

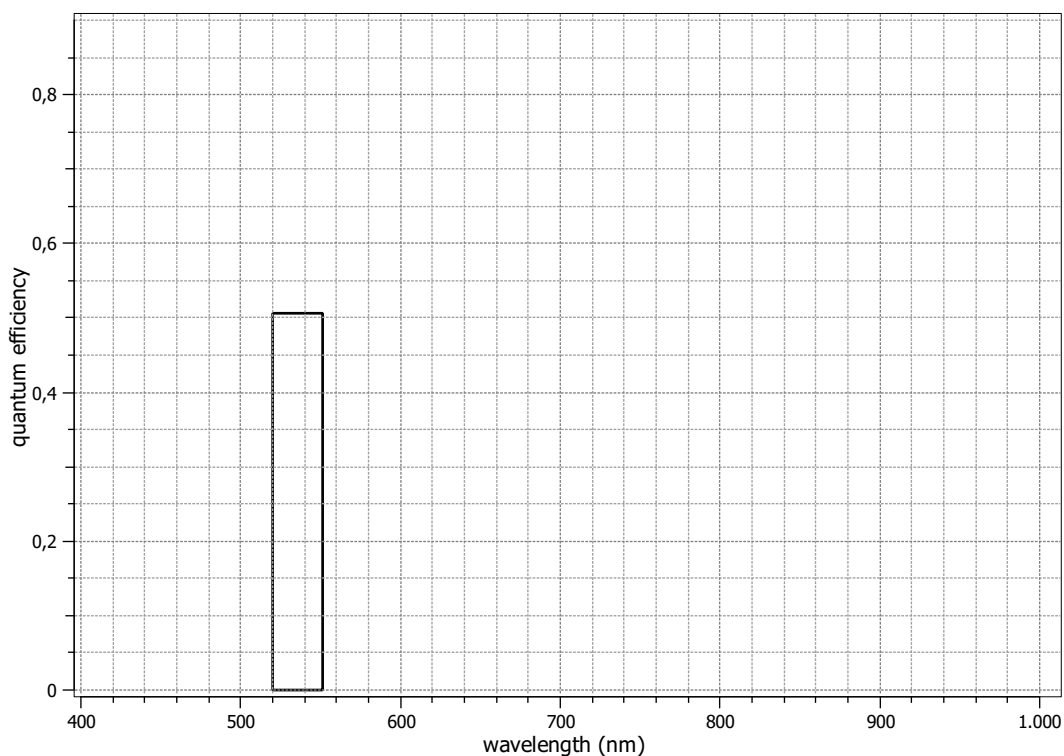
EMVA 1288 Summary Sheet

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	LXG-20M.PS
Serial number	1083570917
Sensor diagonal	12.75 mm
Lens category	C-Mount
Resolution	2048 × 1088, 8 bit
Pixel size (h×v)	5.50 μm × 5.50 μm
Sensor	CMOSIS CMV2000
Sensor type	CMOS
Shutter type	Global shutter
Overlap cap.	Overlapped
Max. frame rate	0.0 Hz
Interface type	GEV

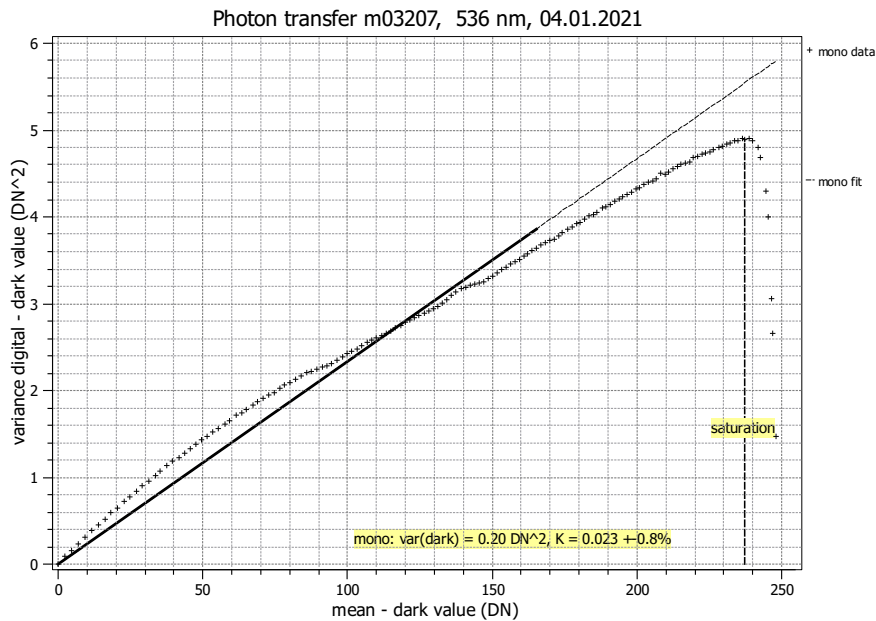
Type of data presented	Single
Operation point 1	
Wavelength centroid	535.7 nm
Wavelength FWHM	31.9 nm
Gain, black-level	1.0 / 0.0
Optional data measured	
None	



