

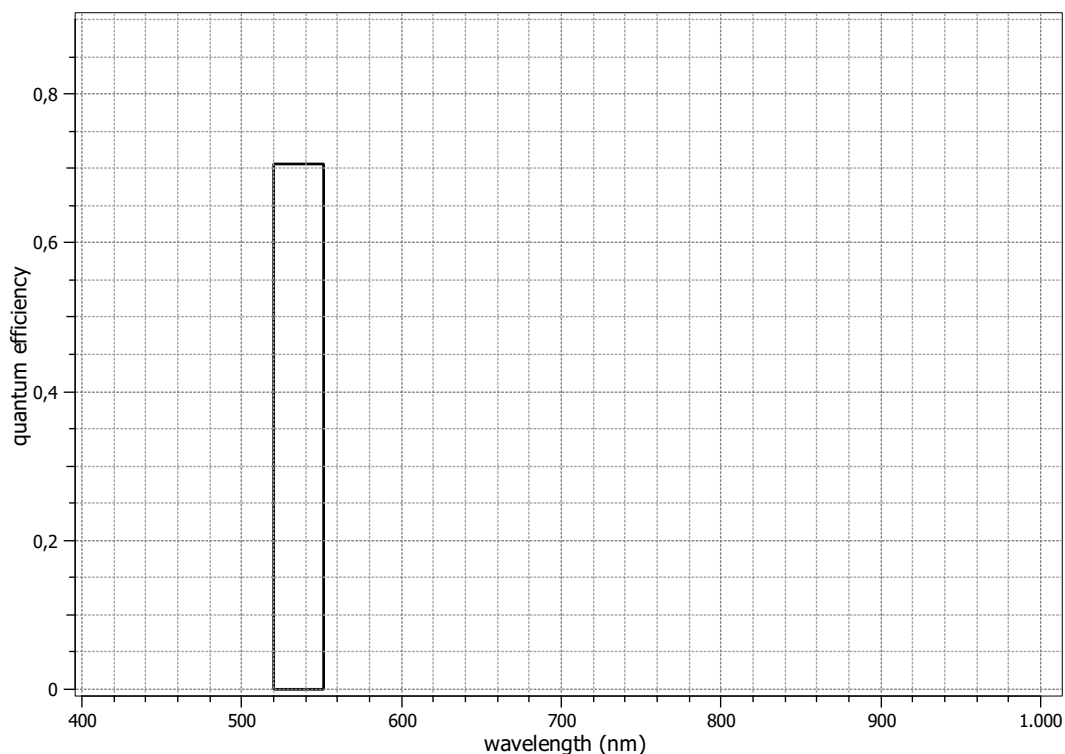
EMVA 1288 Summary Sheet

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 and the *zenodo EMVA 1288 community* with proprietary extensions from AEON. The measurements were performed with the AEON ACC3 RGB Release 7, 21.08.2018, SN 0001(Baumer).

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

Vendor	Baumer
Model	VCXG-241M
Serial number	700006424773
Sensor diagonal	17.03 mm
Lens category	C-Mount
Resolution	4672 × 4100, 12 bit
Pixel size (h×v)	2.74 μm × 2.74 μm
Sensor	Sony IMX540
Sensor type	CMOS
Shutter type	Global shutter
Overlap cap.	Overlapped
Max. frame rate	0.0 Hz
Interface type	GEV

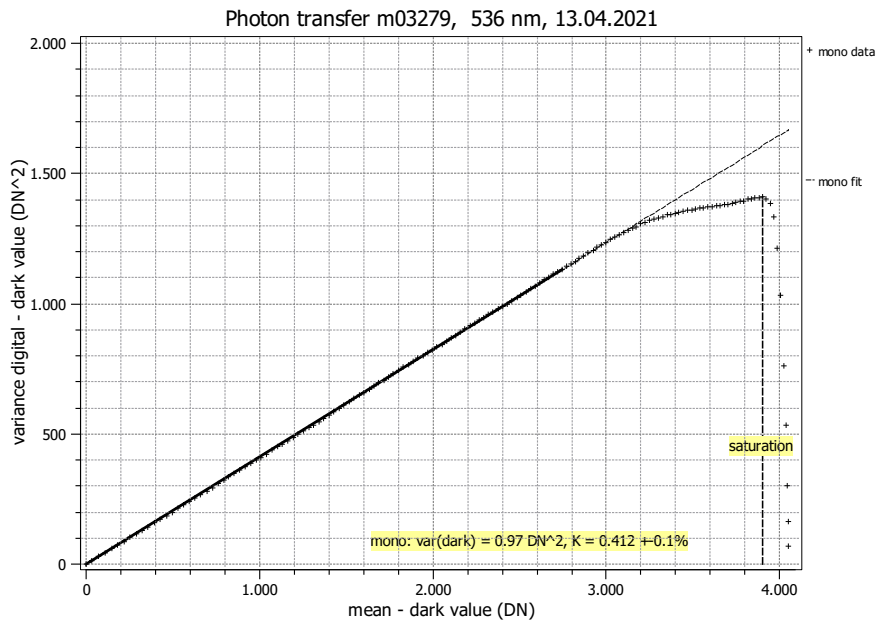
Type of data presented	Single
Operation point 1	
Wavelength centroid	535.7 nm
Wavelength FWHM	31.9 nm
Gain, black-level	1.0 / 40.0
Optional data measured	
None	



