

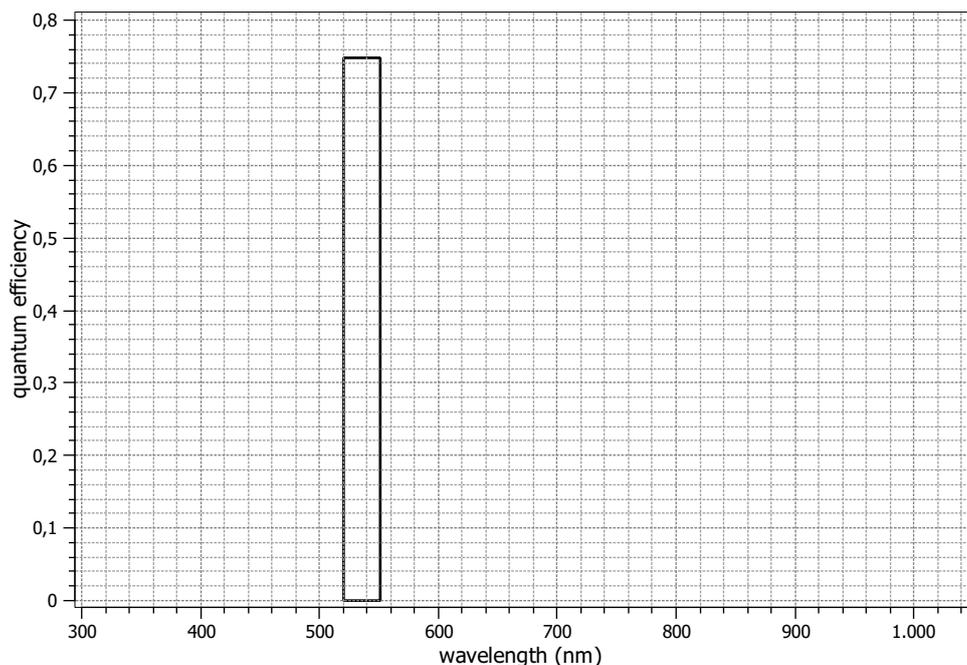
EMVA 1288 Data Sheet m0628

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 6, 18.07.2016, 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

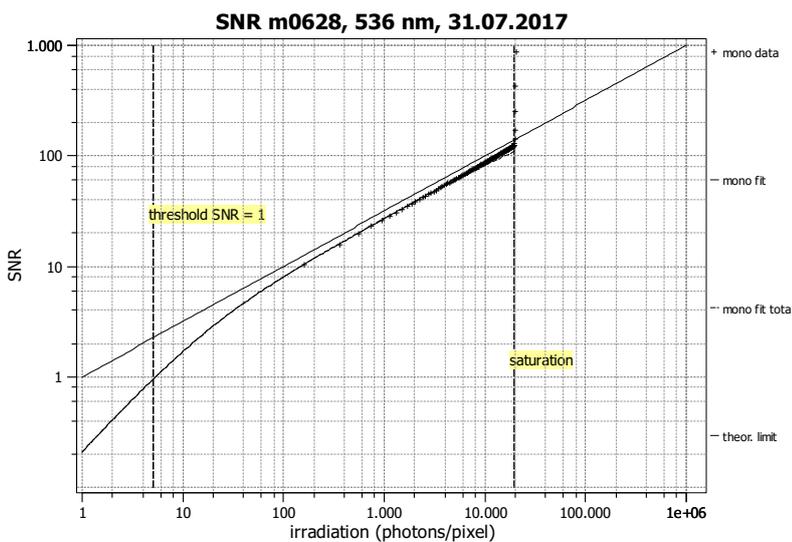
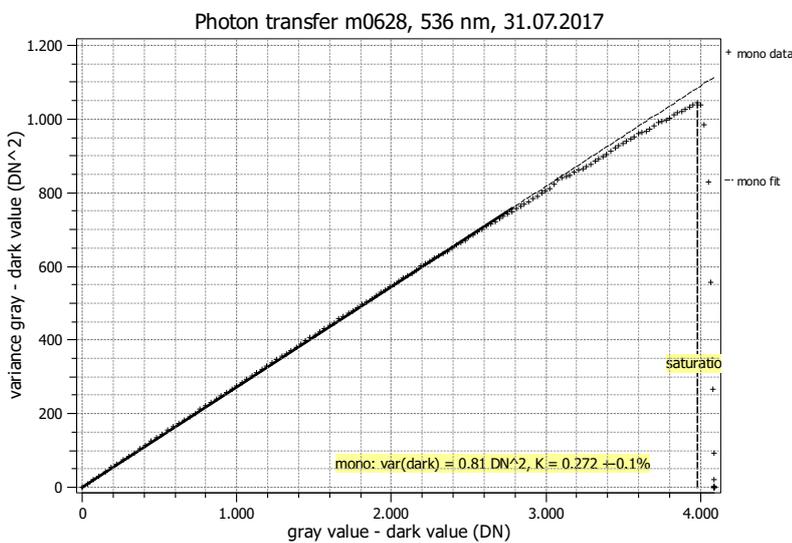
Vendor	MATRIX VISION
Model	mvBlueFOX3-2064G
Serial number	FF001207
Sensor diagonal	8.95 mm
Lens category	C-Mount
Resolution	3096 × 2080, 12 bit
Pixel size	2.40 μm × 2.40 μm
Sensor	IMX178
Sensor type	CMOS
Shutter type	Rolling
Overlap capabilities	Overlapping
Maximum frame rate	29.5 Hz
Interface type	USB3 Vision

Type of data presented	Single
Operation point 1, (page 3)	
Wavelength centroid	536.0 nm
Wavelength FWHM	31.0 nm
Gain, black-level	0dB, 0.1
Optional data measured	
None	



EMVA 1288 Summary Sheet for Operating Point 1

Type of data	Single	Gain, black-level	0dB, 0.1
Exposure control	By irradiance	Environmental temperature	27.2°C
Exposure time	3.00 ms	Camera body temperature	36.4°C
Frame rate	29.5 Hz	Internal temperature(s)	—
Data transfer mode	Mono12	Wavelength, centr., FWHM	536 nm, 31.0 nm



Quantum efficiency

η 74.8%

Overall system gain

K 0.272 DN/e⁻

$1/K$ 3.670 e⁻/DN

Temporal dark noise & DSNU

$\sigma_{y,\text{dark}}$ 0.90 DN

DSNU₁₂₈₈ 0.07 DN

σ_d 3.13 e⁻

DSNU₁₂₈₈ 0.27 e⁻

Signal-to-noise ratio & PRNU

SNR_{max} 121

41.6 dB

6.9 bit

$1/\text{SNR}_{\text{max}}$ 0.83 %

PRNU₁₂₈₈ 0.39 %

Nonlinearity

LE 0.13%

LE_{min} -0.09%

LE_{max} 0.17%

Sensitivity & saturation

$\mu_{p,\text{min}}$ 5.13 p

0.891 p/ μm^2

$\mu_{p,\text{sat}}$ 19457 p

3378 p/ μm^2

$\mu_{e,\text{min}}$ 3.84 e⁻

0.667 e⁻/ μm^2

$\mu_{e,\text{sat}}$ 14558 e⁻

2527 e⁻/ μm^2

Dynamic range

DR 3791

71.6 dB

11.9 bit

Dark current

$\mu_{c,\text{mean}}$ 0.2 DN/s

$\mu_{c,\text{mean}}$ 0.6 e⁻/s

$\mu_{c,\text{var}}$ 0.3 e⁻/s