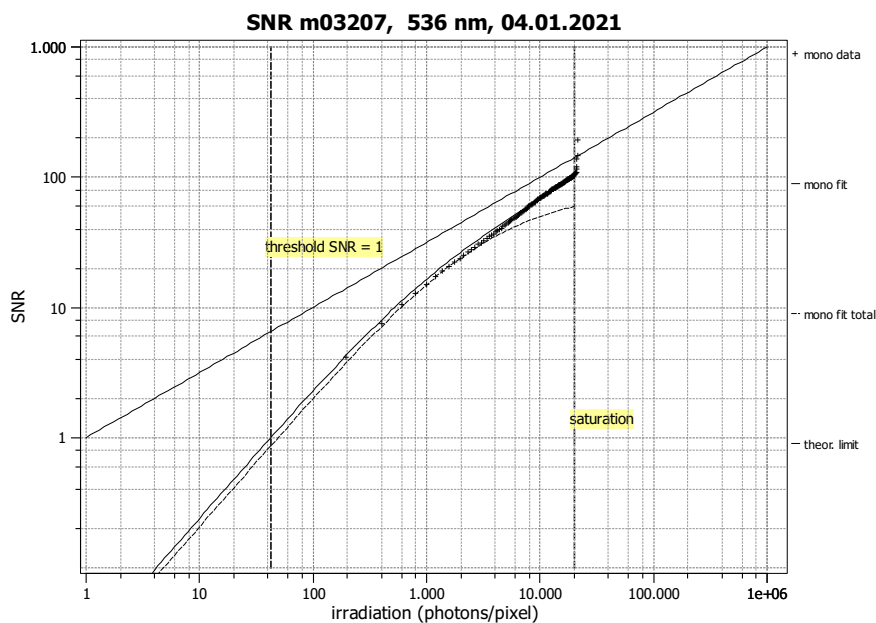
Summary Sheet for Operation Point 1 at a Wavelength of 536 nm

Type of data	Single	Gain, black-level	1.0 / 0.0
Exposure control	By irradiance	Environmental temperature	26.0°C
Exposure time	420.00 μ s	Camera body temperature	37.0°C
Frame rate	10.0 Hz	Internal temperature(s)	—
Data transfer mode	Mono8	Wavelength, centr., FWHM	536 nm, 31.9 nm

Photon Transfer



Signal-to-Noise Ratio



Quantum efficiency

 η 50.6%

Overall system gain

 K 0.023 DN/e⁻
 $1/K$ 42.803 e⁻/DN

Temporal dark noise[†]

 σ_d 17.12 e⁻
 $\sigma_{y,\text{dark}}$ 0.49 DN

Signal-to-noise ratio

 SNR_{max} 101

40.1 dB

6.7 bit

 $1/\text{SNR}_{\text{max}}$ 0.99 %

Absolute sensitivity threshold[†]

 $\mu_{p,\text{min}}$ 42.5 p

 $\mu_{p,\text{min},\text{area}}$ 1.40 p/ μm^2
 $\mu_{e,\text{min}}$ 21.5 e⁻
 $\mu_{e,\text{min},\text{area}}$ 0.71 e⁻/ μm^2

Saturation capacity

 $\mu_{p,\text{sat}}$ 20301 p

 $\mu_{p,\text{sat},\text{area}}$ 671 p/ μm^2
 $\mu_{e,\text{sat}}$ 10271 e⁻
 $\mu_{e,\text{sat},\text{area}}$ 340 e⁻/ μm^2

Dynamic range[†]

DR 478

53.6 dB

8.9 bit

Spatial nonuniformities

 DSNU_{1288} 12.47 e⁻

0.29 DN

 PRNU_{1288} 1.33 %

Linearity error

 LE_{min} -0.82%

 LE_{max} 1.03%

Dark current

 $\mu_{c,\text{mean}}$ 654 $\pm$ 3 e⁻/s

15.3 DN/s

 $\mu_{c,\text{var}}$ 654 $\pm$ 15 e⁻/s

 T_d — °C

[†] Dominated by quantization