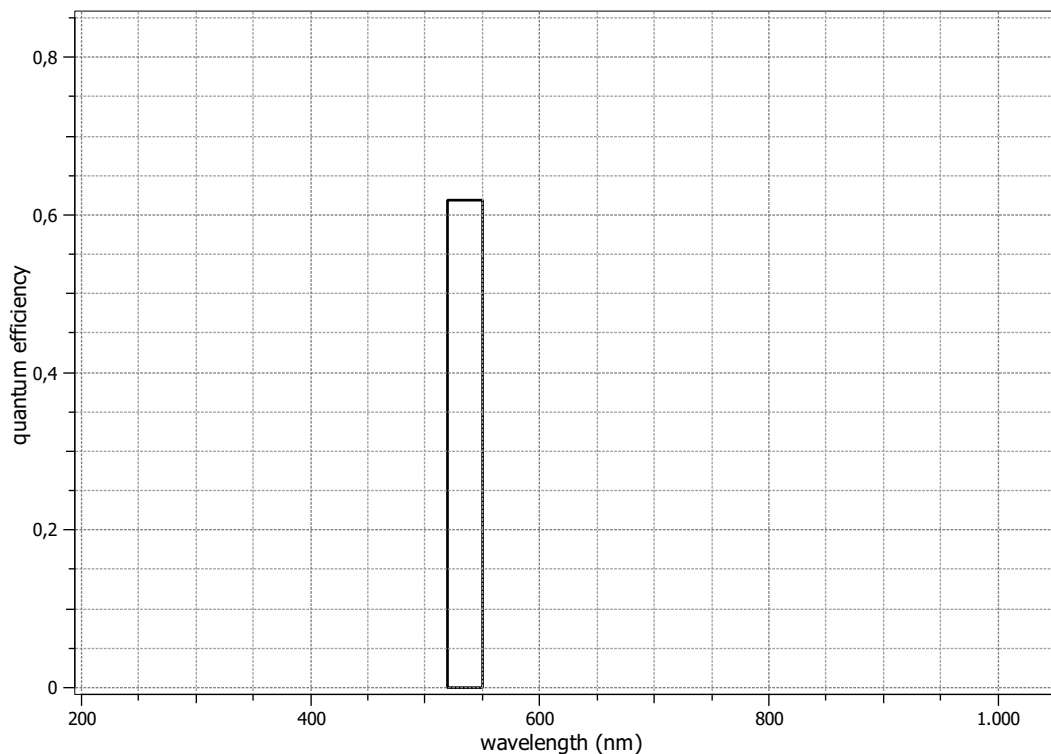


## EMVA 1288 Data Sheet m0939

This datasheet describes the specification according to the standard 1288 release 3.1 for "Characterization and Presentation of Specification Data for Image Sensors and Cameras" issued on December 30, 2016 by the European Machine Vision Association (EMVA), published at [www.standard1288.org](http://www.standard1288.org) and the *zenodo EMVA 1288 community* with proprietary extensions from AEON. The measurements were performed with the AEON ACC3 Release 6, 26.11.2016, SN 0005(MatrixVision.

Measurements performed by T.Renner, Matrix Vision GmbH

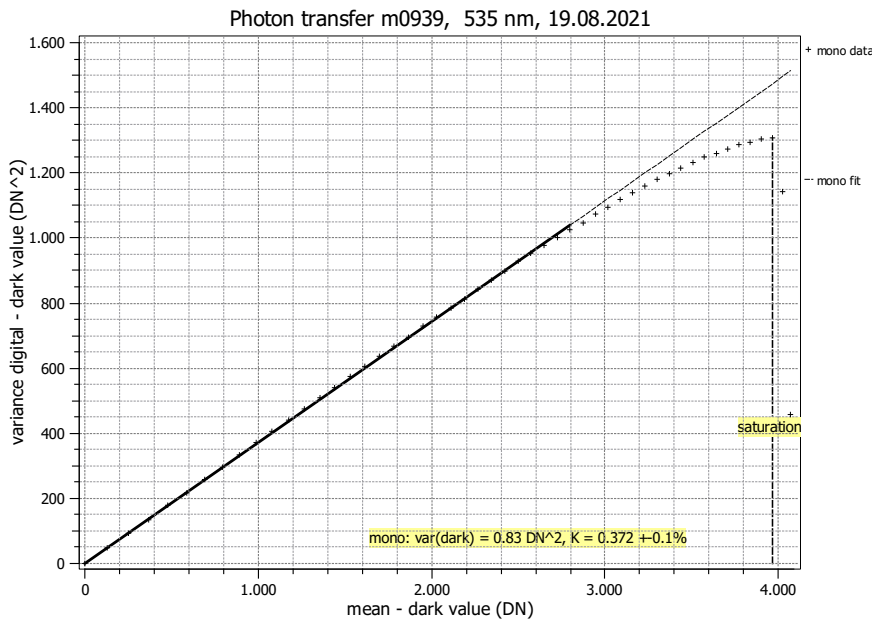
Vendor	MATRIX VI-SION	Type of data presented	Single
Model	BVS_CA-BN2-0089ZG	<b>Operation point 1 (page 3)</b>	
Serial number	BN000141	Wavelength centroid	535.0 nm
Sensor diagonal	16.05 mm	Wavelength FWHM	31.0 nm
Lens category	C-Mount	Gain, black-level	0dB, 0.1
Resolution	4112 × 2176, 12 bit	<b>Optional data measured</b>	
Pixel size (h×v)	3.45 μm × 3.45 μm	None	
Sensor	IMX255		
Sensor type	CMOS		
Shutter type	Global		
Overlap cap.	Overlapping		
Max. frame rate	63.7 Hz		
Interface type	GENiCAM		



