

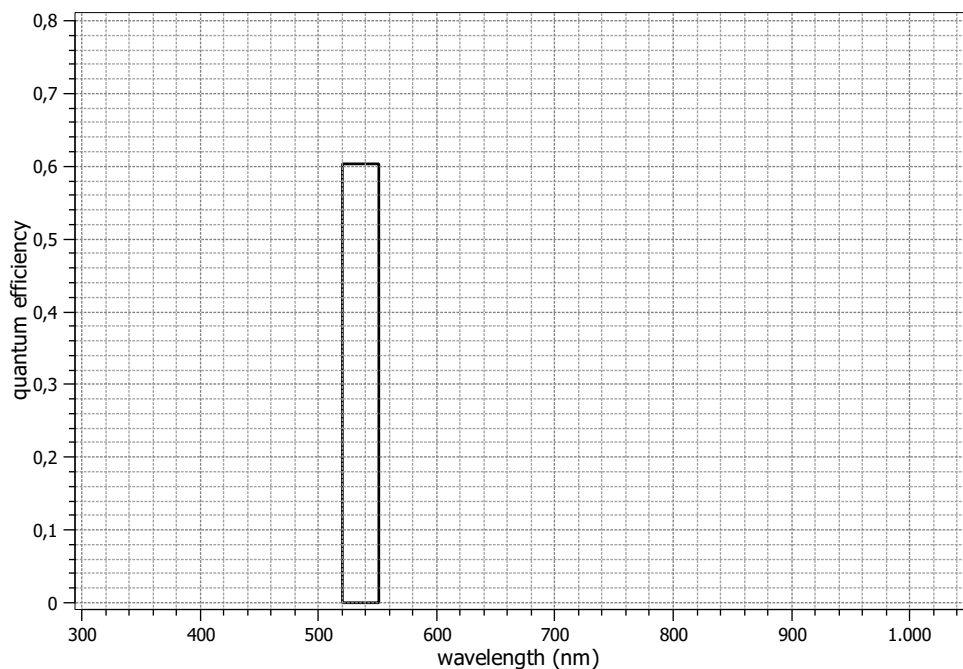
## EMVA 1288 Data Sheet m0592

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](http://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

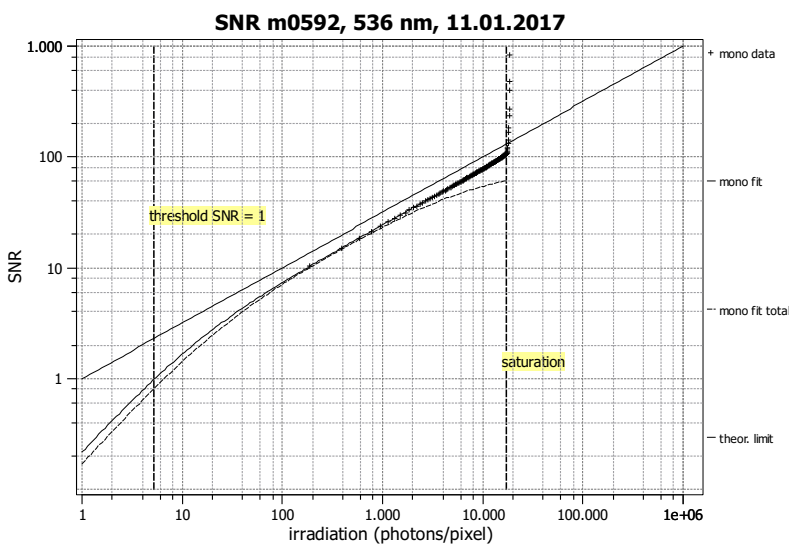
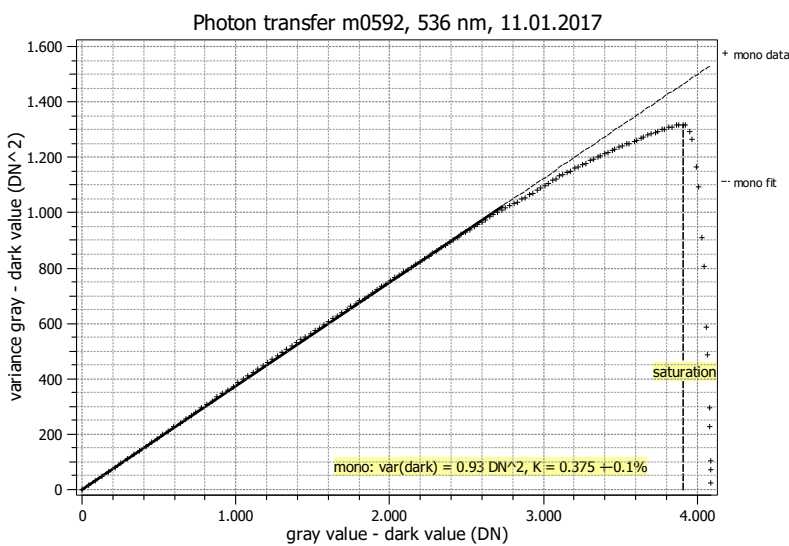
Vendor	MATRIX VISION
Model	mvBlueCOUGAR-XD1012bG
Serial number	GX203231
Sensor diagonal	17.58 mm
Lens category	C-Mount
Resolution	4112 × 3008, 12 bit
Pixel size	3.45 μm × 3.45 μm
Sensor	IMX304
Sensor type	CMOS
Shutter type	Global
Overlap capabilities	Overlapping
Maximum frame rate	9.6 Hz
Interface type	GigE Vision

