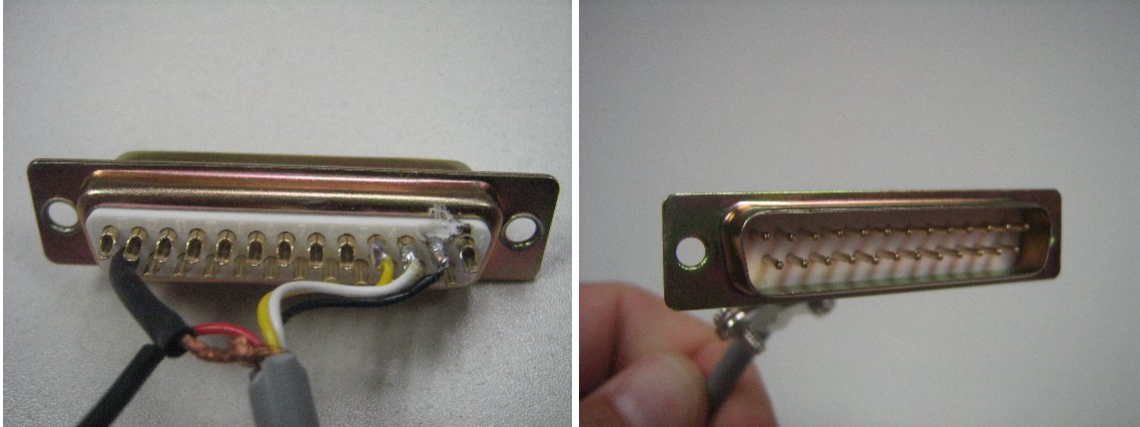
precisExcite 15-pin	parallel port 25-pin	function	
pin 10	pin 2	LED #1	
pin 11	pin 3	LED #2	
pin 12	pin 4	LED #3	
pin 13	pin 5	LED #4	
pin 3	pin 18	GND	ground for LED #1
pin 4	pin 19	GND	ground for LED #2
pin 5	pin 20	GND	ground for LED #3
pin 6	pin 21	GND	ground for LED #4



Prototype parallel port cable



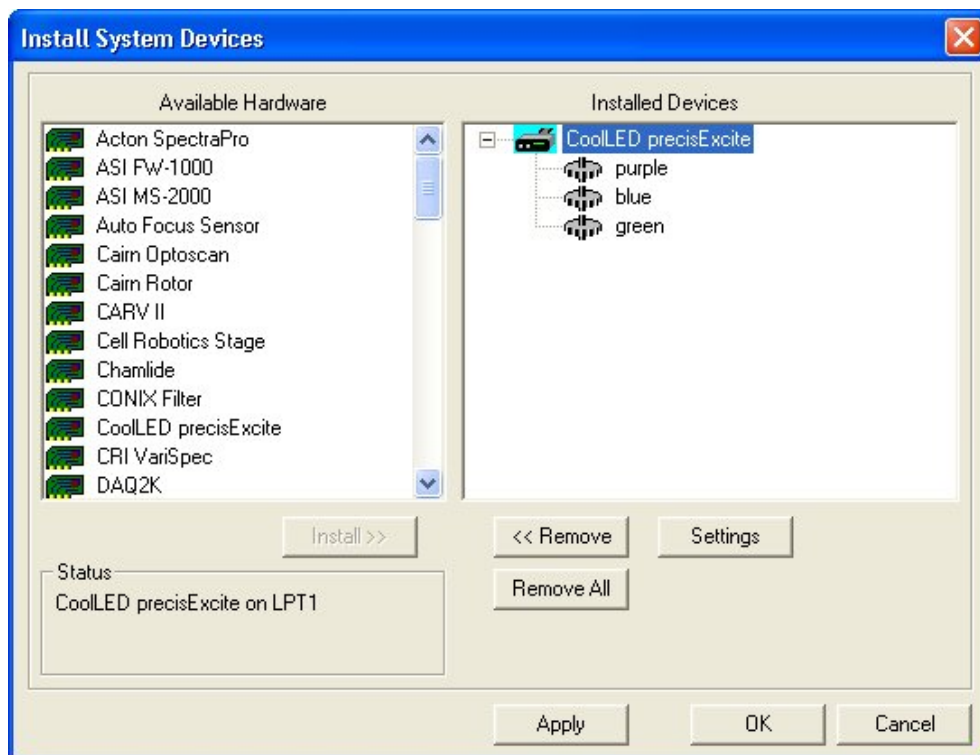
DB-15 end of cable to connect to precisExcite



