ANDOR

an Oxford Instruments company

Photovoltaics

iKon M - Features

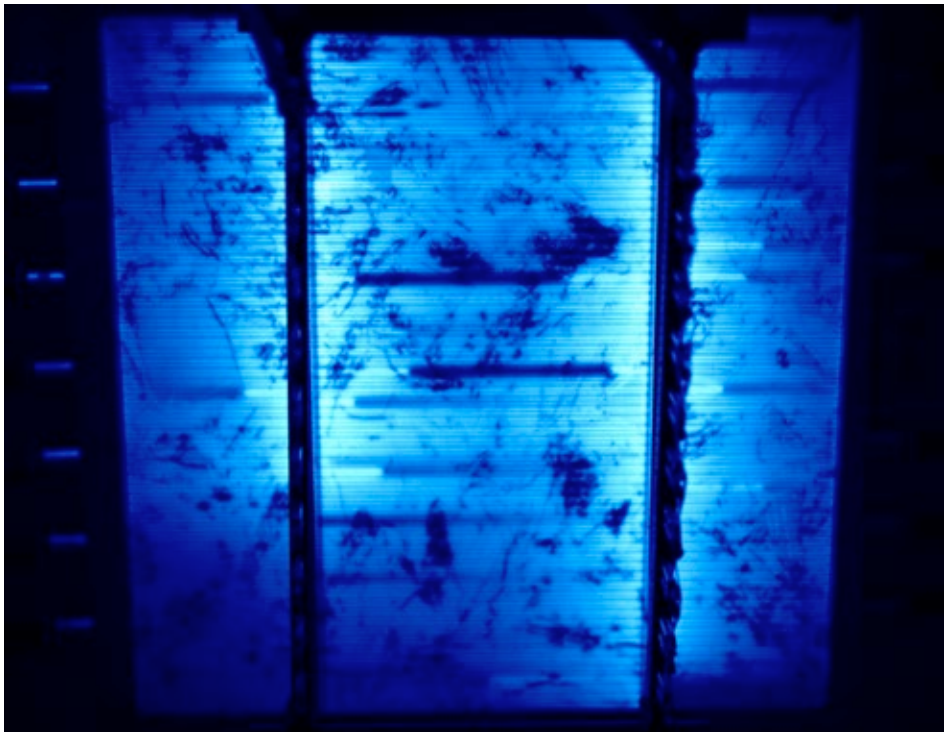
- Electroluminescence imaging with 0.2 s integration time
- Optimal NIR sensitivity:
  - 88% QE @ 900 nm
  - 46% QE @ 1000 nm
- Fast 3 MHz and 5 MHz clocking modes
- Dual exposure ring mode
- Back-illuminated, deep depletion CCD with Fringe Suppression Technology™
- High dynamic range (80 dB)
- Lockable USB connectors
- Deep thermoelectric cooling

Zyla sCMOS - Features

- 1.2 e^- read noise
- 5.5 Megapixel, 6.5 µm pixel size
- High dynamic range (88 dB)
- Compact and light
- Rolling and Global shutter
- NIR optimized QE

Software Development Kit

The SDK is a dynamic link library which can be used with a wide variety of programming environments, including: C, C++, C#, Visual Basic, LabVIEW, Matlab and the HALCON image processing library. The library is available in both 32-bit and 64-bit libraries compatible with Windows (7, 8, 8.1 and 10) and Linux.



iKon-M PV Inspector

Cameras for cell inspection

The ultimate high-performance CCD camera for electro- and photoluminescence imaging of photovoltaic (PV) cells and modules, combining ultra low noise electronics and optimal sensitivity in the NIR. Featuring Fringe Suppression Technology™, this back-illuminated deep depleted sensor is specifically designed to offer ultimate performance for NIR applications, whilst minimizing etaloning. Ideally suited for very fast running PV inspection systems as found in Stringers and Cell Sorters.

Zyla 5.5 sCMOS

For speed and sensitivity

Andor's Zyla sCMOS camera offers high resolution, high speed, high sensitivity imaging performance in a remarkably light and compact, TE cooled design. The 5.5 Megapixel sensor can be read out at 30 fps with only 1.2 electron read noise floor, combined with a high dynamic range of 88 dB. Zyla is suited to Cell inspection and to Module inspection in Laminators and Flashers.

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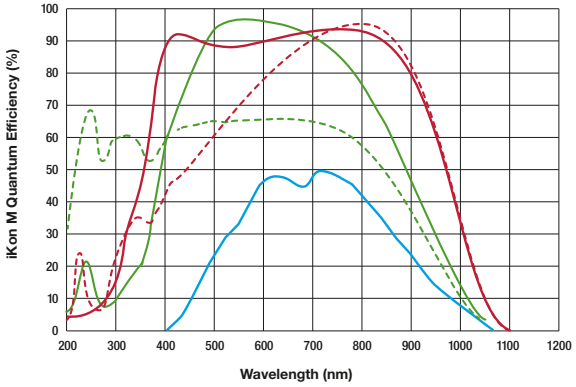
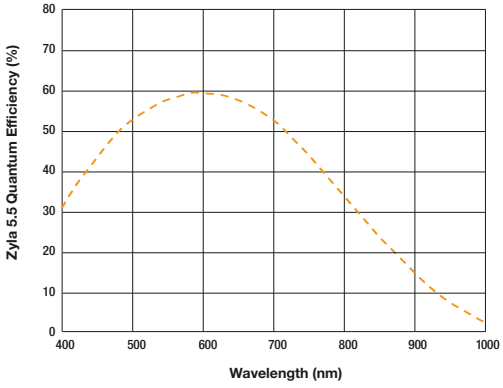
Comparitive Specification Overview

Camera	iKon-M PV Inspector	Zyla
Sensor Type	Back-illuminatedDeep Depletion	Scientific CMOS
Resolution	1024 x 1024	2560 x 2160
Pixel size (µm)	13 x 13	6.5 x 6.5
QE @ 900 nm / 1000 nm	88% / 46%	15% / 4%
Read Noise	2.5 e^-	1.2 e^-
Dynamic Range	80 dB	88 dB
Frame Rate (fps)	2.6 (4.2)	100
Typical T measurement (Exposure/total cycle)	0.2s / 0.6s (0.45s)	0.5/0.6s
Typical Use for PV Inspection	Stringer, Cell Sorter	Laminator, Flasher, Cell Sorter
Data Interface	USB 2.0	Camera Link

Quantum Efficiency Curves





*QE is a measurement for sensor sensitivity. It gives the probability that a photon hitting the sensor will set an electron free.

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