Type of data presented	Single
<b>Operation point 1, (page ??)</b>	
Wavelength centroid	536.0 nm
Wavelength FWHM	31.0 nm
Gain, black-level	0dB, 0.1
<b>Optional data measured</b>	
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	24.0°C
Exposure time	15.00 ms	Camera body temperature	44.0°C
Frame rate	9.6 Hz	Internal temperature(s)	—
Data transfer mode	Mono12	Wavelength, centr., FWHM	536 nm, 31.0 nm



### Quantum efficiency

$\eta$  60.3%

### Overall system gain

$K$  0.375 DN/e<sup>-</sup>

$1/K$  2.668 e<sup>-</sup>/DN

### Temporal dark noise & DSNU

$\sigma_{y,\text{dark}}$  0.96 DN

DSNU<sub>1288</sub> 0.82 DN

$\sigma_d$  2.45 e<sup>-</sup>

DSNU<sub>1288</sub> 2.19 e<sup>-</sup>

### Signal-to-noise ratio & PRNU

SNR<sub>max</sub> 102

40.2 dB

6.7 bit

$1/\text{SNR}_{\text{max}}$  0.98 %

PRNU<sub>1288</sub> 1.32 %

### Nonlinearity

LE 0.22%

LE<sub>min</sub> -0.30%

LE<sub>max</sub> 0.15%

### Sensitivity & saturation

$\mu_{p,\text{min}}$  5.17 p

0.434 p/ $\mu\text{m}^2$

$\mu_{p,\text{sat}}$  17354 p

1458 p/ $\mu\text{m}^2$

$\mu_{e,\text{min}}$  3.12 e<sup>-</sup>

0.262 e<sup>-</sup>/ $\mu\text{m}^2$

$\mu_{e,\text{sat}}$  10464 e<sup>-</sup>

879 e<sup>-</sup>/ $\mu\text{m}^2$

### Dynamic range

DR 3357

70.5 dB

11.7 bit

### Dark current

$\mu_{c,\text{mean}}$  -6.9 DN/s

$\mu_{c,\text{mean}}$  -18.5 e<sup>-</sup>/s

$\mu_{c,\text{var}}$  5.1 e<sup>-</sup>/s