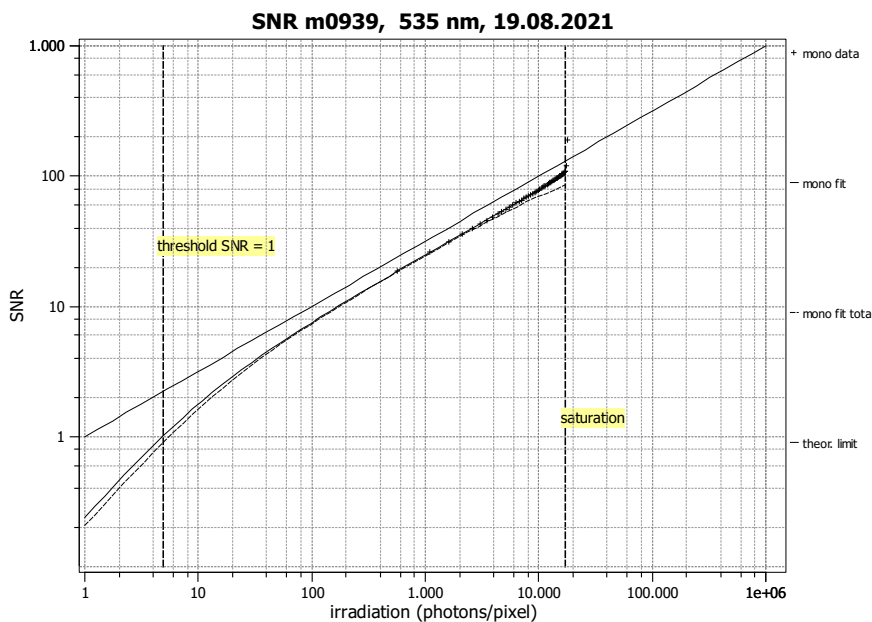
## Summary Sheet for Operation Point 1 at a Wavelength of 535 nm

Type of data	Single	Gain, black-level	0dB, 0.1
Exposure control	By irradiance	Environmental temperature	22.4°C
Exposure time	13.00 ms	Camera body temperature	44.2°C
Frame rate	63.7 Hz	Internal temperature(s)	—
Data transfer mode	Mono12p	Wavelength, centr., FWHM	535 nm, 31.0 nm

### Photon Transfer



### Signal-to-Noise Ratio



#### Quantum efficiency

$\eta$  61.9%

#### Overall system gain

$K$  0.372 DN/e<sup>-</sup>

$1/K$  2.692 e<sup>-</sup>/DN

#### Temporal dark noise

$\sigma_d$  2.33 e<sup>-</sup>

$\sigma_{y,\text{dark}}$  0.91 DN

#### Signal-to-noise ratio

SNR<sub>max</sub> 104

40.3 dB

6.7 bit

$1/\text{SNR}_{\text{max}}$  0.97 %

#### Absolute sensitivity threshold

$\mu_{p,\text{min}}$  4.86 p

$\mu_{p,\text{min,area}}$  0.408 p/μm<sup>2</sup>

$\mu_{e,\text{min}}$  3.01 e<sup>-</sup>

$\mu_{e,\text{min,area}}$  0.253 e<sup>-</sup>/μm<sup>2</sup>

#### Saturation capacity

$\mu_{p,\text{sat}}$  17312 p

$\mu_{p,\text{sat,area}}$  1454 p/μm<sup>2</sup>

$\mu_{e,\text{sat}}$  10714 e<sup>-</sup>

$\mu_{e,\text{sat,area}}$  900 e<sup>-</sup>/μm<sup>2</sup>

#### Dynamic range

DR 3563

71.0 dB

11.8 bit

#### Spatial nonuniformities

DSNU<sub>1288</sub> 1.54 e<sup>-</sup>

0.57 DN

PRNU<sub>1288</sub> 0.66 %

#### Linearity error

LE<sub>min</sub> -0.40%

LE<sub>max</sub> 0.75%

#### Dark current

$\mu_{c,\text{mean}}$  -13 ± 2 e<sup>-</sup>/s

-4.8 DN/s

$\mu_{c,\text{var}}$  15 ± 8 e<sup>-</sup>/s

$T_d$  — °C