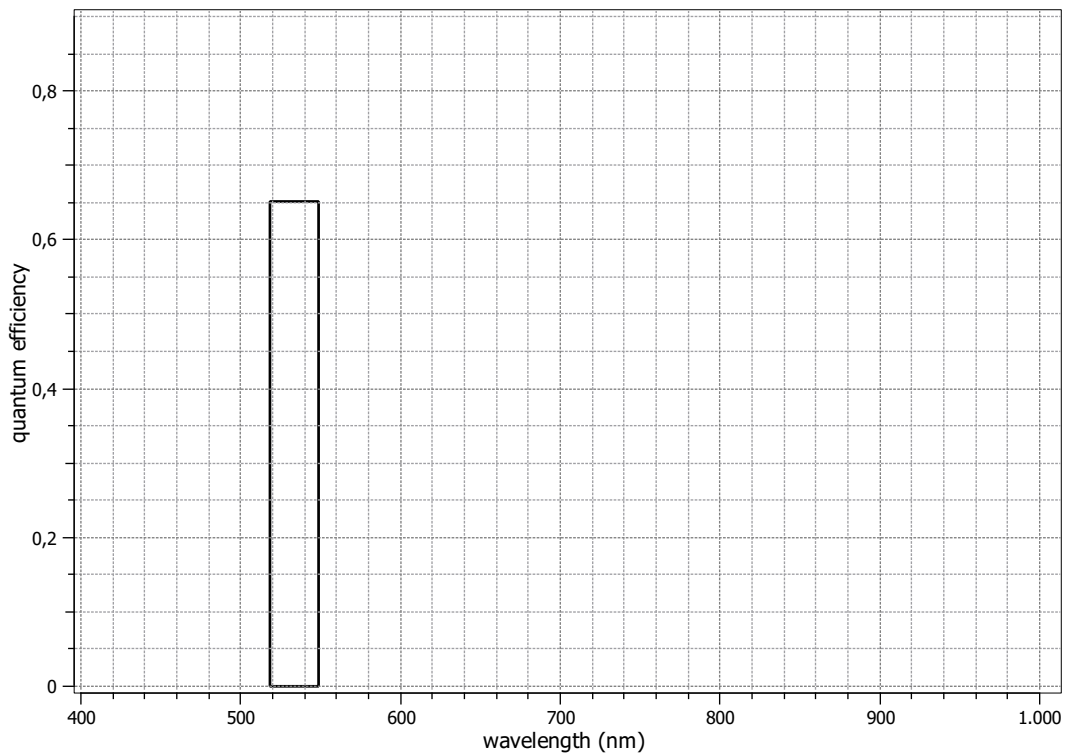


## EMVA 1288 Summary Sheet

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 7, 21.08.2018, SN 0018(AEON).

Measurements performed by Technical and Application Support Center, Baumer Optronic GmbH.

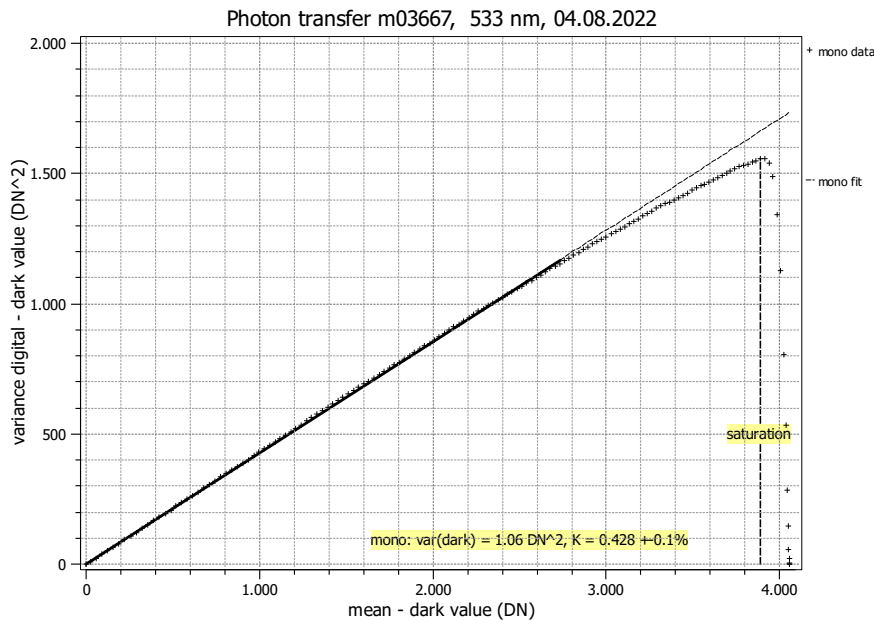
Vendor	Baumer	Type of data presented	Single
Model	VCXU.2-123M	<b>Operation point 1</b>	
Serial number	700008638367	Wavelength centroid	533.3 nm
Sensor diagonal	17.52 mm	Wavelength FWHM	30.3 nm
Lens category	C-Mount	Gain, black-level	1.0 / 39.0
Resolution	4096 × 3000, 12 bit	<b>Optional data measured</b>	
Pixel size (h×v)	3.45 μm × 3.45 μm	None	
Sensor	Sony IMX253		
Sensor type	CMOS		
Shutter type	Global shutter		
Overlap cap.	Overlapped		
Max. frame rate	0.0 Hz		
Interface type	U3V		



