Lm11059

High Resolution 10.7 Megapixel USB 2.0 Traffic, Flat Panel Inspection and High Resolution Documentation Camera

High Resolution CCD Sensor with Global Shutter

Lumenera's progressive scan Lm11059 digital camera is built for rugged 24/7 use. A proven high resolution 35 mm large format CCD sensor with a fully global electronic shutter captures excellent quality, high-speed images with zero blur. Completely integrated Canon EF lens controller offers increased longevity and durability (no external cabling is required). The industrial-grade Lm11059 is ideally suited for traffic monitoring, automated License Plate Recognition (LPR), flat panel and solar panel inspection, as well as high resolution documentation and ophthalmic imaging. The scientific grade option (-SCI) is built under a strictly controlled environment to ensure no visible defects are found in the optical path. This is a key requirement for applications using collimated light sources.

High Quality Images for Difficult Lighting Environments

The high quality CCD sensor provides both monochrome and vivid color images for the most demanding environments. Full streaming uncompressed video and still image captures are easily controlled through a set of stable and reliable USB device drivers. Region of interest and binning modes allow the camera to run at faster frame rates while only providing the image data you need. Image capture synchronization is achievable using either a hardware or software trigger and is complemented by 32 MB of on board memory for frame buffering to ensure image delivery.

Plug n' Play with No Framegrabber

The compact, light weight design of the Lm11059, measuring 76.2 x 76.2 x 82.6 mm, ensures easy integration into tight spaces and enclosures. The fully locking USB 2.0 cabling, power connector and digital interface ensure a simple plug-and-play installation. No framegrabber is required. Simplified I/O cabling is provided through a locking Hirose connector supporting 2 output, 2 input and 2 software configurable I/O ports.

Maximize Camera Performance Within Your Own Application

The Lumenera Camera SDK provides a full suite of features and functions that allow you to maximize the camera's performance within your own vision application. The SDK is compatible with all of our USB and GigE-based cameras. Microsoft DirectX/DirectShow, Windows API and .NET API interfaces are provided, allowing you the choice of application development environments from C/C++ to VB.NET or C#.NET. Full inline IntelliSense autocompletion and documentation is provided with the .NET API interface and is accompanied by a full API manual describing all camera functions and properties.

Superior Technical Assistance Center

All Lumenera cameras are supported by an experienced team of technical support and imaging experts. We understand your imaging needs and are here to help you get the most out of your camera.

Features

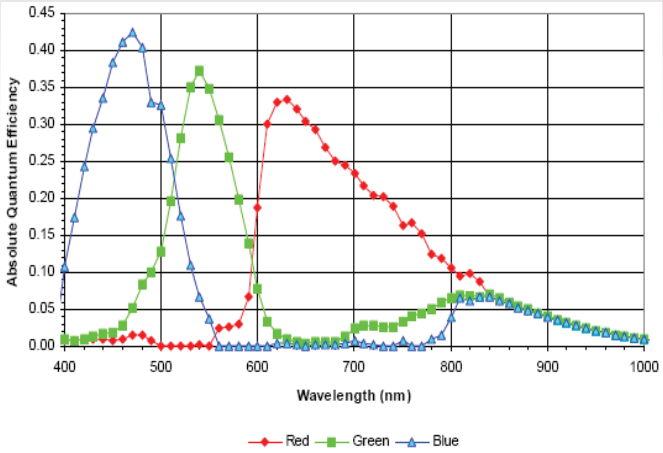
- Canon EF lens mount with fully integrated controller for focus/auto iris offers increased longevity and durability
- Compact form factor measuring 76.2 x 76.2 x 82.6 mm for easy integration, without losing the image quality typical in larger sized cameras
- Fanless body, smaller footprint and lower power requirement than the original Lw series
- High quality Kodak KAI-11002 CCD sensor provides excellent sensitivity and color reproduction
- Standard industrial or optional scientific grade quality available
- Color or monochrome, interline transfer, progressive scan 10.7 MP CCD sensor
- Locking industrial USB, power and Hirose GPI/O connector for control of peripherals and synchronization of lighting
- 2 output, 2 input and 2 software configurable I/O ports
- 32 MB RAM frame buffer
- Simplified cabling - video, and full camera control over a single USB cable
- 8 mounting points and 2 tripod (1/4"-20) mounts
- Binning improves sensitivity and Region of Interest (ROI) provides higher frame rates
- FCC Class B, CE Certified
- Select 8 or 14-bit pixel data
- DirectX/DirectShow compatible
- Software compatible with Windows 10, Windows 8.1, Windows 7, Linux, 32 and 64-bit operating systems
- Complete SDK available
- Four (4) year warranty

