This datasheet describes the specification according to the standard 1288 for Characterization and Presentation of Specification Data for Image Sensors and Cameras of the European Machine Vision Association (EMVA) (see www.standard1288.org). The measurements were performed with an AEON ACC3 RGB Release 3, 20.01.2104, SN 0005(). The performance parameters and estimated accuracy of the measurements are described in the technical report for the instrument, its calibration in the corresponding calibration report.

Vendor | MATRIX VISION
Model | mvBlueFOX3-2024aG
Serial number | FF000025
Sensor diagonal | 13.40 mm
Lens category | C-Mount
Resolution | 1936 x 1216, 12 bit
Pixel size | 5.86 μm x 5.86 μm
Sensor type | CMOS
Shutter type | Global
Overlap capabilities | Overlapping
Maximum frame rate | 32.0 Hz
Interface type | USB3 Vision

Type of data presented | Single
Operation point 1, (page 3)
Wavelength centroid | 534.2 nm
Wavelength FWHM | 30.9 nm
Gain, offset | Gain = 0dB, Offset = 0.1
Optional data measured | None

![Spectral sensitivity plot](image_url)
EMVA 1288 Summary Sheet for Operating Point 1

Type of data | Single | Gain, offset | Gain = 0dB, Offset = 0.1 |
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Exposure time | 17.0 ms | Environmental temperature | 27.4°C |
Frame rate | 0.0 Hz | Camera temperature | 34.2°C |
Data transfer mode | Mono12 | Wavelength, centr., FWHM | 534 nm, 30.9 nm |

Quantum efficiency

\[ \eta \] = 0.643

Gain

\[ K \text{ (DN/e)} \] = 0.126
\[ 1/K \text{ (e/DN)} \] = 7.943

Dark noise & DSNU

\[ \sigma_d \text{ (DN)} \] = 0.84
\[ \sigma_0 \text{ (e)} \] = 6.2
\[ \text{DSNU}_{1288} \text{ (DN)} \] = 0.30
\[ \text{DSNU}_{1288} \text{ (e)} \] = 2.37

Signal-to-noise ratio & PRNU

\[ \text{SNR}_{\text{max}} \] = 179
\[ \text{SNR}_{\text{max}} \text{ (dB)} \] = 45.1
\[ \text{SNR}_{\text{max}} \text{ (bits)} \] = 7.5
\[ 1/\text{SNR}_{\text{max}} \text{ (%)} \] = 0.56
\[ \text{PRNU}_{1288} \text{ (%)} \] = 0.499

Nonlinearity

\[ \text{LE} \text{ (%)} \] = 0.48

Sensitivity & saturation

\[ \mu_{p,\text{min}} \text{ (p)} \] = 11.2
\[ \mu_{e,\text{min}} \text{ (e)} \] = 7.2
\[ \mu_{p,\text{sat}} \text{ (p)} \] = 50056
\[ \mu_{e,\text{sat}} \text{ (e)} \] = 32166

Dynamic range

\[ \text{DR} \] = 4486
\[ \text{DR} \text{ (dB)} \] = 73.0
\[ \text{DR} \text{ (bit)} \] = 12.1

Dark current

\[ \mu_{c,\text{mean}} \text{ (DN/s)} \] = 2.92
\[ \mu_{c,\text{mean}} \text{ (e/s)} \] = 23.19
\[ \mu_{c,\text{var}} \text{ (e/s)} \] = 21.97