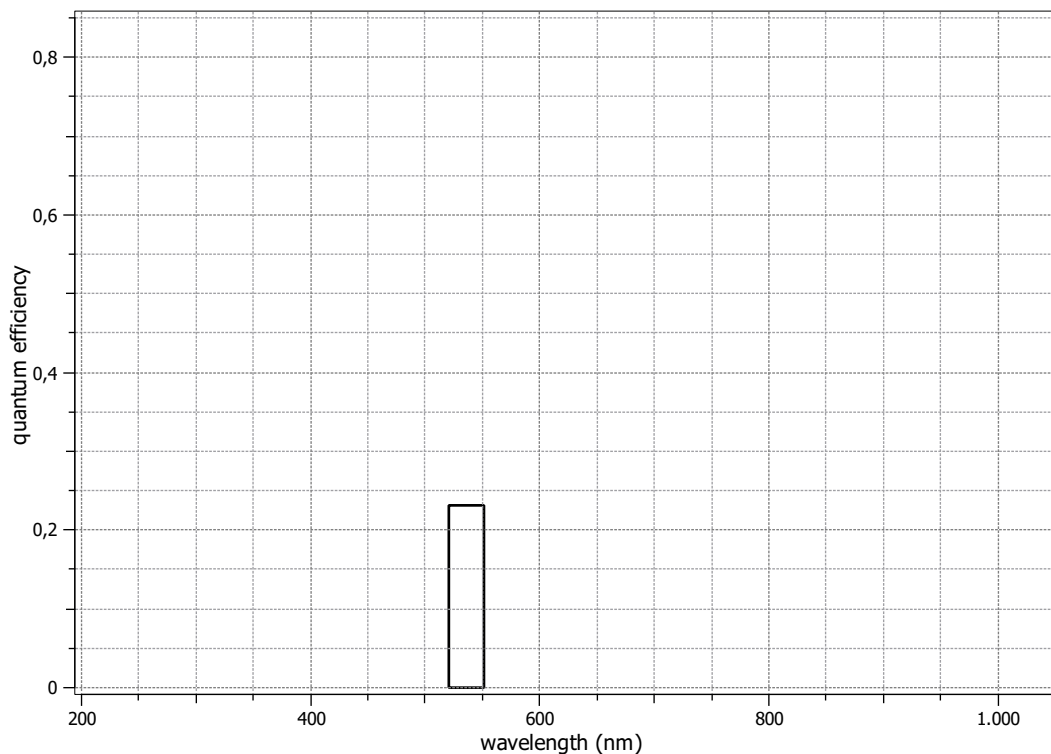


## EMVA 1288 Data Sheet m0767

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 W.Dutt, Matrix Vision GmbH

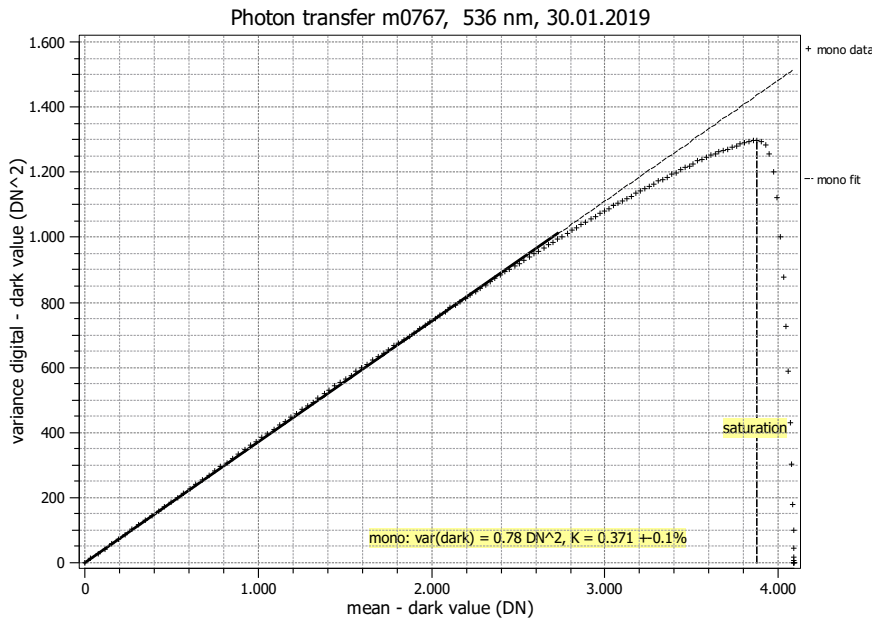
Vendor	MATRIX VI-SION	Type of data presented	Single
Model	mvBlueCOUGAR-X105pG	<b>Operation point 1</b>	
Serial number	GX026783	Wavelength centroid	536.0 nm
Sensor diagonal	11.07 mm	Wavelength FWHM	31.0 nm
Lens category	C-Mount	Gain, black-level	0dB, 0.1
Resolution	2464 × 2056, 12 bit	<b>Optional data measured</b>	
Pixel size (h×v)	3.45 μm × 3.45 μm	None	
Sensor	IMX250_POL		
Sensor type	CMOS		
Shutter type	Global		
Overlap cap.	Overlapping		
Max. frame rate	34.1 Hz		
Interface type	GigE Vision		