Lumenera corporation

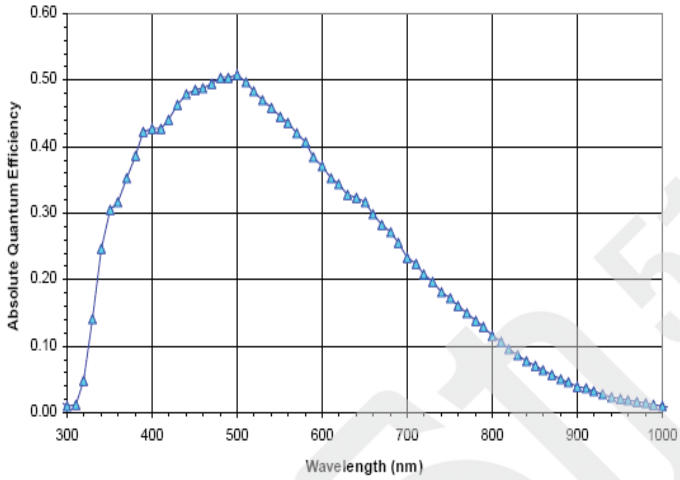
7 CAPELLA COURT, OTTAWA, ON, CANADA K2E 8A7 | LEIPZIG, GERMANY | ATLANTA, GEORGIA, USA | TEL (613) 736-4077 | FAX (613) 736-4071 | WWW.LUMENERA.COM | INFO@LUMENERA.COM

11072018

Color Quantum Efficiency Curves



Monochrome Quantum Efficiency Curve



Ordering Options	
Lm11059M	10.7 MP Monochrome Camera (Enclosed)
Lm11059C	10.7 MP Color Camera (Enclosed)
LuSDK	Software Developer's Kit (Web Download)
Camera Includes	
La21224L	Locking 12 V DC power supply
Lu803	3m USB 2.0 A to B cable
Customization Options	
-SCI	Scientific grade
-WOIR	Plain glass within lens mount
-WIR	With IR cut filter within lens mount
-WOG	Without any glass within lens mount
-WOCG	Without sensor cover glass
-WOML	Without sensor pixel micro lenses
-C1	Higher quality CCD sensor
-C0	Highest quality CCD sensor

