Quick Start Guide for Lumenera USB 2.0 Cameras

Thank you for purchasing a Lumenera USB 2.0 camera. This camera is designed to operate straight out of the box. Follow the steps below for a quick and easy installation.

Required Tools and Parts:

Computer:	External power for camera models with Orange LED
• 1.0 Ghz Pentium III or higher (compatible) • 512 MB RAM (min), 1GB or more (recommended) • USB 2.0 Port	• 6V DC regulated • 800 mA minimum current • 2.1 mm tip; center positive
Operating System:	**External power for camera models with Green LED**
• Windows XP (SP 2) or Windows VISTA or Windows 7 • 32 and 64-bit platforms are supported	• 5V DC regulated • 500 mA minimum current • 2.1 mm tip; center positive
Lens:	**External power for specific models (Green LED):** **Lw11059, Lw11057, Lw11058, Lw16059, Lm11059**
• C-Mount (standard) or CS-Mount (optional) lens with proper optical format for the sensor • Large format cameras require Canon EF series lens (Lw11059, Lw16059 and Lm11059) for a 35mm-sized sensor, a Nikon F-mount (Lw11057), or Pentax K-mount (Lw11058)	• 12V DC regulated • 2A minimum current • 2.1 mm tip, center positive
Notes:	**External power for Lu176 - Orange LED**
• A USB 2.0 port is required. The camera will not work on a standard USB 1.1 port • Over-voltage is not covered by warranty – correct voltage is always printed on the camera	• 9V DC regulated • 500 mA minimum current • 2.1 mm tip; center positive

Camera Set-up and Installation:

Step 1 — Install a 3rd party USB 2.0 PCI add-in card if your computer does not already have a USB 2.0 port. If you have purchased a developers kit and are using the supplied USB 2.0 PCI add-in card, the drivers are built-in when using Windows XP with Service Pack 2, Windows VISTA or Windows 7.

Step 2 — Install the camera software from the enclosed CD-ROM before connecting the camera to the computer. Insert the Lumenera Installer CD-ROM into your CD-ROM drive. The installer application should start automatically. If it does not, open a Windows Explorer window, locate the installer application on your CD-ROM drive and manually start it by double-clicking on the application. Follow the onscreen prompts to install the device drivers and user application software.

WARNING
Observe the following to ensure smooth installation of camera software:
- You must ensure you are logged into the computer with administrator privileges prior to installing the camera software.
- Close all application software that is running and before inserting the Lumenera Installer CD into your CDROM drive.
- Do not connect the camera to the computer before installing the camera software.

Step 3 — Connect the power supply to the camera (if one was provided). The majority of the Lu and Lw-based camera models will operate using the 5V power on the USB 2.0 bus and do not require a separate DC power supply. Be sure to verify your power supply requirements with the label printed on the camera. Refer to the table above for guidelines.

WARNING
- Using an incorrect power supply may damage the camera and void the warranty.

Step 4 — **Connect the supplied USB 2.0 cable to the camera and a free USB 2.0 port on your computer.**
Windows XP users will see the Window's New Hardware Wizard pop-up, detecting a new "Lumenera Unconfigured Device". Select "Install the software automatically" from the options that are presented to you and click *Next.* A warning dialog will appear notifying you that the drivers have not been digitally signed by Microsoft. Click *Continue Anyway to* continue with the device driver installation. Then click *Finish* to install the device drivers.

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After a few seconds the Window's New Hardware Wizard will pop-up again (if it does not, unplug and re-plug the camera), detecting a "Lumenera USB 2.0 Camera" device. Select "Install the software automatically" from the options that are presented to you and click *Next*. A warning dialog will appear notifying you that the drivers have not been digitally signed by Microsoft. Click *Continue Anyway* to continue with the device driver installation. Then click *Finish* to install the device drivers. When the device drivers are successfully loaded the LED on the back of the camera will illuminate.

For Windows VISTA and Windows 7 users, the detection of new hardware and the identification of the necessary device drivers is performed behind the scenes. It is typical to see a notification balloon appear in the lower right corner of the screen to indicate that the device drivers are being loaded. This operation typically takes less than a minute to complete. When the LED illuminates on the back of the camera, the device drivers are loaded and the camera is ready to use.

WARNING
- You must ensure you are logged into the computer with administrator privileges prior to installing the camera software.
- Do not connect the camera to the computer before installing the camera software (included on your CD-ROM). See Step 2 for more details on how to install this software.

IMPORTANT
Windows will ask you to re-run these steps every time you plug the camera into a **new** USB 2.0 port. You must have administrator privileges the first time the camera is used on any given USB 2.0 port. You may wish to repeat these installation steps for all USB 2.0 ports on your computer in your initial installation.

Step 5 — **If prompted,** restart **your computer.** Once all of the software has been installed, the camera applications can be run from the Windows Start Menu.

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Product Warranty
Lumenera Corporation warrants to the original purchaser that our cameras are guaranteed to be free from manufacturing defects for a period of one (1) year from the original date of purchase.

Should the unit fail during the warranty period, Lumenera will, at its option, repair or replace the failed unit. Repaired or replaced units will be covered under warranty for the remainder of the original one (1) year warranty period.

This warranty does not apply to units that, after being inspected by Lumenera, have been found to have failed due to customer abuse, accidents, mishandling, tampering/alteration, improper installation, improper power source, negligence, opening of the enclosure, or if the serial number has been removed or damaged. This warranty does not cover labor or incurred charges required in removing or installing the unit, any business interruption, loss of profits/revenues, or any consequential damages. Units returned to Lumenera beyond the warranty period will be repaired, if possible, and all appropriate material and labor charges will apply. Any returning product, specifically those being returned under warranty, must follow the Returned Material Authorization (RMA) process. Any units being returned are to be properly packaged (in original packing - if possible). Lumenera will not cover damage sustained in shipping due to improper packing.

For RMA instructions please refer to our website at www.lumenera.com/support/rma.php.