TriWave® CC701 Visible, NIR, SWIR (400nm - 1600nm) Camera Core

NOBLEPEAK VISION

TRIWAVE

The TriWave® CC701 camera core enables rapid time to market and lower development costs for OEM's developing full camera systems with the revolutionary TriWave® imaging technology. 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 active SWIR illuminated applications such as Solar Panel and Semiconductor Wafer Inspection, Medical, Machine Vision and Biometrics imaging systems can achieve significant performance advantages with TriWave®

TriWave Features:

- Spectral response: 400nm to 1600nm
- VGA and HVGA resolution
- 10µm x 10µm pixel size
- Enables ½" Lens Formats
- Faceplate Noise Equivalent Irradiance (NEI) 3.5 X 10^9 photons/cm2/sec

Platform Features:

- Analog and Digital video outputs
- Standard VISCA™ control interface that operates over RS-232C
- 30 frames/second capture
- Exposure control
- Progressive and interlaced scan
- 12V – 24V DC supply
- C-Mount lens adapter

Applications:

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

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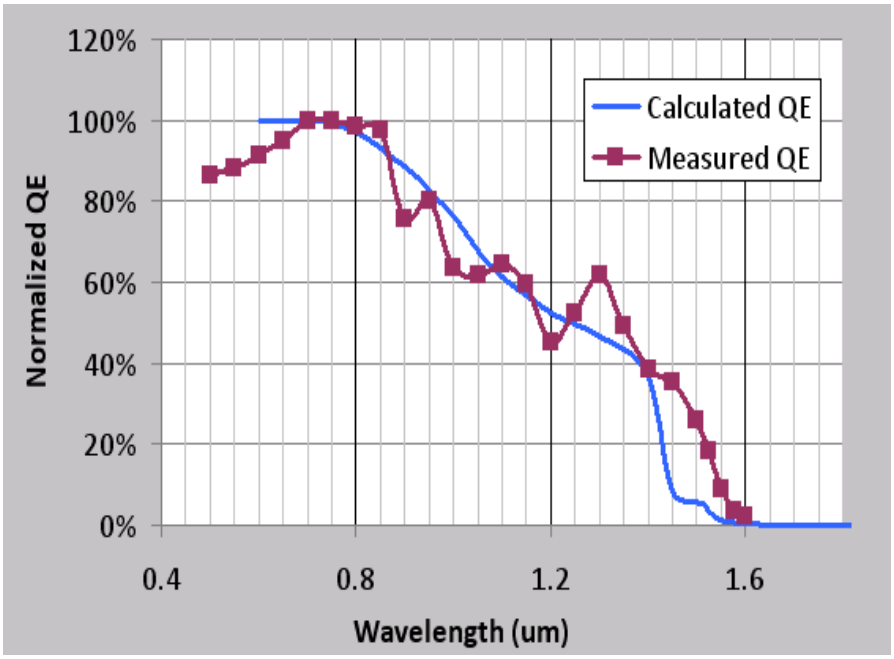

Typical Pixel Quantum Efficiency (Fill factor x Dielectric Transmission x Absorption x Collection Efficiency x Circuit Efficiency)

Mechanical Specifications	
Lens Mount	C-mount
Mechanical Dimensions	68 x 70 x 132 mm [2.68 x 2.76 x 5.2 in] (W x H x D)
Environmental and Power Specifications	
Operating Temperature	–40°C to 40°C @ Enclosure Rtherm <1.0°C/W
Supply	12 Volts DC @ 1.5 Amps nominal (5 Amps max)
Key Specifications	
Analog video interfaces	SMPTE 170M (NTSC)
Digital video interface	ITU-R BT.656, 30 Hz
Camera Control Interface	VISCA/RS-232C (zero to 3.3 Volts)
Scan modes	Progressive and Interlaced
Exposure Modes	Electronic rolling shutter with variable integration time
Electronic Rolling Shutter	80µs to 1/30 sec (NTSC)
Digital Slow Shutter	1/30 s to 1 s
Exposure control	Auto, Manual, Priority mode, EV compensation, Back-light compensation
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 X 10^9 photons/cm2/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)