

CMOS Camera

DS1-D1312-160

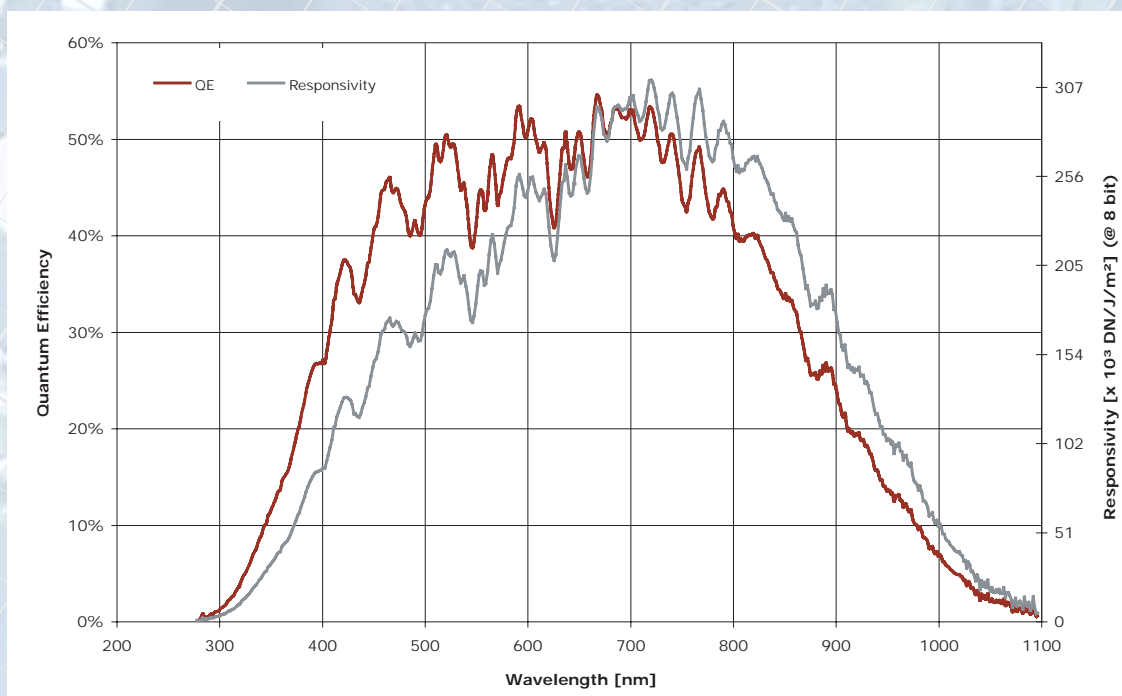
1.4 Megapixel resolution with proprietary Photonfocus sensor

Features

- 1312 x 1082 pixel resolution
- Global Shutter
- Dynamic range up to 60 dB
- Up to 110 fps @ full resolution
- Sensor without cover glass
- Region of Interest (ROI)
- CameraLink® interface
- 10 bit greyscale
- On camera shading correction
- Superior Signal-to-Noise Ratio (SNR)
- CE, RoHS & WEEE compliant



Spectral response



DS1-D1312-160-CL-10

Image Sensor

Image sensor	Photonfocus A1312-160 (3. generation)
Technology	CMOS active pixel (APS)
Scanning system	Progressive scan
Optical format / diagonal	1" (13.6 mm diagonal) maximum resolution 2/3" (11.6 mm diagonal) 1024 x 1024 resolution
Resolution	1312 x 1082 pixels
Pixel size	8 µm x 8 µm
Active optical area	10.48 mm x 8.64 mm (maximum)
Random noise (RNS)	< 0.3 DN RMS @ 8 bit / gain = 1
Fixed pattern noise (FPN)	< 3.4 DN RMS @ 8 bit / gain = 1
Dark current	0.65 fA/pixel
Full well capacity	~100 ke
Spectral range	< 400 to 1030 nm (to 10 % of peak responsivity) • Very good NIR response
Responsivity	210 x 10 ³ DN / (J/m ²) @ 625 nm / 8 bit / gain = 1 (approximately 620 DN / (lux s) @ 625 nm / 8 bit / gain = 1)
Quantum Efficiency	> 50 %
Optical fill factor	> 60 %
Dynamic range	Up to 60 dB
Colour format	Monochrome
Characteristic curve	Linear
Shutter mode	Global shutter
Read out mode	Sequential read out or simultaneous read out (read out during exposure)

Camera

Exposure time	10 µs ... 0.41 s / 25 ns steps
Frame rate	108 fps @ full resolution
Pixel clock	80 MHz
Camera taps	2
Greyscale resolution	10 bit / 8 bit
Analogue gain	1
Digital gain	1
Configuration interface	CL SERIAL (9600 or 57600 baud, user selectable)
Trigger modes	• Free running (non triggered) • Interface trigger • External trigger input
Features	• Region of Interest (ROI) • On camera shading correction • Strobe output
Interface	CameraLink® base configuration
Operating temperature	0 °C ... +50 °C
Power supply	+12 V DC (+/- 10 %)
Power consumption	< 3.0 W
Lens mount	C-Mount (CS-Mount optional)
Dimensions	60 x 60 x 45 mm ³
Mass	265 g
Conformity	CE / RoHS / WEEE
Special	Adjustable backfocus; Opto-isolated I/Os

Software

Camera Control	PFRremote™ graphical user interface (GUI) and PFLib (SDK)
OS	win2k; winxp; winvista; other OS (Linux, QNX, etc.) on request

All information provided in this flyer is believed to be accurate and reliable. No responsibility is assumed by Photonfocus AG for its use. Photonfocus AG reserves the right to make changes to this information without notice. Reproduction of this flyer in whole or in part, by any means, is prohibited without prior permission having been obtained from Photonfocus AG.