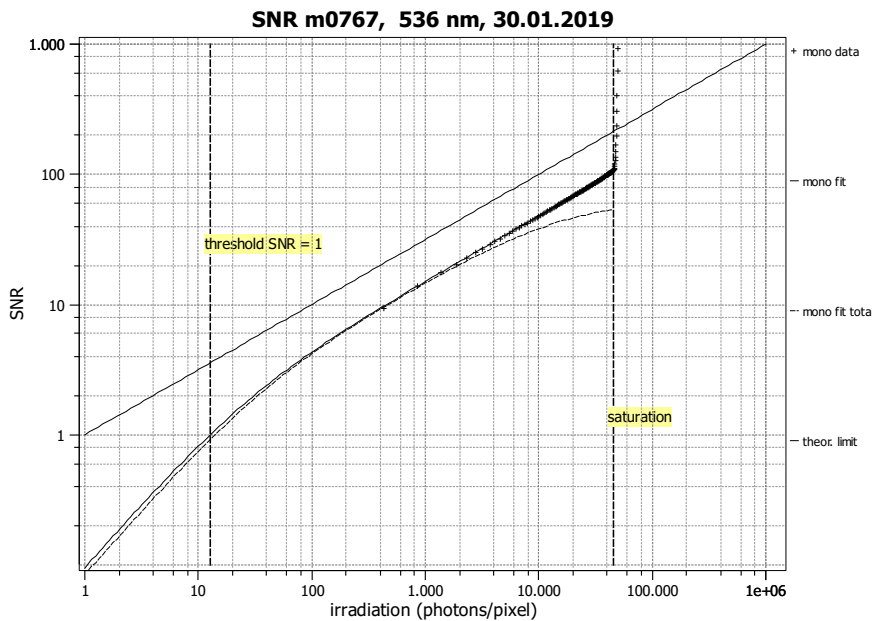
## Summary Sheet for Operation Point 1 at a Wavelength of 536 nm

Type of data	Single	Gain, black-level	0dB, 0.1
Exposure control	By irradiance	Environmental temperature	24.1°C
Exposure time	3.00 ms	Camera body temperature	44.5°C
Frame rate	11.7 Hz	Internal temperature(s)	—
Data transfer mode	Mono12	Wavelength, centr., FWHM	536 nm, 31.0 nm

### Photon Transfer



### Signal-to-Noise Ratio



#### Quantum efficiency

$\eta$  23.2%

#### Overall system gain

$K$  0.371 DN/e<sup>-</sup>

$1/K$  2.699 e<sup>-</sup>/DN

#### Temporal dark noise

$\sigma_d$  2.26 e<sup>-</sup>

$\sigma_{y,\text{dark}}$  0.89 DN

#### Signal-to-noise ratio

SNR<sub>max</sub> 103

40.2 dB

6.7 bit

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

#### Absolute sensitivity threshold

$\mu_{p,\text{min}}$  12.70 p

$\mu_{p,\text{min,area}}$  1.067 p/μm<sup>2</sup>

$\mu_{e,\text{min}}$  2.94 e<sup>-</sup>

$\mu_{e,\text{min,area}}$  0.247 e<sup>-</sup>/μm<sup>2</sup>

#### Saturation capacity

$\mu_{p,\text{sat}}$  45482 p

$\mu_{p,\text{sat,area}}$  3821 p/μm<sup>2</sup>

$\mu_{e,\text{sat}}$  10529 e<sup>-</sup>

$\mu_{e,\text{sat,area}}$  885 e<sup>-</sup>/μm<sup>2</sup>

#### Dynamic range

DR 3580

71.1 dB

11.8 bit

#### Spatial nonuniformities

DSNU<sub>1288</sub> 1.27 e<sup>-</sup>

0.47 DN

PRNU<sub>1288</sub> 1.59 %

#### Linearity error

LE<sub>min</sub> -0.62%

LE<sub>max</sub> 0.65%

#### Dark current

$\mu_{c,\text{mean}}$  -11 ± 2 e<sup>-</sup>/s

-4.2 DN/s

$\mu_{c,\text{var}}$  15 ± 2 e<sup>-</sup>/s

$T_d$  — °C