

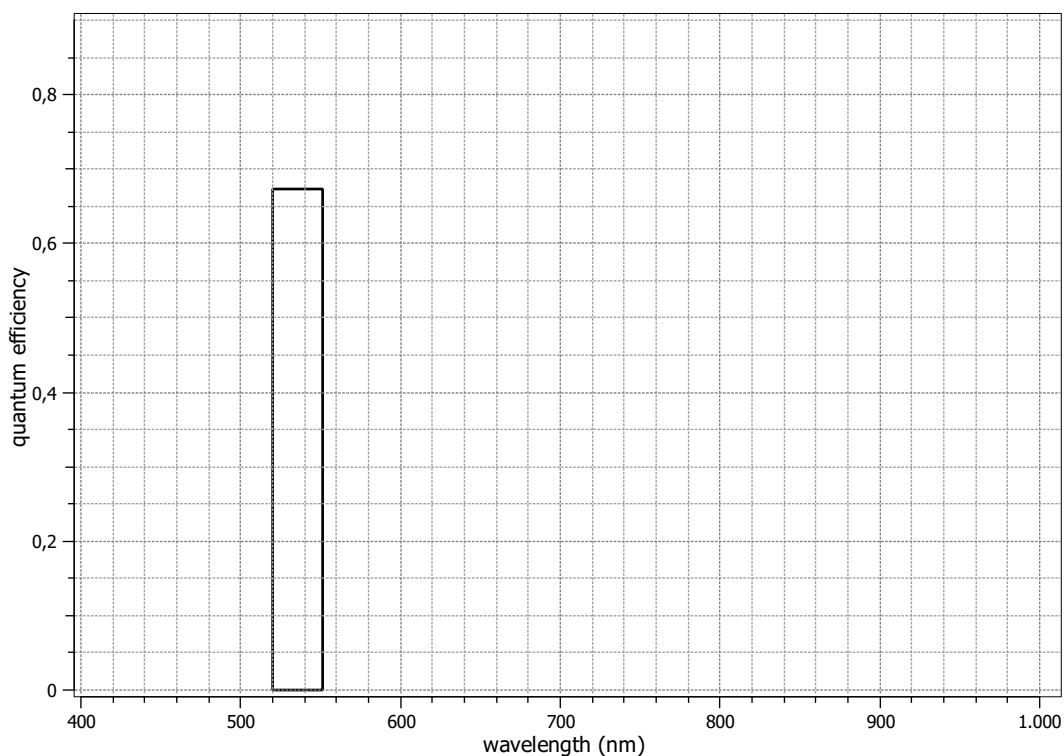
EMVA 1288 Summary Sheet

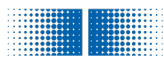
This datasheet describes the specification according to the standard 1288 release 3.1 for "Characterization and Presentation of Specification Data for Image Sensors and Cameras" issued on December 30, 2016 by the European Machine Vision Association (EMVA), published at www.standard1288.org and the *zenodo 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 Optronic GmbH.

Vendor	Baumer
Model	VCXG-127M.I.XT
Serial number	700006704593
Sensor diagonal	13.90 mm
Lens category	C-Mount
Resolution	4096 × 2992, 12 bit
Pixel size (h×v)	2.74 μm × 2.74 μm
Sensor	Sony IMX545
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 / 39.0
Optional data measured	
None	