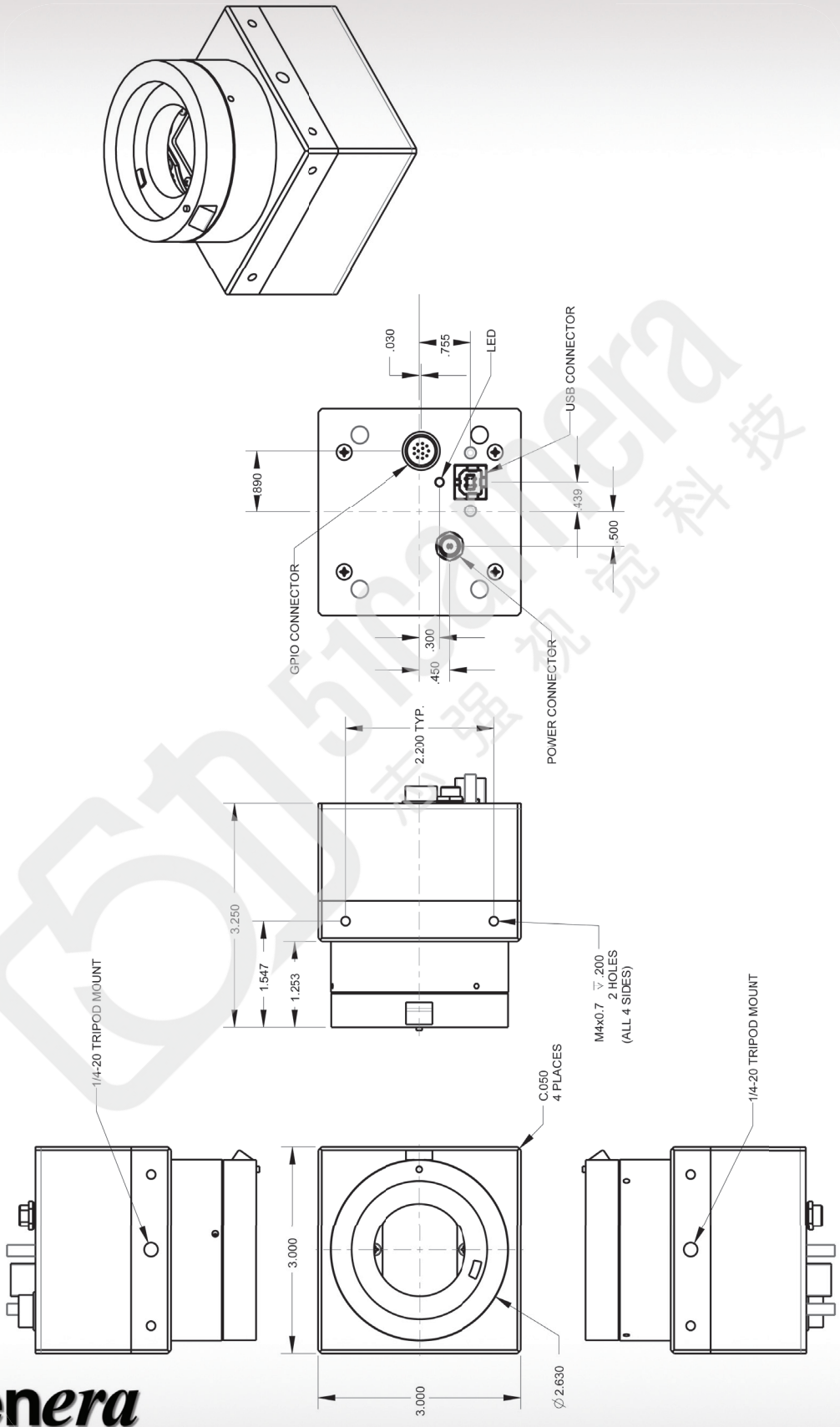
Sensor Specifications	
Image Sensor	Kodak KAI-11002
Optical Format	35 mm
Active Area	37.25 x 25.70 mm
Pixel Size	9.0 x 9.0 µm
Resolution	4008 x 2672 pixels
Region of Interest Control	Any multiple of 8 x 8 pixels, 8 x 8 pixels minimum
Camera Specifications	
Frame Rate	4.3 fps at full resolution 13.7 fps at 640 x 480 (with ROI)
Bit Depth	8 or 14-bit
Binning Modes	2 x 2, 4 x 4 and 8 x 8
Exposure Control	Manual and automatic control
Exposure Range	86 µs to 198.8 ms (video) 53 µs to 134.2 s (snapshot)
Gain Control	Manual and automatic control
Gain Range	1 to 61.7 x
White Balance	Manual and automatic control
Trigger Modes	Hardware and software triggerable
Camera Characteristics	
Sensitivity	Excellent
Dynamic Range	66 dB
Full Well Capacity	60,000 e-
Quantum Efficiency	50% (mono-peak), 42% (color-peak)
Read Noise	30 e-
Dark Current Noise	<50 mV/s at 20 °C
Mechanical Specifications	
Data Interface	USB 2.0, locking connector
General Purpose I/O	Locking Hirose
Lens Mount	Canon EF mount
Dimensions (HxWxD)	76.2 x 76.2 x 82.6 mm 3.0 x 3.0 x 3.25 inch
Mass	~600 g
Operating Temperature	0 to 50 °C
Storage Temperature	-30 to 70 °C
Operating Humidity	5 to 95 %, non-condensing
Shock / Vibration	50 g shock, 5 g (2 to 200 Hz) vibration
Onboard Memory	Camera has onboard non-volatile memory storage
Camera Software	
Operating Systems	Windows 10, Windows 8.1, Windows 7, Linux, 32 and 64-bit operating systems
Software Interfaces	Windows API, .NET, DirectX /DirectShow
Power and Emissions	
Power Consumption	~6 W (average)
Power Requirement	12 V DC
Emissions Compliances	FCC Class B, CE Certified
Hazardous Materials	RoHS, WEEE Compliant
Warranty	Four (4) year
System Requirements	
Recommended PC Specs	• Pentium 4, 1.3 GHz or higher • 512 MB RAM • 60 MB hard drive free space or more • USB 2.0 Port • Windows 10, 8.1, 7; Linux

Lumenera corporation

7 CAPELLA COURT, OTTAWA, ON, CANADA K2E 8A7 | LEIPZIG, GERMANY | ATLANTA, GEORGIA, USA | TEL (613) 736-4077 | FAX (613) 736-4071 | WWW.LUMENERA.COM | INFO@LUMENERA.COM

11072018

Mechanical Drawings



Measurements = inch

7 CAPELLA COURT, OTTAWA, ON, CANADA K2E 8A7 | LEIPZIG, GERMANY | ATLANTA, GEORGIA, USA | TEL (613) 736-4077 | FAX (613) 736-4071 | WWW.LUMENERA.COM | INFO@LUMENERA.COM

11072018