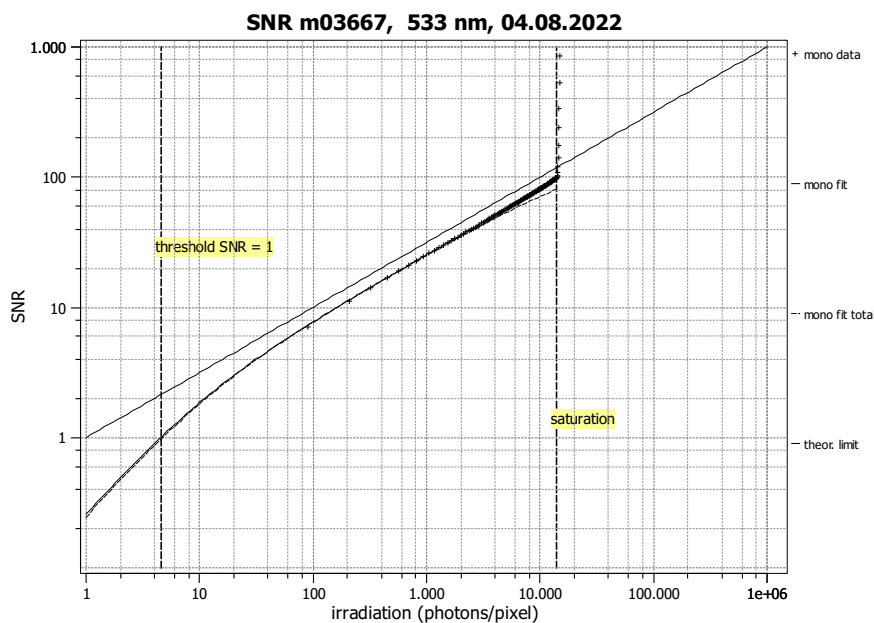
## Summary Sheet for Operation Point 1 at a Wavelength of 533 nm

Type of data	Single	Gain, black-level	1.0 / 39.0
Exposure control	By irradiance	Environmental temperature	25.8°C
Exposure time	796.00 $\mu$ s	Camera body temperature	35.7°C
Frame rate	10.0 Hz	Internal temperature(s)	—
Data transfer mode	Mono12	Wavelength, centr., FWHM	533 nm, 30.3 nm

### Photon Transfer



### Signal-to-Noise Ratio



#### Quantum efficiency

$\eta$  65.2%

#### Overall system gain

$K$  0.428 DN/e<sup>-</sup>

$1/K$  2.338 e<sup>-</sup>/DN

#### Temporal dark noise

$\sigma_d$  2.31 e<sup>-</sup>

$\sigma_{y,\text{dark}}$  1.03 DN

#### Signal-to-noise ratio

SNR<sub>max</sub> 95

39.6 dB

6.6 bit

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

#### Absolute sensitivity threshold

$\mu_{p,\text{min}}$  4.54 p

$\mu_{p,\text{min,area}}$  0.381 p/ $\mu\text{m}^2$

$\mu_{e,\text{min}}$  2.96 e<sup>-</sup>

$\mu_{e,\text{min,area}}$  0.249 e<sup>-</sup>/ $\mu\text{m}^2$

#### Saturation capacity

$\mu_{p,\text{sat}}$  13952 p

$\mu_{p,\text{sat,area}}$  1172 p/ $\mu\text{m}^2$

$\mu_{e,\text{sat}}$  9097 e<sup>-</sup>

$\mu_{e,\text{sat,area}}$  764 e<sup>-</sup>/ $\mu\text{m}^2$

#### Dynamic range

DR 3073

69.8 dB

11.6 bit

#### Spatial nonuniformities

DSNU<sub>1288</sub> 0.77 e<sup>-</sup>

0.33 DN

PRNU<sub>1288</sub> 0.67%

#### Linearity error

LE<sub>min</sub> -0.47%

LE<sub>max</sub> 1.32%

#### Dark current

$\mu_{c,\text{mean}}$   $-1.04 \pm 0.22$  e<sup>-</sup>/s

-0.44 DN/s

$\mu_{c,\text{var}}$   $0.55 \pm 0.20$  e<sup>-</sup>/s

$T_d$  — °C