

EMVA 1288 Data Sheet m1322

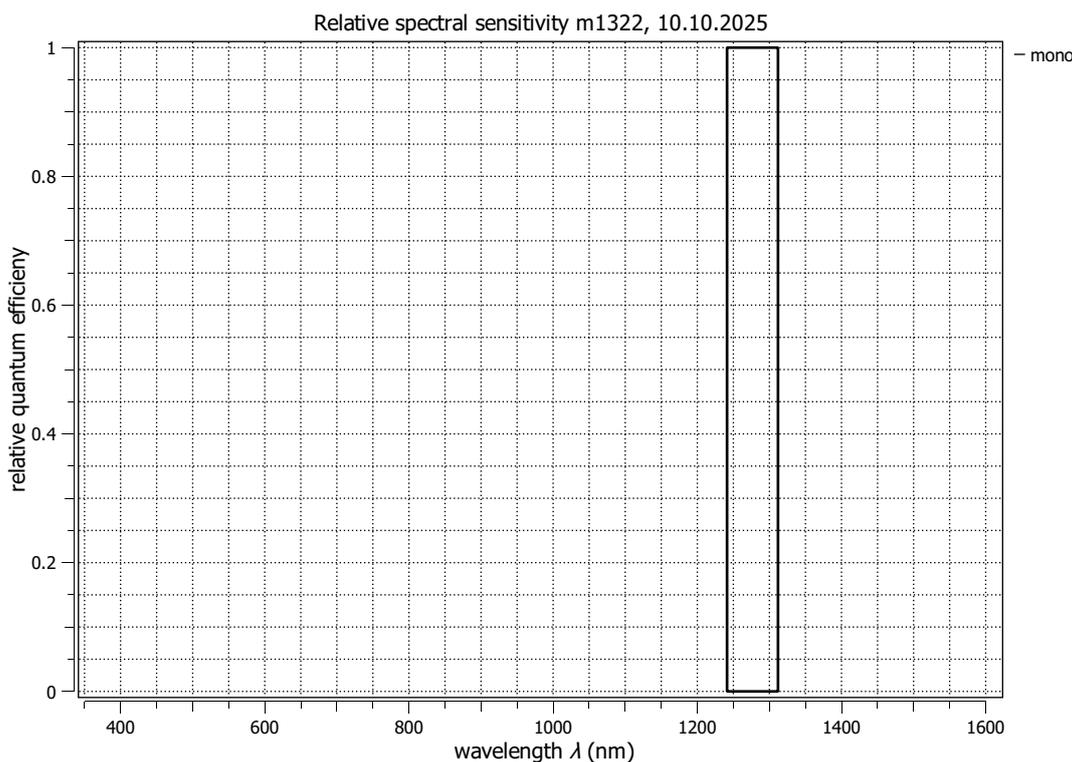
This data sheet describes the specification according to the standard 1288 Release 4.0 General issued on 21 June 2021 for "Characterization and Presentation of Specification Data for Image Sensors and Cameras" by the European Machine Vision Association (EMVA), published at <https://www.emva.org/standards-technology/emva-1288/> 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 | mvBlueFOX3-2003sG |
| Serial number | FF020042 |
| Sensor diagonal | 4.19 mm |
| Lens category | C-Mount |
| Resolution | 656 × 520, 12 bit |
| Offset/size channels | 0 × 0/ 656 × 520 |
| Pixel size (h×v) | 5.00 μm × 5.00 μm |
| Sensor | IMX991 |
| 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 |

