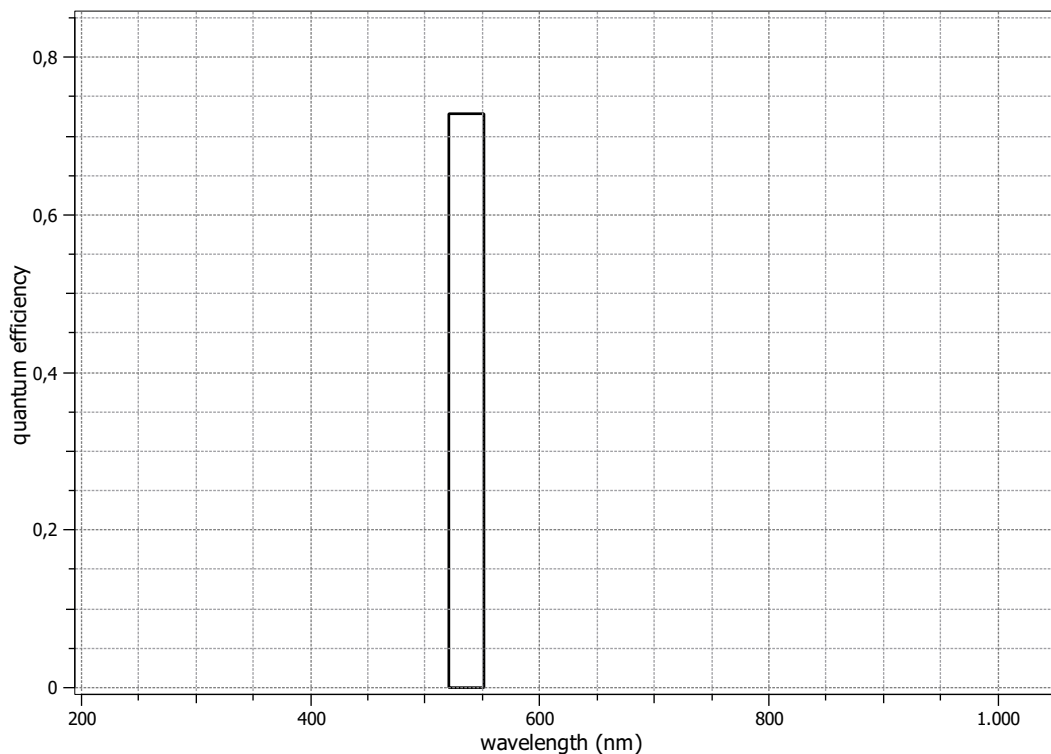


## EMVA 1288 Data Sheet m0741

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	mvBlueFOX3-2124rG	<b>Operation point 1 (page 3)</b>	
Serial number	FF000018	Wavelength centroid	536.0 nm
Sensor diagonal	9.39 mm	Wavelength FWHM	31.0 nm
Lens category	C-Mount	Gain, black-level	0dB, 0.05
Resolution	4064 × 3044, 12 bit	<b>Optional data measured</b>	
Pixel size (h×v)	1.85 μm × 1.85 μm	None	
Sensor	IMX226		
Sensor type	CMOS		
Shutter type	Rolling		
Overlap cap.	Overlapping		
Max. frame rate	15.3 Hz		
Interface type	USB3 Vision		

