

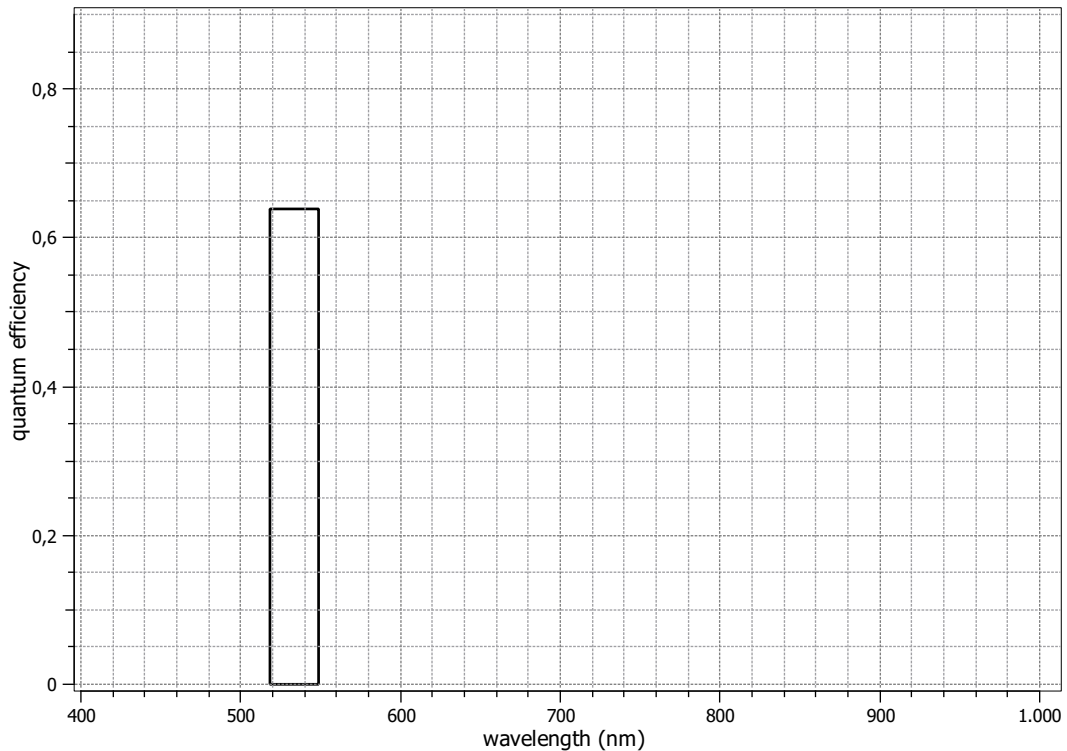
## EMVA 1288 Summary Sheet

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
Model	VCXG.2-124M
Serial number	700009329999
Sensor diagonal	17.52 mm
Lens category	C-Mount
Resolution	4096 × 3000, 12 bit
Pixel size (h×v)	3.45 μm × 3.45 μm
Sensor	Sony IMX304
Sensor type	CMOS
Shutter type	Global shutter
Overlap cap.	Overlapped
Max. frame rate	0.0 Hz
Interface type	GEV

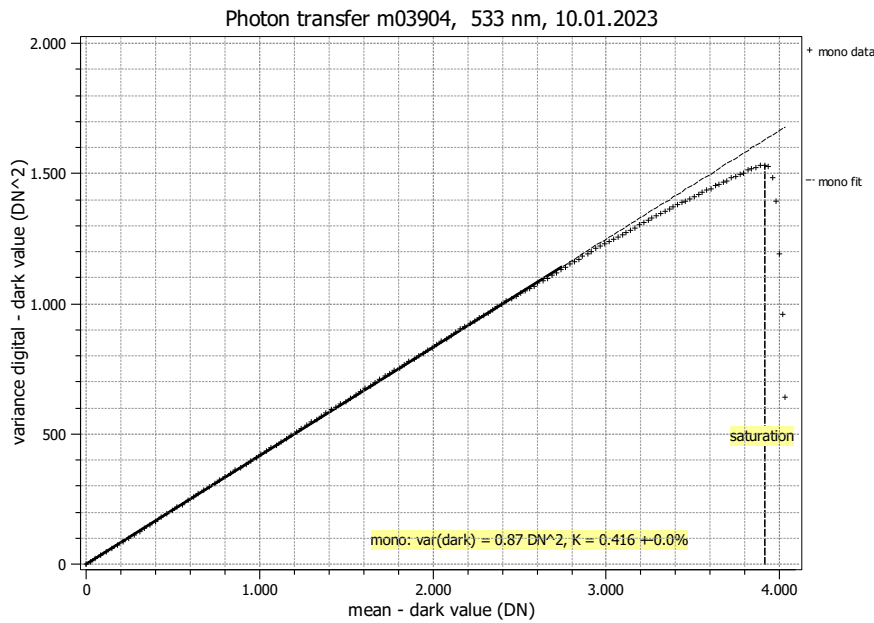
Type of data presented	Single
<b>Operation point 1</b>	
Wavelength centroid	533.3 nm
Wavelength FWHM	30.3 nm
Gain, black-level	1.0 / 39.0
<b>Optional data measured</b>	
None	



