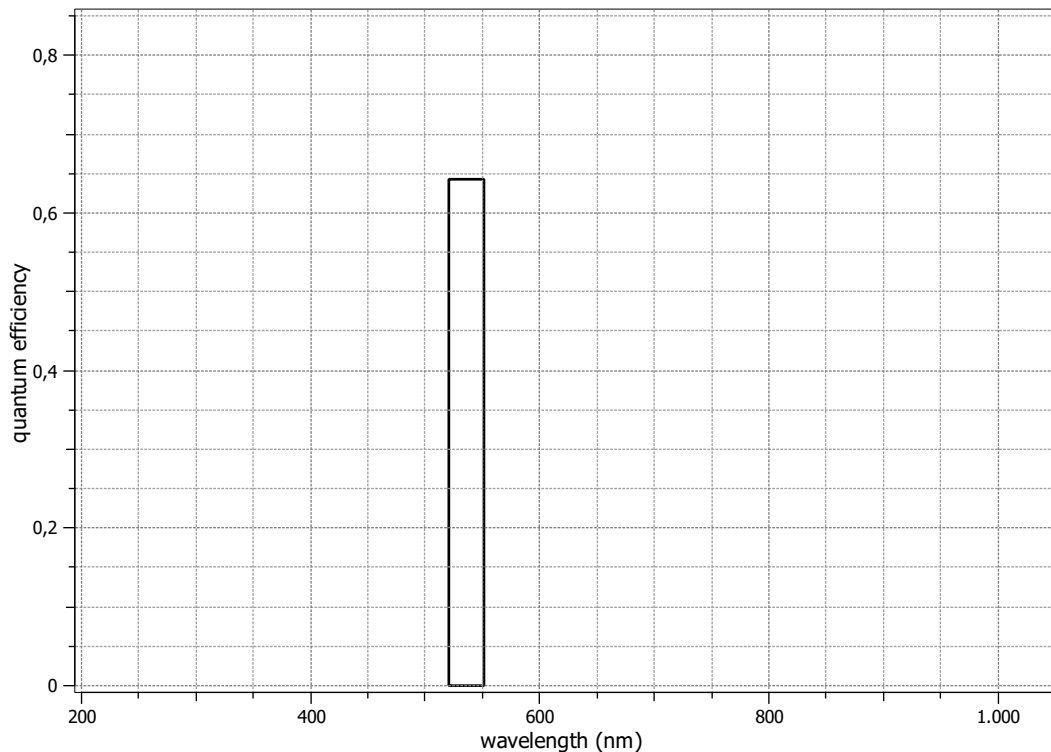


EMVA 1288 Data Sheet m0777

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 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

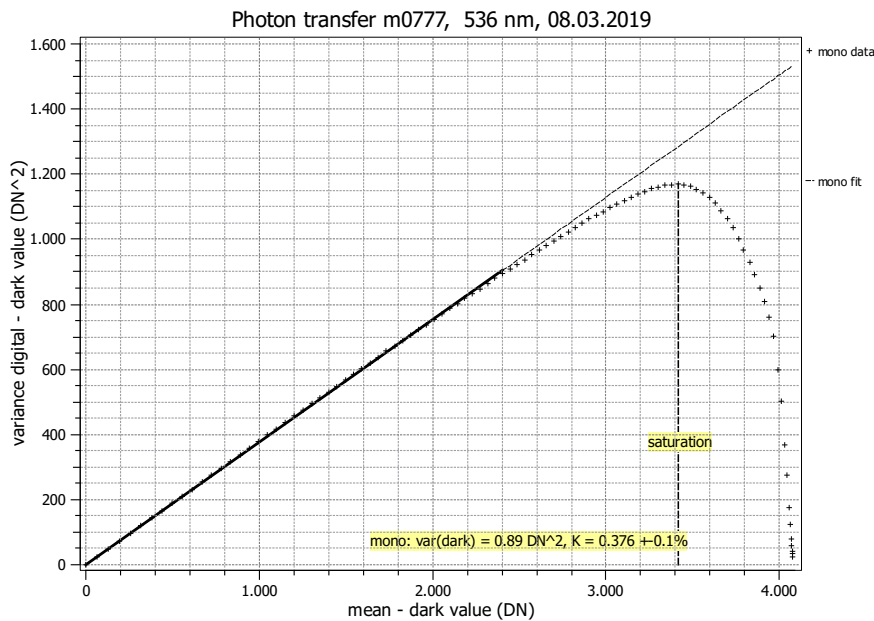
Vendor	MATRIX VI-SION	Type of data presented	Single
Model	mvBlueCOUGAR-XD1031G	Operation point 1 (page 3)	
Serial number	GX208689	Wavelength centroid	536.0 nm
Sensor diagonal	27.94 mm	Wavelength FWHM	31.0 nm
Lens category	M42	Gain, black-level	0dB, 0.1
Resolution	6480 × 4856, 12 bit	Optional data measured	
Pixel size (h×v)	3.45 μm × 3.45 μm	None	
Sensor	IMX342		
Sensor type	CMOS		
Shutter type	Global		
Overlap cap.	Overlapping		
Max. frame rate	3.8 Hz		
Interface type	GigE Vision		