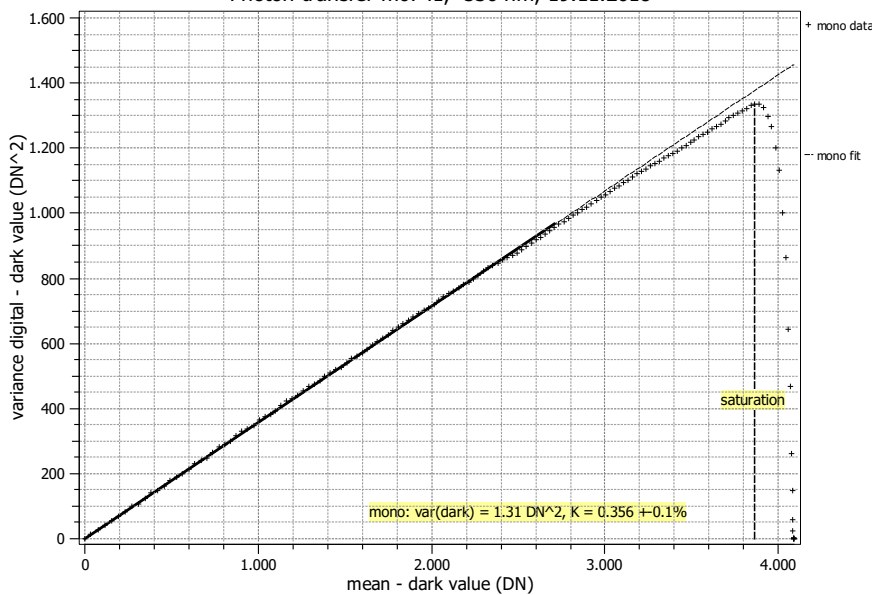


## Summary Sheet for Operation Point 1 at a Wavelength of 536 nm

Type of data	Single	Gain, black-level	0dB, 0.05
Exposure control	By irradiance	Environmental temperature	23.9°C
Exposure time	3.00 ms	Camera body temperature	39.1°C
Frame rate	15.3 Hz	Internal temperature(s)	—
Data transfer mode	Mono12	Wavelength, centr., FWHM	536 nm, 31.0 nm

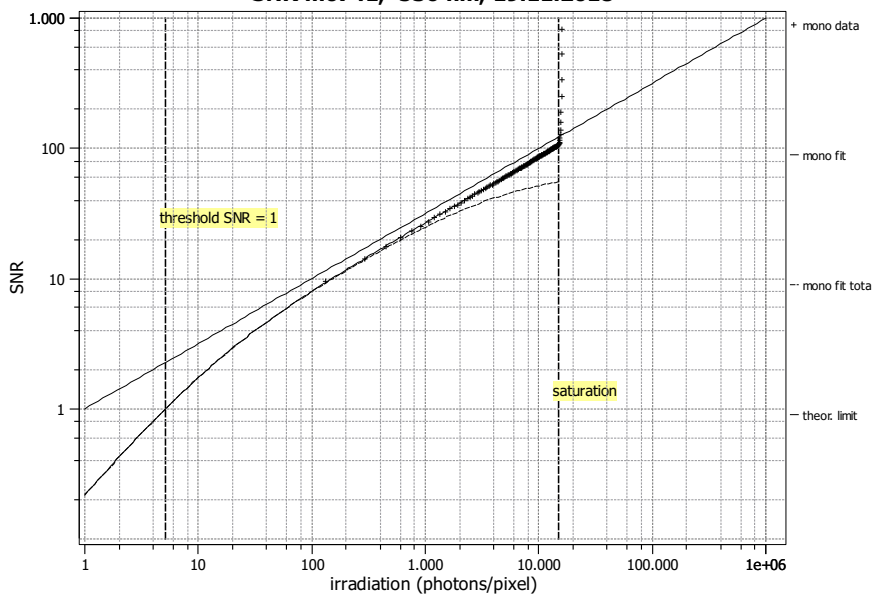
### Photon Transfer

Photon transfer m0741, 536 nm, 19.11.2018



### Signal-to-Noise Ratio

SNR m0741, 536 nm, 19.11.2018



#### Quantum efficiency

$\eta$  72.7%

#### Overall system gain

$K$  0.356 DN/e<sup>-</sup>

$1/K$  2.805 e<sup>-</sup>/DN

#### Temporal dark noise

$\sigma_d$  3.10 e<sup>-</sup>

$\sigma_{y,\text{dark}}$  1.14 DN

#### Signal-to-noise ratio

SNR<sub>max</sub> 104

40.3 dB

6.7 bit

$1/\text{SNR}_{\text{max}}$  0.96 %

#### Absolute sensitivity threshold

$\mu_{p,\text{min}}$  5.15 p

$\mu_{p,\text{min,area}}$  1.504 p/μm<sup>2</sup>

$\mu_{e,\text{min}}$  3.75 e<sup>-</sup>

$\mu_{e,\text{min,area}}$  1.094 e<sup>-</sup>/μm<sup>2</sup>

#### Saturation capacity

$\mu_{p,\text{sat}}$  14818 p

$\mu_{p,\text{sat,area}}$  4330 p/μm<sup>2</sup>

$\mu_{e,\text{sat}}$  10780 e<sup>-</sup>

$\mu_{e,\text{sat,area}}$  3150 e<sup>-</sup>/μm<sup>2</sup>

#### Dynamic range

DR 2878

69.2 dB

11.5 bit

#### Spatial nonuniformities

DSNU<sub>1288</sub> 0.27 e<sup>-</sup>

0.10 DN

PRNU<sub>1288</sub> 1.54 %

#### Linearity error

LE<sub>min</sub> -0.60%

LE<sub>max</sub> 1.09%

#### Dark current

$\mu_{c,\text{mean}}$  0.32 ± 0.09 e<sup>-</sup>/s

0.11 DN/s

$\mu_{c,\text{var}}$  0.95 ± 0.01 e<sup>-</sup>/s

$T_d$  — °C