KITE EM247 CL

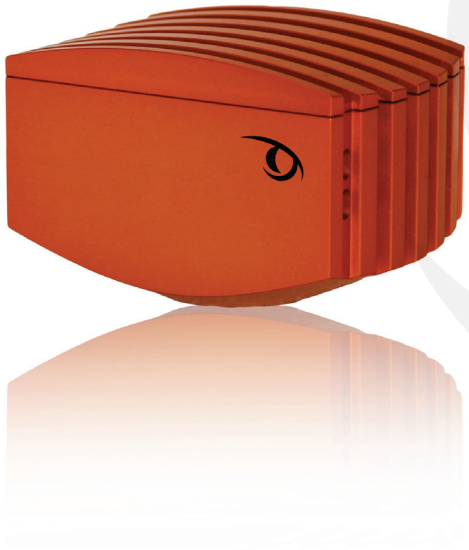
Digital Monochrome EMCCD camera

658 x 496 • 50Hz • 16 bit •

GMP

GENERAL MICROTECHNOLOGY & PHOTONICS

DATASHEET



CAMERA Link

Key Features and Benefits

- ✓ **658 x 496 EMCCD sensor.** Enables optimum image resolution in low light imaging applications
- ✓ **B/W EMCCD technology.** Enables high sensitivity imaging with up to 1000x on-chip gain
- ✓ **16 bit CameraLink output.** Provides wide dynamic range
- ✓ **53% QE from Virtual Phase sensor.** Optimum Photon collection
- ✓ **Interline Frame Transfer.** No mechanical shutter required, vibration-less CCD readout
- ✓ **High frame rate imaging: 50Hz.** Optimum image sharpness even in low light condition
- ✓ **Ultra compact and rugged.** Ideal for OEM integration into Electro-Optic systems

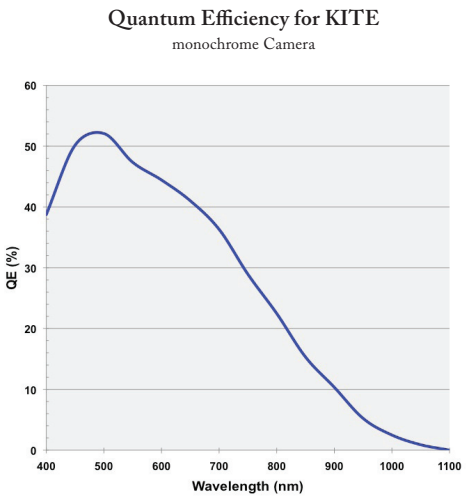
Raptor photonics

Capturing Tomorrow

Specification for KITE EM247 CL

Sensor	Texas Instruments TC247SPD
Sensor Type	1/2" Interline Frame Transfer Impactron
Active Pixel	658 x 496
Pixel Size	10μm x 10μm
Active Area	6.58mm x 4.96mm
Full Well Capacity	24000 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	65 dB
Frame Rate	50Hz
Digital Output Format	16 bit CameraLink (base configuration)
Peak Quantum Efficiency	53% @ 530nm
Spectral response	350 - 1100nm
Readout mode	Progressive scan
Cooling	-20°C with ambient air @ +20°C
Binning	2x2, 4x4, 8x8
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

Quantum Efficiency

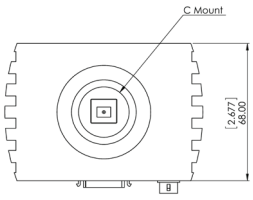


Sample Applications

Raptor's EMCCD camera cores are ideally suited for cutting edge low light scientific imaging application such as:

- Fluorescence Microscopy
- Gel Imaging
- Ion Imaging
- Bioluminescence
- Hyperspectral Imaging
- X-ray imaging
- Astronomy

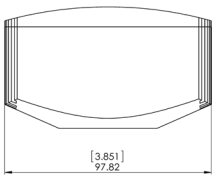
Dimensions

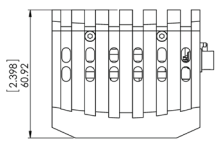


Unit: [inch] mm

Power connector on camera: Hirose HR10-7R-4P

Cable connector (socket): Hirose HR10-7P-4S





Ordering Information

Camera	
KITE EM247 digital B/W camera	KI247-CL
KITE Power Supply cable	RPL-HR4-CBL-B

Optional Accessories	
Epix base CL card	RPL-EPIX-EB1
Epix base Notebook CL card	RPL-EPIX-ECB1-54
EPIX XCAP Ltd software	RPL-XCAP-LTD
MicroManager Driver	RPL-MM-D
CameraLink Cable, 2m[1]	RPL-CL-CBL-2M
Optical Visible lenses[2]	RPL-xx-xxxx

Note: [1] Longer CL cable available

[2] Please consult us to check our range of lenses

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