



**BREAKTHROUGH
TOSHIBA
TECHNOLOGY**

Lens not included

Achieves sensitivity and dynamic range in excess of current generation night-vision cameras and provides full color at 30 FPS in near total darkness!

FEATURE

0.00025 Lux Minimum Illumination

50 dB S/N Ratio

Electron Multiplying CCD (EMCCD)

Adaptive Recursive Noise Reduction

Peltier Cooled CCD

BENEFIT

Reproduces full color, full motion images in starlight conditions

Provides industry leading sharpness in ALL light conditions

Generates new electrons dramatically increasing sensitivity at very fast speeds without the common readout noise of traditional CCD

Reduces CCD output buffer noise in low light conditions

Maintains constant temperature of CCD to maximize low light performance

IK-1000

STARLIGHT COLOR VIDEO CAMERA

Image Sensor	1/2 inch CCD
Active Pixels	658 x 496 Pixel
Effective Picture Element	319 k Pixel
Video Output Signal	VBS (NTSC:BNC), Y/C
Lens Mount	C Mount (Lens Not Included With Camera)
SYNC System	Internal
Resolution	420 TVL (NTSC OUT)
Minimum Illumination	0.001 Lux (F1.2 CMG x 1000, AGC 12 dB, White 50%) 0.00025 Lux (F1.2 CMG x 1000, AGC 12 dB, White 10%) 0.000004 Lux (256 x long term exposure*, AGC Off, White 10%)
S/N Ratio (NTSC)	50 dB
White Balance	ATW/One Push WB/MANUAL
IRIS Control	Auto Iris Lens (EE/DC)
Electric Shutter	Manual (OFF, 1/60, 1/100, 1/250, 1/500, 1/1000, 1/2000)
GAIN	OFF, 0 dB to 18 dB (1 dB Step Selectable)
Charge Multiplication GAIN (CMG)	x 1000 approximately (maximum)
Backlight Compensation	7-Mode Selectable, 16 Area Photometry
Frame Rate	30 Frames Per Second
Camera Control	RS-232C (Dsub-9p)
Power Supply	12 V DC
Power Consumption	At 77 °F: 6 watts, At 104 °F: 12 watts
Operating Temperature	14 °F to 113 °F
Humidity	90% Maximum
Weight	15.8 oz (450 g)
Dimensions	2.28" (W) x 2.3" (H) x 5.24" (D)
Emission Standard	FCC Class A
Warranty	One Year Limited Warranty



APPLICATIONS

Suggested applications for the IK-1000 camera include these 24/7/365 high value assets:

- Homeland Security
- Airports
- Military
- Dams, Water Treatment
- Government Buildings
- Mass Transit
- Ports
- Nuclear Power Plants
- Natural Gas Sites
- Pipelines
- National Monuments

TECHNOLOGY COMPARISON

	Image Intensifier Camera	IR Illuminated Camera	Thermal Imaging Camera	IK-1000 EMCCD
Color Image In Low Light	No	No	No	Yes
Compact Design	No	No	No	Yes
Maintenance Free Design	No	No	Yes	Yes
Distance Range	Unlimited	Limited By IR	Unlimited	Unlimited

*Slow Shutter

WHAT IS EMCCD?

Electronic multiplying architecture differs from traditional CCD technology in that a gain register is inserted between the end of the shift register and the output amplifier. The gain register has two phases with independent electrodes, each holding a different voltage potential. The resultant intense electric field causes the electrons to undergo impact ionization. This generates new electrons that manifest themselves as dramatically increased sensitivity at very fast speeds without the common readout noise of traditional CCDs. **The result is virtually noiseless 30 FPS full color in near total darkness.**