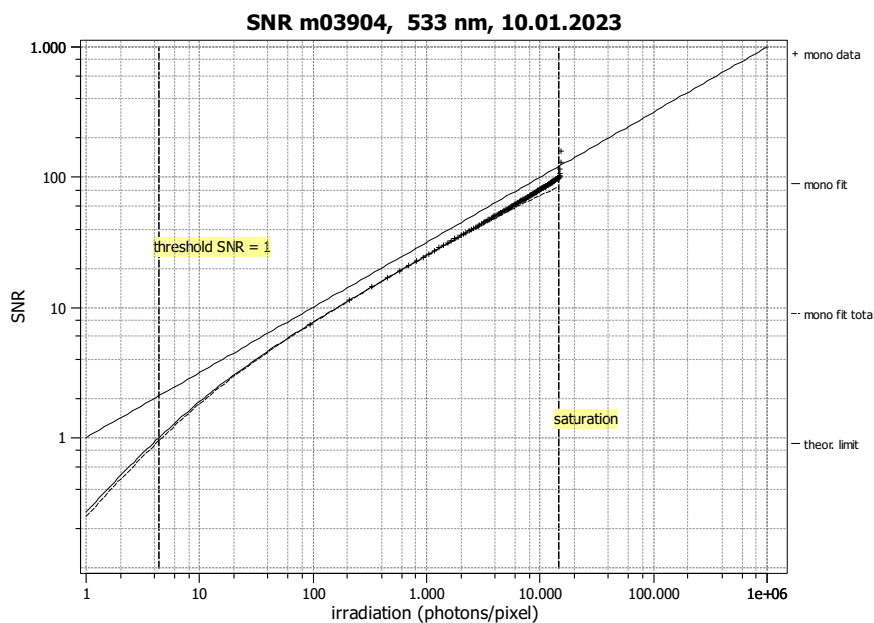
## Summary Sheet for Operation Point 1 at a Wavelength of 533 nm

Type of data	Single	Gain, black-level	1.0 / 39.0
Exposure control	By irradiance	Environmental temperature	24.6°C
Exposure time	796.00 $\mu$ s	Camera body temperature	37.5°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

$\eta$  63.9%

#### Overall system gain

$K$  0.416 DN/e<sup>-</sup>

$1/K$  2.403 e<sup>-</sup>/DN

#### Temporal dark noise

$\sigma_d$  2.13 e<sup>-</sup>

$\sigma_{y,\text{dark}}$  0.93 DN

#### Signal-to-noise ratio

SNR<sub>max</sub> 97

39.7 dB

6.6 bit

$1/\text{SNR}_{\text{max}}$  1.03 %

#### Absolute sensitivity threshold

$\mu_{p,\text{min}}$  4.38 p

$\mu_{p,\text{min,area}}$  0.368 p/ $\mu\text{m}^2$

$\mu_{e,\text{min}}$  2.80 e<sup>-</sup>

$\mu_{e,\text{min,area}}$  0.235 e<sup>-</sup>/ $\mu\text{m}^2$

#### Saturation capacity

$\mu_{p,\text{sat}}$  14694 p

$\mu_{p,\text{sat,area}}$  1235 p/ $\mu\text{m}^2$

$\mu_{e,\text{sat}}$  9387 e<sup>-</sup>

$\mu_{e,\text{sat,area}}$  789 e<sup>-</sup>/ $\mu\text{m}^2$

#### Dynamic range

DR 3358

70.5 dB

11.7 bit

#### Spatial nonuniformities

DSNU<sub>1288</sub> 0.95 e<sup>-</sup>

0.40 DN

PRNU<sub>1288</sub> 0.59 %

#### Linearity error

LE<sub>min</sub> -0.50%

LE<sub>max</sub> 1.33%

#### Dark current

$\mu_{c,\text{mean}}$   $-0.7 \pm 0.1$  e<sup>-</sup>/s

-0.28 DN/s

$\mu_{c,\text{var}}$   $2.8 \pm 0.2$  e<sup>-</sup>/s

$T_d$  — °C