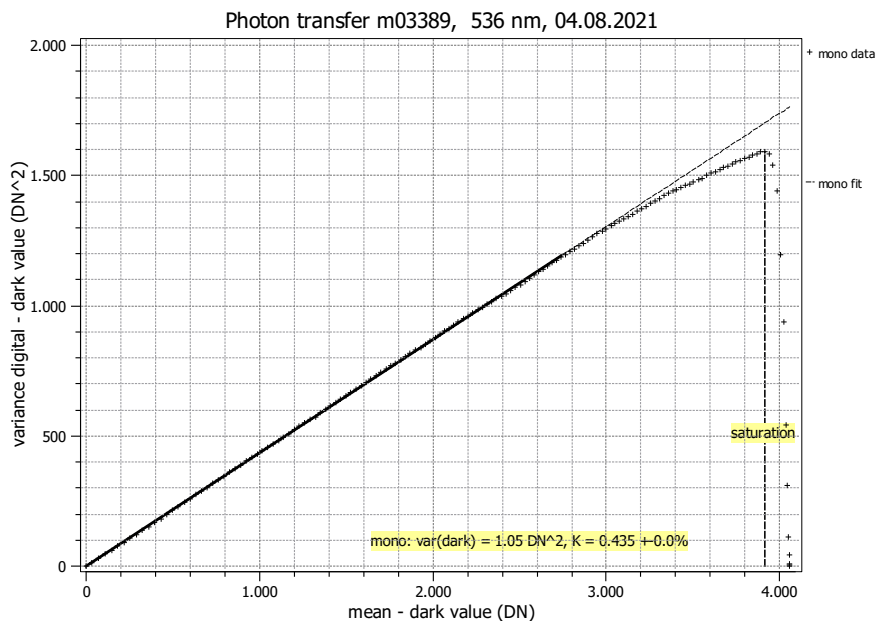




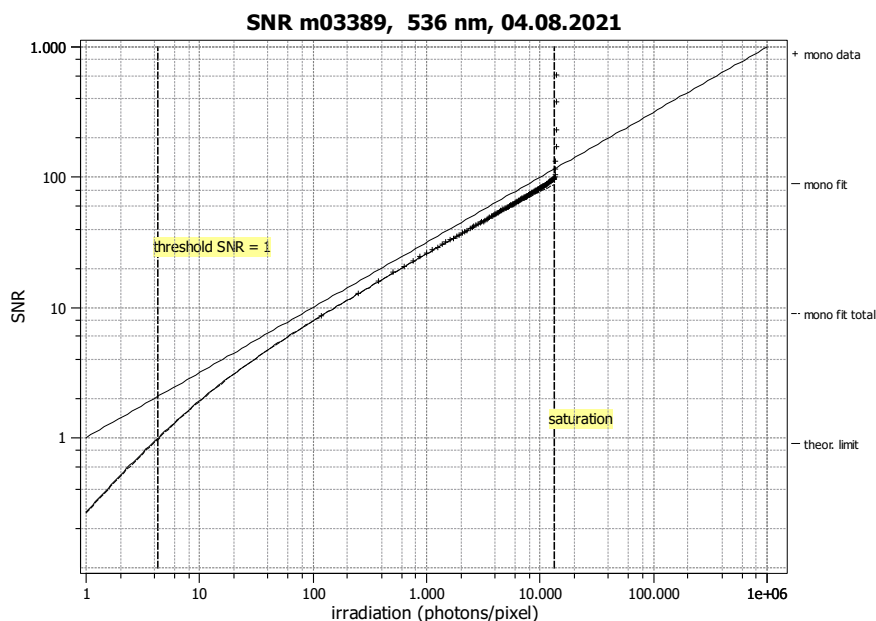
Summary Sheet for Operation Point 1 at a Wavelength of 536 nm

Type of data	Single	Gain, black-level	1.0 / 39.0
Exposure control	By irradiance	Environmental temperature	23.3°C
Exposure time	1.59 ms	Camera body temperature	26.9°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 67.3%

Overall system gain

 K 0.435 DN/e⁻
 $1/K$ 2.300 e⁻/DN

Temporal dark noise

 σ_d 2.26 e⁻
 $\sigma_{y,\text{dark}}$ 1.02 DN

Signal-to-noise ratio

 SNR_{max} 95

39.5 dB

6.6 bit

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

Absolute sensitivity threshold

 $\mu_{p,\text{min}}$ 4.32 p

 $\mu_{p,\text{min},\text{area}}$ 0.576 p/μm²
 $\mu_{e,\text{min}}$ 2.91 e⁻
 $\mu_{e,\text{min},\text{area}}$ 0.387 e⁻/μm²

Saturation capacity

 $\mu_{p,\text{sat}}$ 13364 p

 $\mu_{p,\text{sat},\text{area}}$ 1780 p/μm²
 $\mu_{e,\text{sat}}$ 8995 e⁻
 $\mu_{e,\text{sat},\text{area}}$ 1198 e⁻/μm²

Dynamic range

 DR 3093

69.8 dB

11.6 bit

Spatial nonuniformities

 DSNU_{1288} 0.55 e⁻

0.24 DN

 PRNU_{1288} 0.42 %

Linearity error

 LE_{min} -0.31%

 LE_{max} 0.81%

Dark current

 $\mu_{c,\text{mean}}$ 0.1 ± 0.0 e⁻/s

0.06 DN/s

 $\mu_{c,\text{var}}$ 4.5 ± 0.3 e⁻/s

 T_d — °C