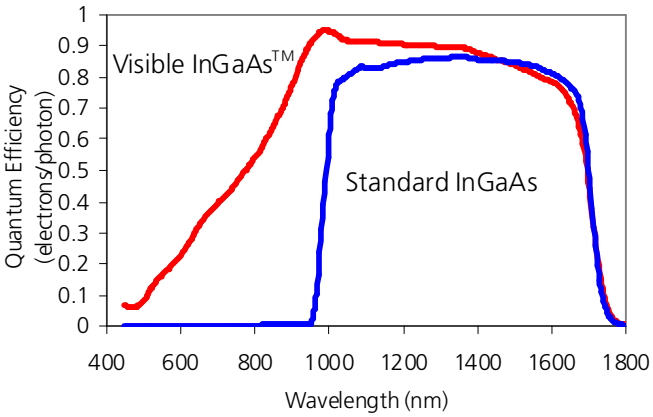
SU320MVis-1.7RT
Visible and SWIR Response InGaAs MiniCamera

Simultaneous imaging of all visible and SWIR laser beams and their targets are now available with one camera, the compact SU320MVis video camera. The camera features factory set non-uniformity correction at 8 different settings, with simultaneous 12-bit digital and composite video outputs. This low-power camera is easy to operate and delivers corrected video immediately upon applying power.

APPLICATIONS

- Covert surveillance with all laser designators
- Laser beam profiling of scientific, datacom and telecom lasers with one camera
- Hyperspectral imaging
- Machine vision in visible and SWIR



FEATURES

- Sensitivity across the visible and near infrared spectrum (0.4 µm to 1.7 µm)
- 320 x 240 pixels of 40 µm sq. w/100% fill factor
- Room temperature FPA operation
- Low power, < 1.6 W
- All solid-state InGaAs imager
- Digital & composite video outputs
- Programmable exposure times
- Automatic Gain Control (AGC)
- On-board non-uniformity corrections
- Accepts standard C-mount glass lenses

The SU320MVis Indium Gallium Arsenide (InGaAs) near infrared camera is a compact and versatile imaging tool with anti-blooming, and real-time, on-board non-uniformity corrections (NUC), gamma correction and Automatic Gain Control (AGC). The lack of cryogenic liquids or moving parts makes the SU320MVis equally at home in the field, in industrial settings, as well as in the laboratory, while operating the FPA at room temperature. Simply power the device by using 3.6 to 5 VDC or by using the included 100 to 240 VAC power adapter to immediately see video images on any EIA170 or CCIR compatible monitor while the 12-bit digital data is simultaneously available.

SUI *knows* IR™

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MECHANICAL

Length x Width x Height:	5 cm x 6 cm x 9.5 cm 1.96 in x 2.36 in x 3.74 in
Weight	< 300 g (no lens)
Focal Plane Array Format	320 x 240 pixels
Pixel Pitch	40 µm
Lens Mount	C-mount

ENVIRONMENTAL & POWER

Operating Temperature	0°C to 40°C
Storage Temperature	-10°C to 60°C
Humidity	Non-condensing
Power Requirements: AC Adapter Supplied DC (Voltage/Current)	 100-240 VAC, 47-63 Hz 3.6-5 V/ < 0.6 A at 25°C ambient

ELECTRICAL SPECIFICATIONS

Optical Fill Factor	100%
Spectral Response	0.4 µm to 1.7 µm
Quantum Efficiency	> 5% QE at 0.4 µm > 45% QE at 0.8 µm > 70% QE from 1 to 1.6 µm
Mean Detectivity, D* [1]	> 2 x 10^{12} cm√Hz/W
Noise Equivalent Irradiance [1]	< 5 x 10^{9} photons/cm^2·s
Noise (RMS)	< 1000 electrons
Full Well (Typical)	> 2 x 10^{6} electrons
True Dynamic Range	> 2000:1
Operability [2]	> 99%
Exposure Times	127 µs to 16.27 ms/16.38 ms (EIA170/CCIR) variable in 8 steps
Image Correction	2-point (offset and gain) pixel by pixel user selectable at all 8 integration times
Digital Output Format	12 bit EIA422 format
Analog Output Format	Interlaced or progressive scan composite for video monitors
Frame Rate	60 Hz EIA170 progressive scan 50 Hz CCIR progressive scan
Scan Mode	Rolling shutter, continuous or triggered

[1] λ = 1.55 µm, exposure time = 16.3 ms, no lens, digital gain of 1X, with both AGC and corrections off
[2] The fraction of pixels with responsivity deviation within +/-25% from the mean

INCLUDED WITH CAMERA

1) Camera	2) 25 mm, f/1.4 C-mount lens
3) Frame grabber interface box	4) AC adapter
5) Camera to FG interface box cable	6) 2 x SMA to BNC cables
7) Manual	8) Carrying case
9) Sample Lab View VI. & camera config. files for National Inst. frame-grabber cards	10) Palm interface cable & MiniCamera control software for palmOne™ handhelds

