

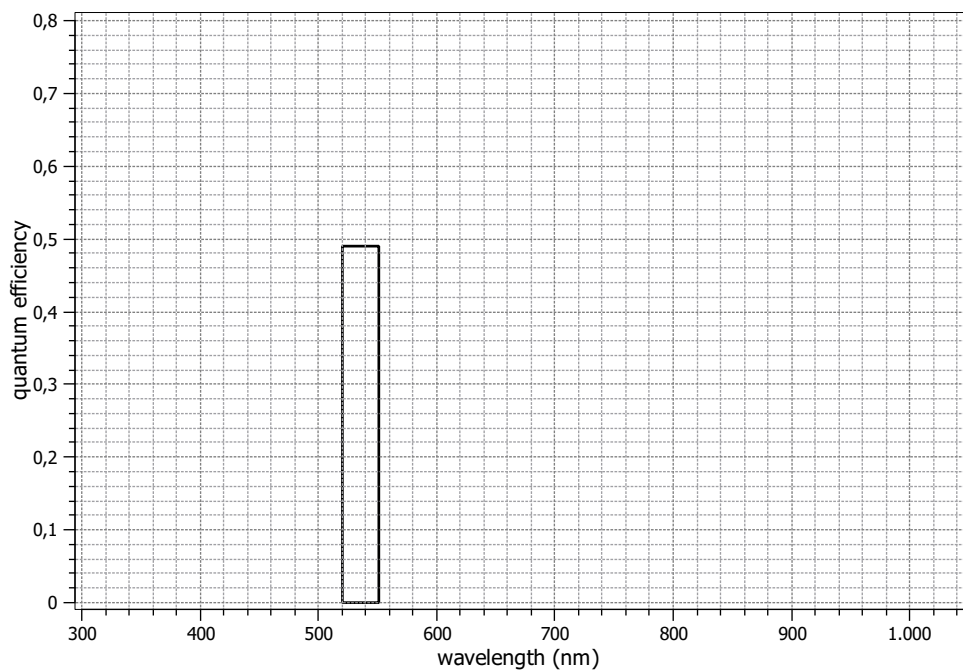
EMVA 1288 Data Sheet m0579

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 or the *Zenodo EMVA 1288 community*) release 3.0 with proprietary extensions from AEON. The measurements were performed with the AEON ACC3 Release 5, 06.06.2016, SN 0005(MatrixVision) . The performance parameters and estimated accuracy of the measurements are described in the technical report for the instrument, its calibration in the corresponding specification and calibration report.

