



Trax/UV Back Illuminated™ – World's First Back-Illuminated UV CMOS Camera

Features

- World's first back-illuminated UV CMOS camera
- 1.3 megapixel high resolution (1280 x 1024 pixels) at maximum 30 fps
- Anti-reflection coating optimizes Ultra-Violet response
- Very high QE maximizes UV sensitivity and dynamic range
- 100% pixel fill factor
- Low noise
- CameraLink® interface
- Flexible region-of-interest (ROI) settings
- Compact – 2 x 2 x 3 inches
- Includes GUI and SDK

Applications

- **Semiconductor wafer inspection and mask alignment**
- **Electronics: Solder inspection, PCB inspection, photoresist exposure control**
- **Automotive: Leak detection, surface inspection**
- **Forensics: Fingerprint analysis, counterfeit currency and documents**
- **UV microscopy**
- **UV metrology**
- **UV laser beam diagnostics**
- **Medical imaging**
- **Lithography**

Back Illuminated 200 nm to 900 nm UV CMOS 1.3 Megapixel CameraLink® 1.3 Megapixel High Resolution 30 fps Digital Camera. Designed for Inspection, Forensics, Microscopy, Metrology, Medical Imaging, and Scientific Applications.



Overview

The Trax/UV Back Illuminated is the world's first back-illuminated CMOS camera optimized for ultra-violet response. The combination of 100% fill-factor and high Quantum Efficiency (QE) from proprietary coatings provides UV sensitivity comparable to very expensive, scientific grade CCD cameras. The camera has a 1.3 megapixel resolution (1280 X 1024, 10.8 μm pixels) and 30 frames per second full frame digital readout via CameraLink®. The camera has a small form factor, low power consumption and is ideal for both end user and volume OEM applications.

The camera has a small form factor, low power consumption, and is ideal for OEM applications and end-user applications including semiconductor wafer inspection and mask alignment, automotive leak detection and surface inspection, forensic fingerprint analysis, counterfeit currency and documents, UV microscopy, metrology and laser beam diagnostics, medical imaging and lithography. The Trax/UV Back Illuminated is supported by National Instruments' IMAQ™ and LabVIEW™ software.

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Specifications

General Specifications

Imaging Sensor	Back-illuminated CMOS with anti-reflection coating
Active Image Pixels	1280 (H) × 1024 (V), 1.3 megapixels
Pixel Size	10.8 μm x 10.8 μm (square grid)
Active Image Area	13.8 (H) x 11.06 mm (V), 17.7 mm diagonal
Pixel Fill Factor	100%
System Read Noise	30 e- rms
Well Capacity	40 ke
Dark Current	150 e/p/s
Cooling	Passive air cooling (no fan required)
Nonlinearity	<2%
ROI Selection	Software Selectable
Frame Rate vs. ROI	1280 X 1024: 30 fps 512 X 512: 130 fps 128 X 128: 1230 fps
Digital Output Bit Depth	10 bit monochrome
Shutter Type	Rolling Shutter and Pseudo Snapshot
Exposure Time Range (Exposure limit depends on ROI Size)	Rolling Shutter Mode: 30 usec to 6 second Pseudo Snapshot Mode: 30 usec to 260 msec
Digital Data Port	CameraLink®

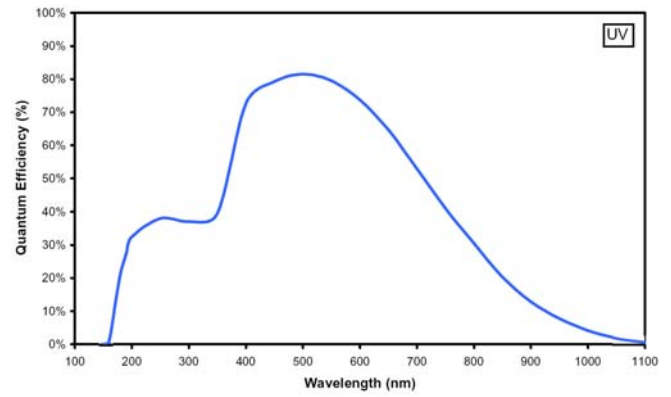
Physical and Power

Power Consumption	2 Watts @ 3.6 VDC
Lens Mount	C-Mount, 1" Optical Format
Camera Mount	1/4"-20
Dimensions	51 x 51 x 76 mm (2 x 2 x 3 inches)
Weight	225 grams (8 oz.)
Operating Temp.	-0°C to 50°C
Humidity	5%-95%, Non-condensing
Computer Operating System Platforms	Windows® Vista, Windows® XP, Windows® 2000
Conformities	CE Mark, FCC, RoHS

Ordering Information

VCUV-1.3CL: Trax/UV Back Illuminated CMOS UV Camera

Typical QE Response



Camera Drawings