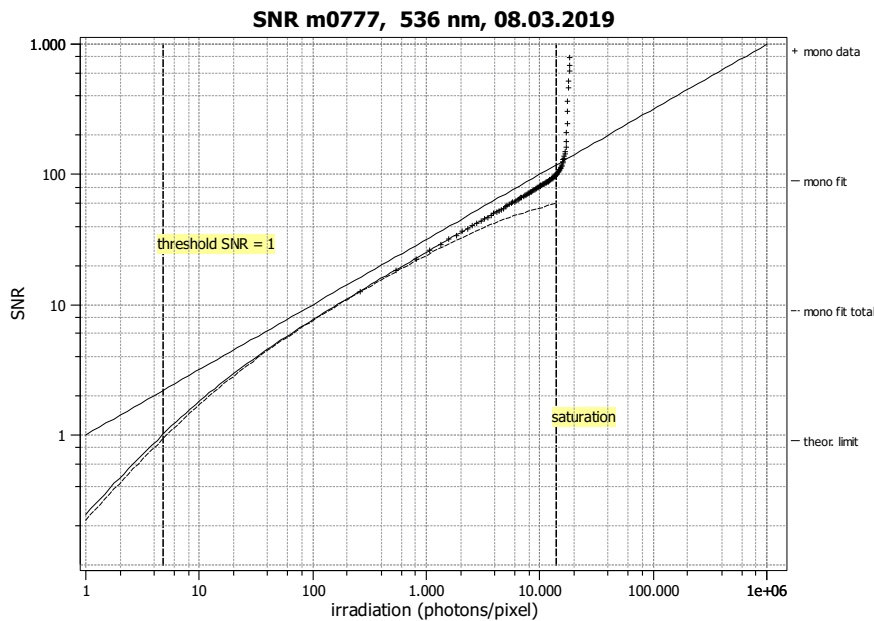
Summary Sheet for Operation Point 1 at a Wavelength of 536 nm

Type of data	Single	Gain, black-level	0dB, 0.1
Exposure control	By irradiance	Environmental temperature	25.0°C
Exposure time	18.00 ms	Camera body temperature	37.0°C
Frame rate	3.8 Hz	Internal temperature(s)	—
Data transfer mode	Mono12	Wavelength, centr., FWHM	536 nm, 31.0 nm

Photon Transfer



Signal-to-Noise Ratio



Quantum efficiency

η 64.3%

Overall system gain

K 0.376 DN/e⁻

$1/K$ 2.658 e⁻/DN

Temporal dark noise

σ_d 2.39 e⁻

$\sigma_{y,\text{dark}}$ 0.94 DN

Signal-to-noise ratio

SNR_{max} 95

39.6 dB

6.6 bit

$1/\text{SNR}_{\text{max}}$ 1.05 %

Absolute sensitivity threshold

$\mu_{p,\text{min}}$ 4.76 p

$\mu_{p,\text{min,area}}$ 0.400 p/ μm^2

$\mu_{e,\text{min}}$ 3.06 e⁻

$\mu_{e,\text{min,area}}$ 0.257 e⁻/ μm^2

Saturation capacity

$\mu_{p,\text{sat}}$ 14102 p

$\mu_{p,\text{sat,area}}$ 1185 p/ μm^2

$\mu_{e,\text{sat}}$ 9065 e⁻

$\mu_{e,\text{sat,area}}$ 762 e⁻/ μm^2

Dynamic range

DR 2964

69.4 dB

11.5 bit

Spatial nonuniformities

DSNU₁₂₈₈ 1.25 e⁻

0.47 DN

PRNU₁₂₈₈ 1.31 %

Linearity error

LE_{min} -0.48%

LE_{max} 1.03%

Dark current

$\mu_{c,\text{mean}}$ -3.4 ± 3.1 e⁻/s

-1.30 DN/s

$\mu_{c,\text{var}}$ 7.8 ± 1.8 e⁻/s

T_d — °C