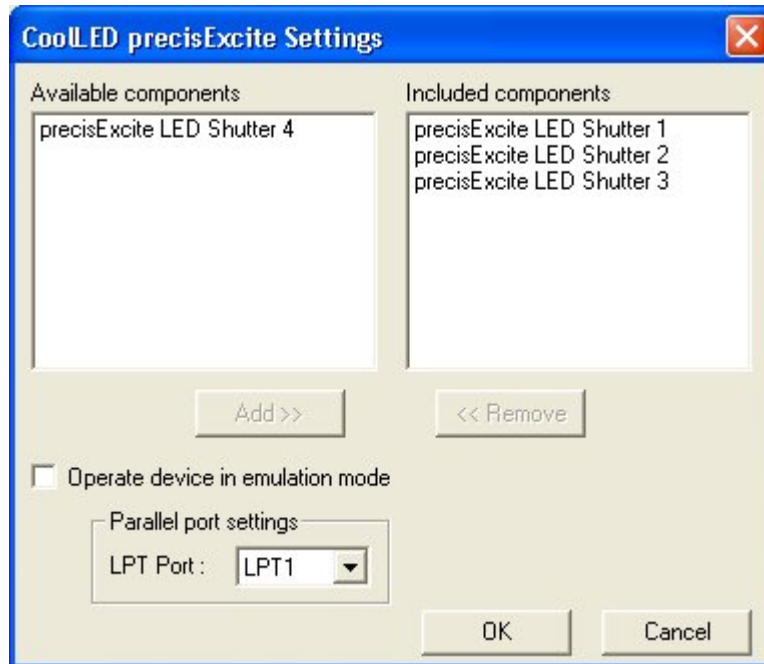
Prototype cable DB-25 end to connect to computer parallel (LPT) port
Once the parallel port cable has been wired, a shell can be placed around the connector.

Meta Imaging Series Administrator Settings:

To configure the driver, start the Meta Imaging Series Administrator. Press the “Configure Hardware” button. Press the “Install System Devices” button. A dialog will appear listing all the drivers. Find the “CoolLED precisExcite” driver on the left-side (“Available Hardware”) list and highlight it. Press the “Install >>” button to move the driver to the right-side (“Installed Drivers”) list. The dialog will appear similar to this:



Highlight the “CoolLED precisExcite” driver in the right-side (“Installed Devices”) list and press the “Settings” button below the list. The following dialog will appear:

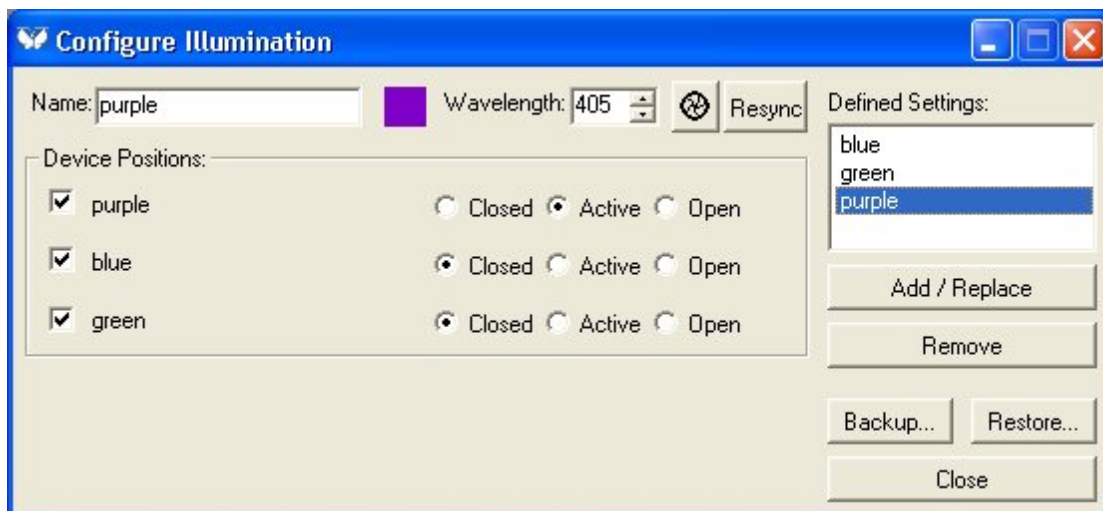


Make sure to choose the LPT (parallel) port to which the device is connected. The driver by default has four shutter channels. If your precisExcite has fewer LEDs, select the unused LED Shutter components in the right-side “Included components” list, highlight them, and press “<< Remove” to remove them. For the remaining LED components, highlight each one and rename each to the desired LED name, for example “red”, “green”, “435”, “515”, etc.

Once the LED components have been configured as desired, press OK, and then press OK to exit the Install System Devices dialog. Now press the “Configure Devices” button, highlight the CoolLED driver on the left-side “Available Devices” list, and press “Add >>” to add it to the right-side “Claimed Devices” list. Press OK to exit the Configure Devices dialog, then OK to exit the Meta Imaging Series Administrator.

MetaMorph Illumination Settings

The precisExcite makes available standard Shutter components in MetaMorph, one Shutter for each LED that is available. These can be combined into different standard Illumination Settings. The following screenshot shows an example for a three LED configuration:



It is suggested that all the precisExcite LED's be included (checkbox checked ON) for each illumination setting, and that the LEDs to be off be set to "Closed" and the LEDs to be on be set to "Active".

Intensity Control

The parallel port interface used by MetaMorph does not allow the software to control the intensity of each LED. Instead, the intensity for each LED should be set by using the hand pad.