Measurements performed by T. Renner, Matrix Vision GmbH

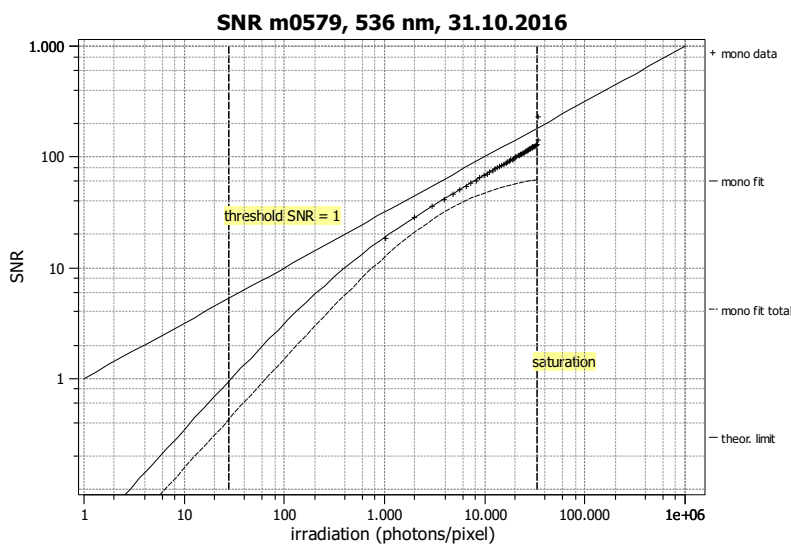
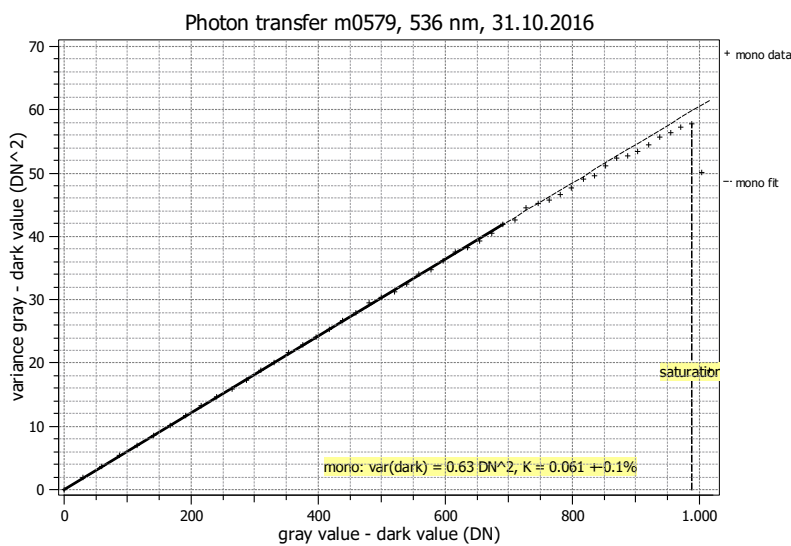
| | |
|----------------------|---------------------|
| Vendor | MATRIX VISION |
| Model | mvBlueFOX-MLC202aG |
| Serial number | 32900008 |
| Sensor diagonal | 8.52 mm |
| Lens category | C-Mount |
| Resolution | 1280 × 1024, 10 bit |
| Pixel size | 5.20 μm × 5.20 μm |
| Sensor | MT9M001 |
| Sensor type | CMOS |
| Shutter type | Rolling |
| Overlap capabilities | |
| Maximum frame rate | 15.1 Hz |
| Interface type | mvIMPACT acquire |

| | |
|-------------------------------------|-----------|
| Type of data presented | Single |
| Operation point 1, (page ??) | |
| Wavelength centroid | 536.0 nm |
| Wavelength FWHM | 31.0 nm |
| Gain, black-level | 0dB, -0.4 |
| Optional data measured | |
| None | |



EMVA 1288 Summary Sheet for Operating Point 1

| | | | |
|--------------------|---------------|---------------------------|-----------------|
| Type of data | Single | Gain, black-level | 0dB, -0.4 |
| Exposure control | By irradiance | Environmental temperature | 23.5°C |
| Exposure time | 15.00 ms | Camera body temperature | 27.8°C |
| Frame rate | 15.1 Hz | Internal temperature(s) | — |
| Data transfer mode | Mono10 | Wavelength, centr., FWHM | 536 nm, 31.0 nm |



Quantum efficiency

η 49.0%

Overall system gain

K 0.061 DN/e⁻
1/ K 16.511 e⁻/DN

Temporal dark noise & DSNU

$\sigma_{y,\text{dark}}$ 0.80 DN
DSNU₁₂₈₈ 1.71 DN
 σ_d 12.26 e⁻
DSNU₁₂₈₈ 28.23 e⁻

Signal-to-noise ratio & PRNU

SNR_{max} 128
42.1 dB
7.0 bit
1/SNR_{max} 0.78 %
PRNU₁₂₈₈ 1.40 %

Nonlinearity

LE 0.16%
LE_{min} -0.13%
LE_{max} 0.19%

Sensitivity & saturation

$\mu_{p,\text{min}}$ 27.9 p
1.03 p/ μm^2
 $\mu_{p,\text{sat}}$ 33276 p
1231 p/ μm^2
 $\mu_{e,\text{min}}$ 13.7 e⁻
0.51 e⁻/ μm^2
 $\mu_{e,\text{sat}}$ 16293 e⁻
603 e⁻/ μm^2

Dynamic range

DR 1192
61.5 dB
10.2 bit

Dark current

$\mu_{c,\text{mean}}$ 1.4 DN/s
 $\mu_{c,\text{mean}}$ 23.6 e⁻/s
 $\mu_{c,\text{var}}$ 146.0 e⁻/s