

# Kite EMCCD

Digital Monochrome Scientific Interline EMCCD  
658 x 496 • Readout Noise <1e • 50Hz Frame Rate •



## Key Features and Benefits

-20°C VGA Scientific EMCCD

- **658 x 496 EMCCD sensor**  
Enables optimum image resolution in low light imaging applications
- **B/W EMCCD technology**  
Enables high sensitivity imaging with 1000x on-chip gain
- **16 bit CameraLink output**  
Provides wide dynamic range
- **53% QE from Virtual Phase sensor**  
Optimum Photon collection
- **Frame Interline Transfer (FIT)**  
No mechanical shutter required, less smear at shorter exposures

Resolution	<b>658 x 496</b>
Readout Noise	<b>&lt;1e</b>
Frame Rate	<b>50Hz</b>
Cameralink	<b>16bit</b>

## Specification for Kite EMCCD

Sensor	Texas Instruments TC247SPD
Sensor Type	1/2" Frame Interline Transfer (FIT) Impactron
Active Pixel	658 x 496
Pixel Size	10µm x 10µm
Active Area	6.58mm x 4.96mm
Full Well Capacity	20000 electrons
Shift Register Well Depth	100000 electrons
Non Linearity	< 1%
Readout noise	< 1 electrons with EM gain ON, < 20 electrons with EM gain OFF
Dynamic Range	83dB
Frame Rate	50Hz
Dark Current	< 1e / pix / sec
Digital Output Format	16 bit CameraLink (base configuration)
Peak Quantum Efficiency	53% @ 530nm
Spectral response	350 - 1100nm
Cooling	-20°C with ambient air @ +20°C
Binning	1x1, 2x2, 3x3, 4x4
Antiblooming protection	Yes
Lens Mount	C mount
Synchronisation	Trigger IN and OUT - TTL compatible
Power Supply	12V DC ±10%
Total power consumption	< 12W
Operating case temperature	-20°C to +55°C
Storage Temperature	-30°C to +85°C
Dimensions	97mm x 68mm x 61mm
Weight (no lens)	< 550g

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## Ordering Information

### Camera

KITE EM247 digital B/W camera	KI247-CL
KITE Power Supply Cable	RPL-FA-CBL

### Optional Accessories

EPIX(R) EB1 base CL card	RPL-EPIX-EB1
EPIX(R) base Notebook CL card	RPL-EPIX-ECB1-34
EPIX(R) base Notebook CL card	RPL-EPIX-ECB1-54
EPIX(R) XCAP STD software	RPL-XCAP-STD
CameraLink Cable, 2m <sup>1</sup>	RPL-CL-CBL-2M
Optical Visible lenses <sup>2</sup>	RPL-xx-xxxx

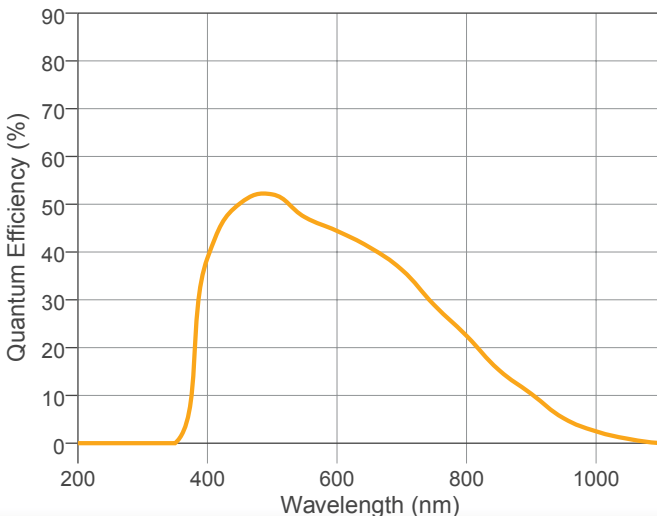
Note 1: Longer CL cable available

Note 2: Please consult us to check our range of lenses

Demo is available on request.  
Pricing AOR subject to volumes.

Detailed technical drawings  
can be downloaded at  
[www.raptorphotonics.com](http://www.raptorphotonics.com)

## Quantum Efficiency



## Applications

- Adaptive Optics and Astronomy
- Calcium signaling
- Fluorescence imaging / spectroscopy
- Flow cytometry
- FRET / FRAP / TIRF
- Genome sequencing
- High content screening
- High resolution fluorescence imaging
- Hyperspectral imaging
- LIBS
- Live Cell Imaging
- Single molecule detection
- Solar Cell Inspection
- X-ray tomography

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