

EMVA 1288 Data Sheet m1313

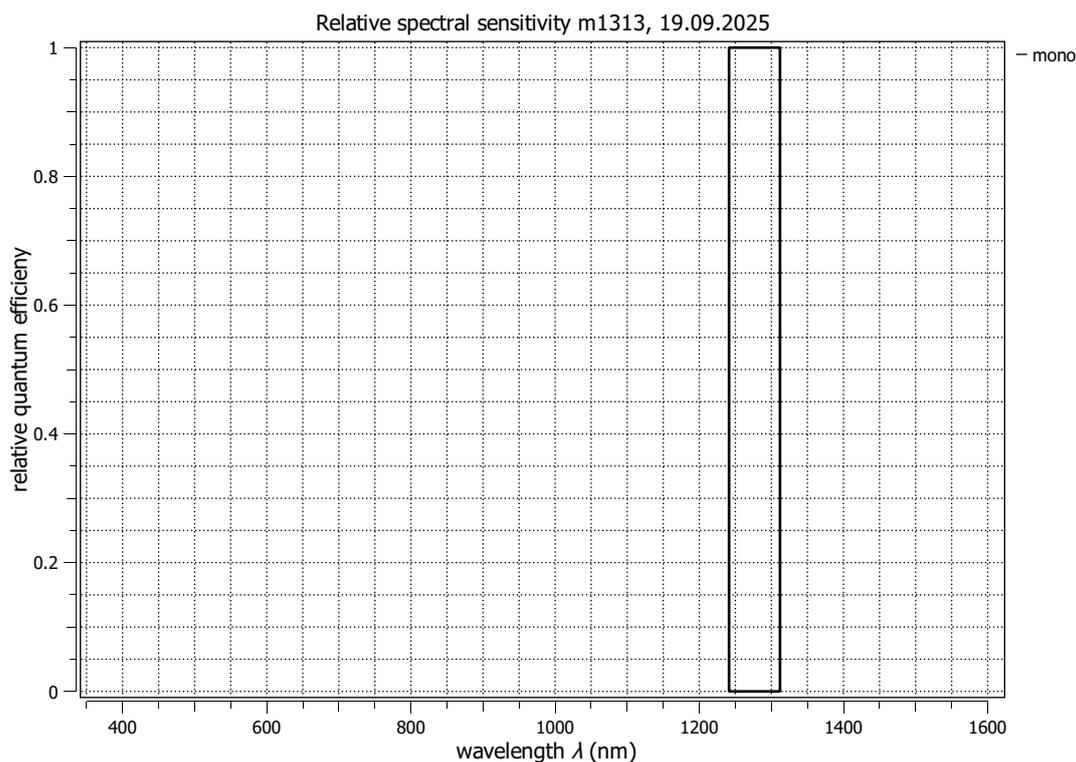
This data sheet describes the specification according to the standard 1288 Release 4.0 General issued on 21 June 2021 for "Characterization and Presentation of Specification Data for Image Sensors and Cameras" by the European Machine Vision Association (EMVA), published at <https://www.emva.org/standards-technology/emva-1288/> with proprietary extensions from AEON. The measurements were performed with the AEON ACC2b 14x1 color, Release 9, 13.11.2020, SN 0066(Balluff), software version 3.2.

Measurements performed by Product Development Vision, Balluff GmbH

Type of data presented	Single
Vendor	Balluff GmbH
Model	mvBlueFOX3-2013sG
Serial number	FF024751
Sensor diagonal	8.28 mm
Lens category	C-Mount
Resolution	1296 × 1032, 12 bit
Offset/size channels	0 × 0/ 1296 × 1032
Pixel size (h×v)	5.00 μm × 5.00 μm
Sensor	IMX990
Sensor type	CMOS
Shutter type	Global
Overlap cap.	Overlapping
Max. frame rate	0.0 Hz
Interface type	USB3Vision

