

TriWave® EC701 Visible, NIR, SWIR (400nm - 1600nm) Camera



NOBLEPEAK VISION



The TriWave® EC701 camera incorporates a 640 x 480 resolution, 10µm pixel imager designed with the revolutionary germanium-enhanced CMOS technology developed by NoblePeak Vision. TriWave® detects visible, near infrared (NIR) and short wave infrared (SWIR) wavelengths, i.e. 400nm to 1600nm. Passive night vision applications using the atmospheric “night glow” or using active SWIR illumination for applications such as Solar Panel and Semiconductor Wafer Inspection, Medical, Machine Vision and Biometrics imaging systems can achieve significant performance and cost benefits with TriWave®.

TriWave Features:

- Spectral response: 400nm to 1600nm
- 640 x 480 resolution
- 10µm x 10µm pixel size
- Enables ½” Lens Formats
- Faceplate Noise Equivalent Irradiance (NEI) 3.5 X 10⁹ photons/cm²/sec

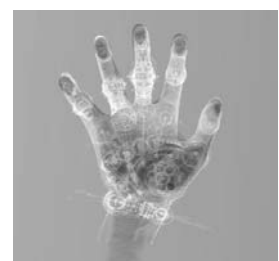
Applications:

- Night/Day Security
- Solar Panel and Semiconductor Wafer Inspection
- Machine Vision
- Medical
- Biometrics



Platform Features:

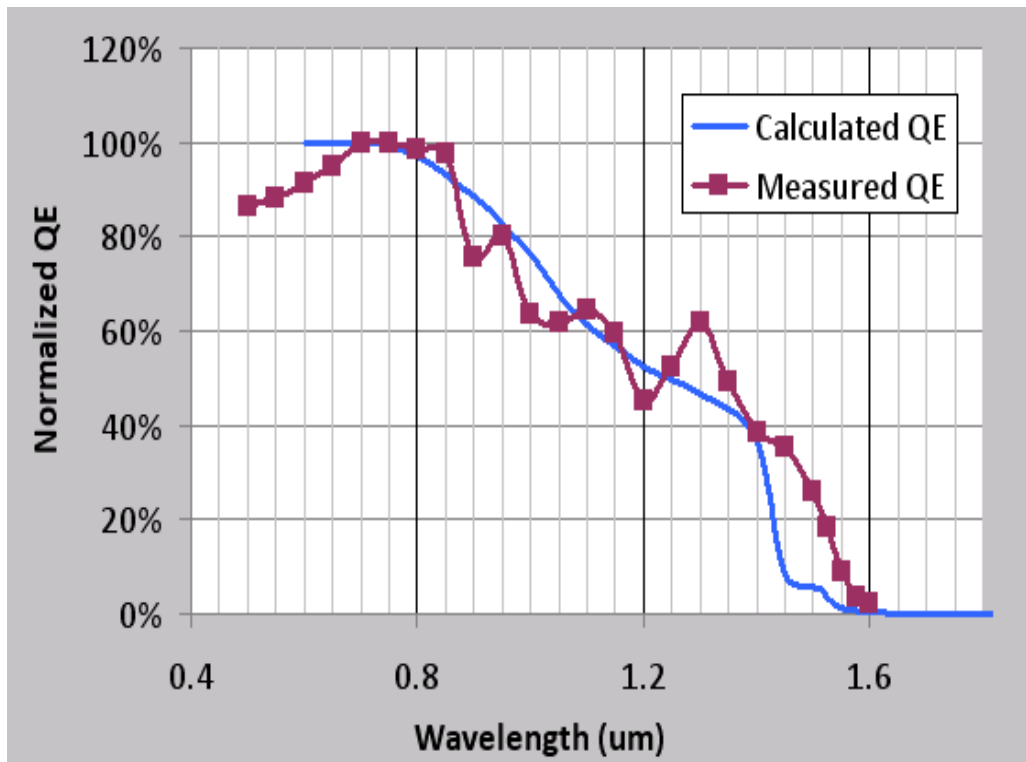
- Analog NTSC output
- 30 frames/second capture
- RS232 Control Interface
- Programmable exposure and frame rates
- Single 12 volt supply
- C-Mount lens adapter
- Broadband lens



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Pixel Quantum Efficiency vs. Wavelength

Pixel Quantum Efficiency (Fill factor x Dielectric Transmission x Absorption x Collection Efficiency x Circuit Efficiency)

Camera Mechanical Specifications	
Lens Mount	C-mount
Custom Lens	f/1.35, 25mm, broadband 0.48-1.7µm
Camera Environmental and Power Specifications	
Operating Temperature	0°C to 25°C
Supply	12 VDC, (2.5 Amps, peak), (1.5 Amps, nominal)
Sensor Specifications	
Pixel Pitch	10 µm x 10 µm
Array Size	VGA, 640 x 480
Spectral Response	400 nm to 1600 nm
Faceplate NEI	3.5×10^9 photons/cm ² /sec
Read Noise	7 e-
True Dynamic Range	59 dB
Exposure Times	33 ms to 17 µs
ADC Resolution	12 bits
Maximum Frame Rate	30 frames/s
Scan Mode	Interlaced (NTSC)

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