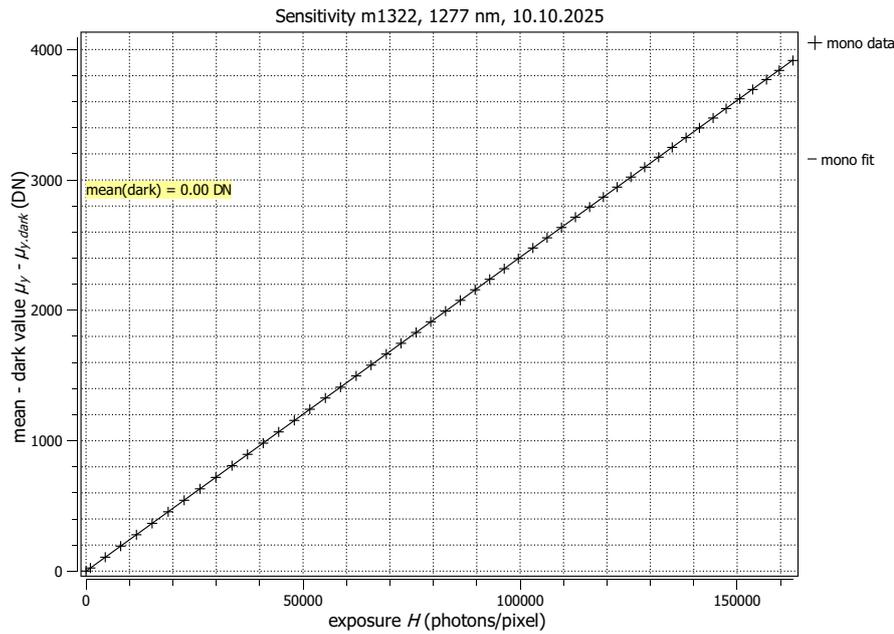
Optional data measured: None



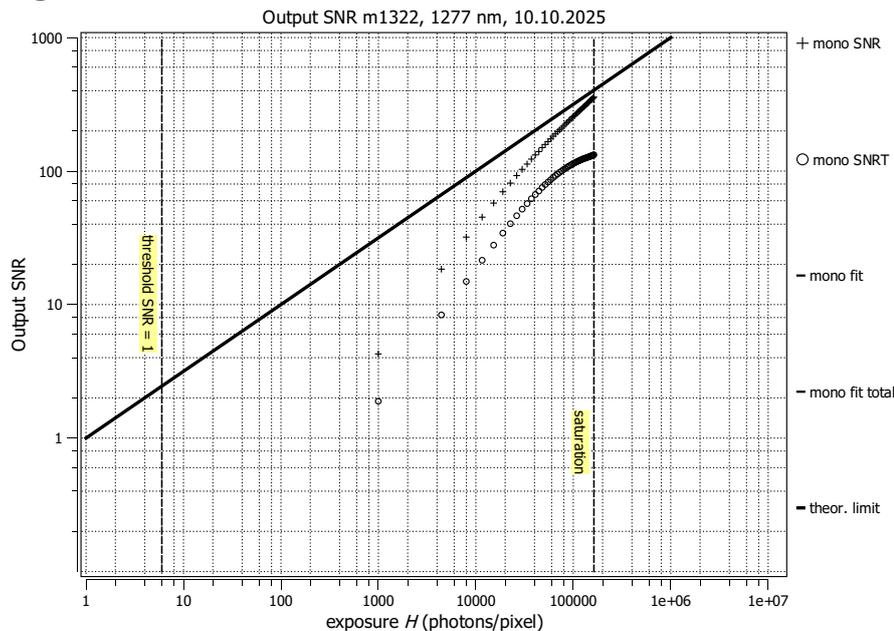
Summary Sheet for Operation Point 1 at a Wavelength of 1277 nm

| | | | |
|--------------------|---------------|---------------------------|------------------|
| Type of data | Single | Gain, black-level | 0.0dB, 1.0 |
| Exposure control | By irradiance | Environmental temperature | 22.4°C |
| Exposure time | 20.00 ms | Camera body temperature | 28.1°C |
| Frame rate | 36.6 Hz | Internal temperature(s) | 35.6°C, 32.5°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 233 p

$\sigma_{y,dark}$ 5.60 DN

Signal-to-noise ratio

SNR_{max} 358.6

51.1 dB

$1/SNR_{max}$ 0.279%

Absolute sensitivity threshold

$\mu_{p,min}$ 5.99 p

$\mu_{p,min,area}$ 0.240 p/ μm^2

Saturation capacity

$\mu_{p,sat}$ 162848 p

$\mu_{p,sat,area}$ 6514 p/ μm^2

Dynamic range

DR 27187

88.69 dB

Spatial nonuniformities

$DSNU_{1288}$ 478 p

$DSNU_{1288,col}$ 14 p

$DSNU_{1288,row}$ 8 p

$DSNU_{1288,pix}$ 477 p

$PRNU_{1288}$ 0.666 %

$PRNU_{1288,col}$ -0.014 %

$PRNU_{1288,row}$ 0.036 %

$PRNU_{1288,pix}$ 0.665 %

Linearity error

LE 0.04%

Dark current

$\mu_{c,mean}$ 5.08E+02 p/s

$\mu_{c,var}$ 2.36E+06 p/s