Nr.	Centroid/FWHM	Gain, blacklevel	t_{exp} (ms)
1	1276.6/70.7 nm	0.0dB, 1.0	20.0

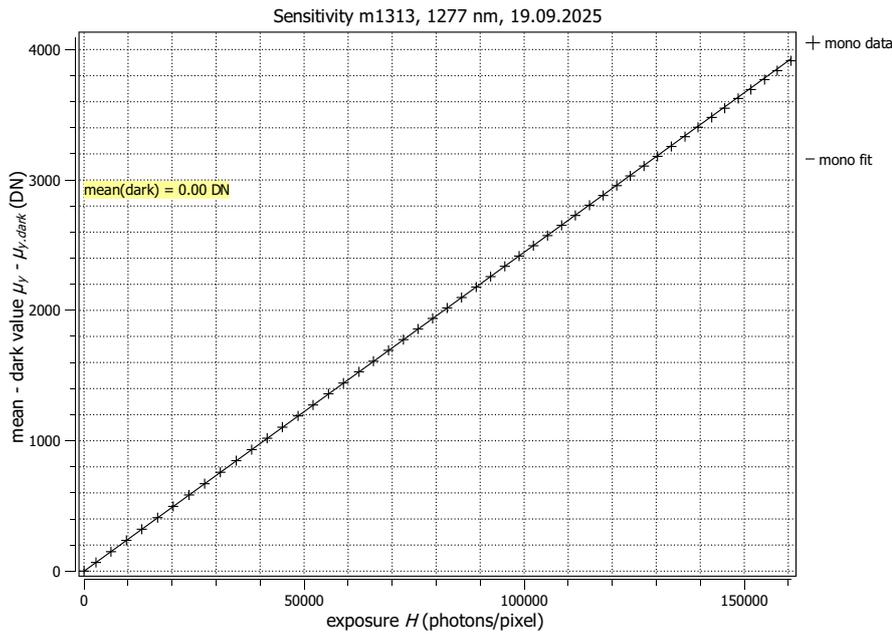
Optional data measured: None



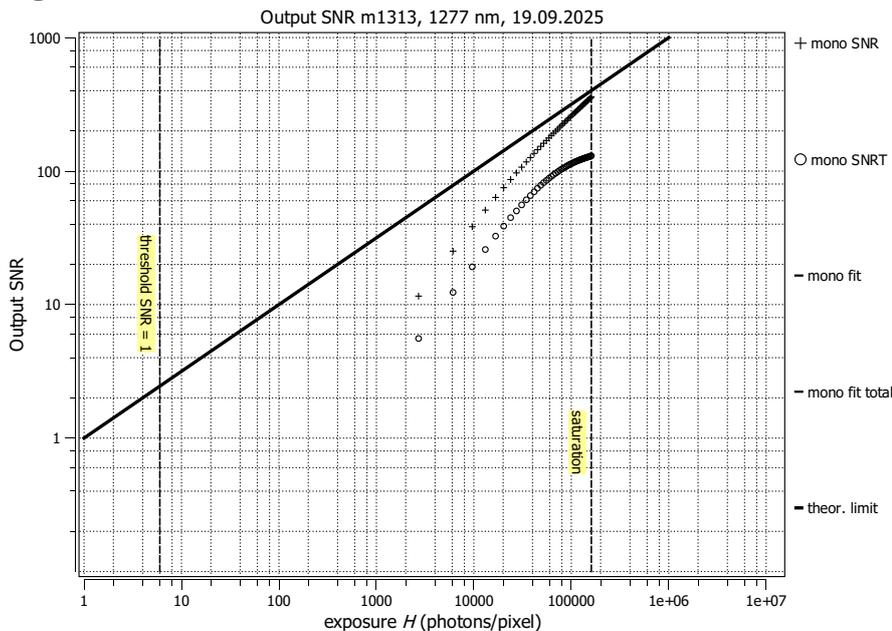
Summary Sheet for Operation Point 1 at a Wavelength of 1277 nm

Type of data	Single	Gain, black-level	0.0dB, 1.0
Exposure control	By irradiance	Environmental temperature	23.2°C
Exposure time	20.00 ms	Camera body temperature	27.5°C
Frame rate	29.4 Hz	Internal temperature(s)	34.4°C, 31.7°C
Data transfer mode	Mono12	Wavelength, centr., FWHM	1277 nm, 70.7 nm

Characteristic Curve



Signal-to-Noise Ratio



Quantum efficiency

η —

Overall system gain

K —

$1/K$ —

Temporal dark noise

σ_d 231 p

$\sigma_{y,dark}$ 5.62 DN

Signal-to-noise ratio

SNR_{max} 359.2

51.1 dB

$1/SNR_{max}$ 0.278 %

Absolute sensitivity threshold

$\mu_{p,min}$ 231 p

$\mu_{p,min,area}$ 9.24 p/ μm^2

Saturation capacity

$\mu_{p,sat}$ 160605 p

$\mu_{p,sat,area}$ 6424 p/ μm^2

Dynamic range

DR 695

56.84 dB

Spatial nonuniformities

$DSNU_{1288}$ 434 p

$DSNU_{1288,col}$ 16 p

$DSNU_{1288,row}$ 7 p

$DSNU_{1288,pix}$ 434 p

$PRNU_{1288}$ 0.677 %

$PRNU_{1288,col}$ -0.004 %

$PRNU_{1288,row}$ 0.037 %

$PRNU_{1288,pix}$ 0.676 %

Linearity error

LE 0.10%

Dark current

$\mu_{c,mean}$ -2.23E+02 p/s

$\mu_{c,var}$ 1.36E+06 p/s