“How to image in extreme, low-light conditions”

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Imaging in extremely low light conditions can present a challenge for a variety of tasks, including military, biomedical, scientific, non-destructive testing, underwater research, realism broadcast TV, and mine and safety inspection. To achieve clear, full color, full motion images in starlight or extreme low-light conditions, the user requires an imaging tool that offers sensitivity and dynamic range in excess of current generation night vision cameras. Toshiba Imaging Systems Division, a division of Toshiba America, has developed an ultra-sensitive ½” CCD color camera with the help of new, revolutionary electron multiplying technology, making it 1000 times more sensitive than a conventional color CCD. The incoming signal is multiplied by a factor of one thousand, allowing a minimum illumination with full color reproduction down to 0.25 mlux (1/1000 lux) in color at 50 IRE. With a high resolution 658 x 496 pixel sensor and a built-in electronic shutter to 1/2000 seconds, the IK-1000ME offers a real solution for imaging in ultra-low-light or starlight conditions.

The challenge of lowlight imaging was brought to the company’s attention by customers who required small, reasonably priced, compact cameras that could reproduce color images in starlight, underwater and other low-light conditions. In answer to these custom requests, Toshiba designed the compact, [58 mm (W) x 58.4 mm (H) x 133 mm (D)**]** ultra-sensitive IK-1000ME color camera.

Toshiba Imaging Systems Division of Toshiba America is the global leader in producing precision cameras with highly accurate spectral sensitivity for enhanced imagery. Toshiba’s latest full color video system adds to the company’s growing reputation for revolutionary, superior cameras and imaging products.

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