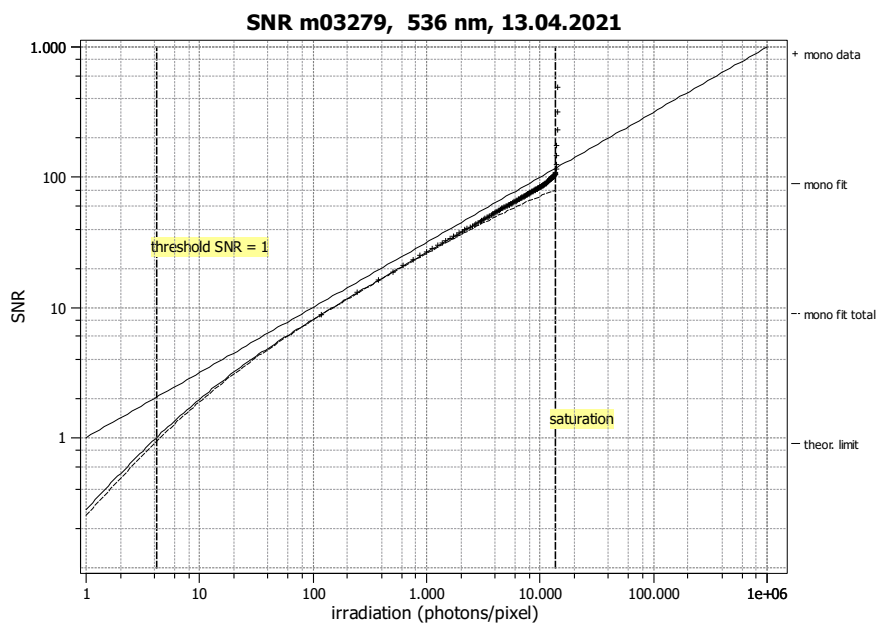
Summary Sheet for Operation Point 1 at a Wavelength of 536 nm

Type of data	Single	Gain, black-level	1.0 / 40.0
Exposure control	By irradiance	Environmental temperature	27.0°C
Exposure time	1.60 ms	Camera body temperature	34.5°C
Frame rate	10.0 Hz	Internal temperature(s)	—
Data transfer mode	Mono12	Wavelength, centr., FWHM	536 nm, 31.9 nm

Photon Transfer



Signal-to-Noise Ratio



Quantum efficiency

 η 70.6%

Overall system gain

 K 0.412 DN/e⁻
 $1/K$ 2.429 e⁻/DN

Temporal dark noise

 σ_d 2.29 e⁻
 $\sigma_{y,\text{dark}}$ 0.98 DN

Signal-to-noise ratio

 SNR_{max} 98

39.8 dB

6.6 bit

 $1/\text{SNR}_{\text{max}}$ 1.02 %

Absolute sensitivity threshold

 $\mu_{p,\text{min}}$ 4.17 p

 $\mu_{p,\text{min,area}}$ 0.555 p/ μm^2
 $\mu_{e,\text{min}}$ 2.94 e⁻
 $\mu_{e,\text{min,area}}$ 0.392 e⁻/ μm^2

Saturation capacity

 $\mu_{p,\text{sat}}$ 13503 p

 $\mu_{p,\text{sat,area}}$ 1799 p/ μm^2
 $\mu_{e,\text{sat}}$ 9531 e⁻
 $\mu_{e,\text{sat,area}}$ 1270 e⁻/ μm^2

Dynamic range

DR 3238

70.2 dB

11.7 bit

Spatial nonuniformities

 DSNU_{1288} 1.12 e⁻

0.46 DN

 PRNU_{1288} 0.74 %

Linearity error

 LE_{min} -0.28%

 LE_{max} 0.84%

Dark current

 $\mu_{c,\text{mean}}$ 0 \pm 0 e⁻/s

0.1 DN/s

 $\mu_{c,\text{var}}$ 13 \pm 1 e⁻/s

 T_d — °C