

EMVA 1288 Data Sheet mACC200013

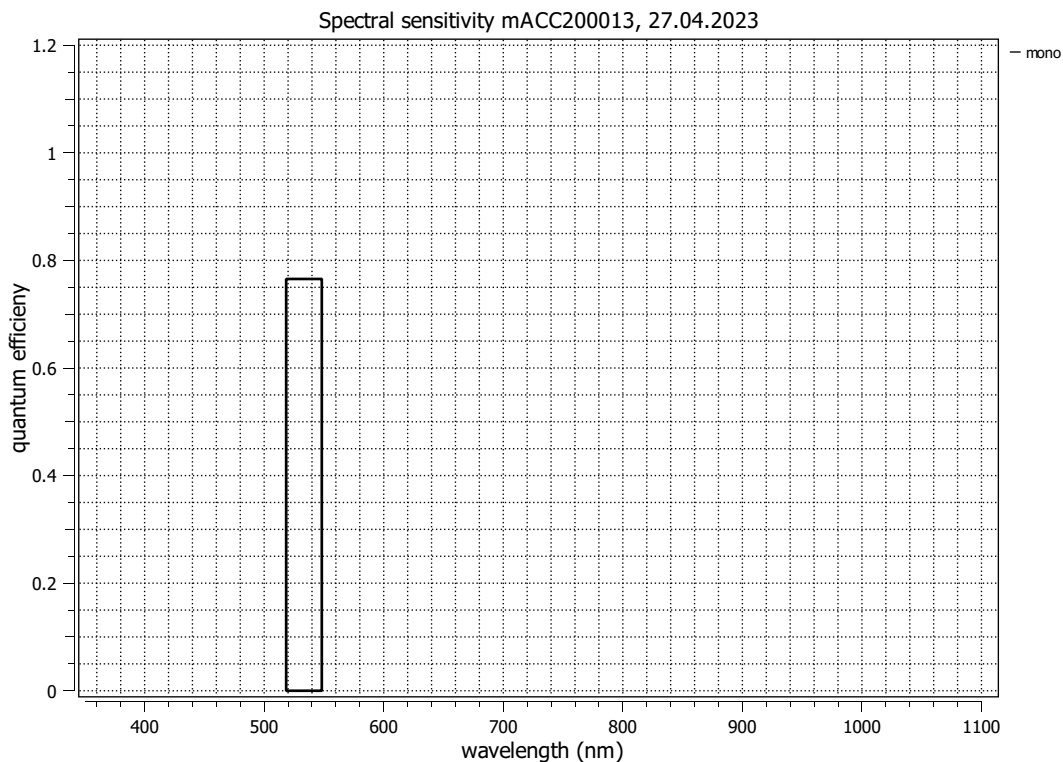
This datasheet describes the specification according to the standard 1288 Release 3.1 issued on 30 December 2016 for "Characterization and Presentation of Specification Data for Image Sensors and Cameras" by the European Machine Vision Association (EMVA), published at <https://www.emva.org/standards-technology/emva-1288/> with proprietary extensions from AEON. The measurements were performed with the AEON ACC2b 14x1 color, Release 9, 13.11.2020, SN 0068(Baumer), software version 2.0.

Measurements performed by AEON.

Type of data presented	Single
Vendor	Baumer
Model	VCXG.2-65M.R
Serial number	700009821419
Sensor diagonal	8.86 mm
Lens category	C-Mount
Resolution	3072 × 2048, 12 bit
Pixel size (h×v)	2.40 μm × 2.40 μm
Sensor	Sony IMX178
Sensor type	CMOS
Shutter type	Rolling shutter
Overlap cap.	Overlapped
Max. frame rate	0.0 Hz
Interface type	GEV

Nr.	Centroid/FWHM	Gain, blacklevel	t _{exp} (ms)
1	533.3/29.8 nm	1.0 / 40.0	3.00

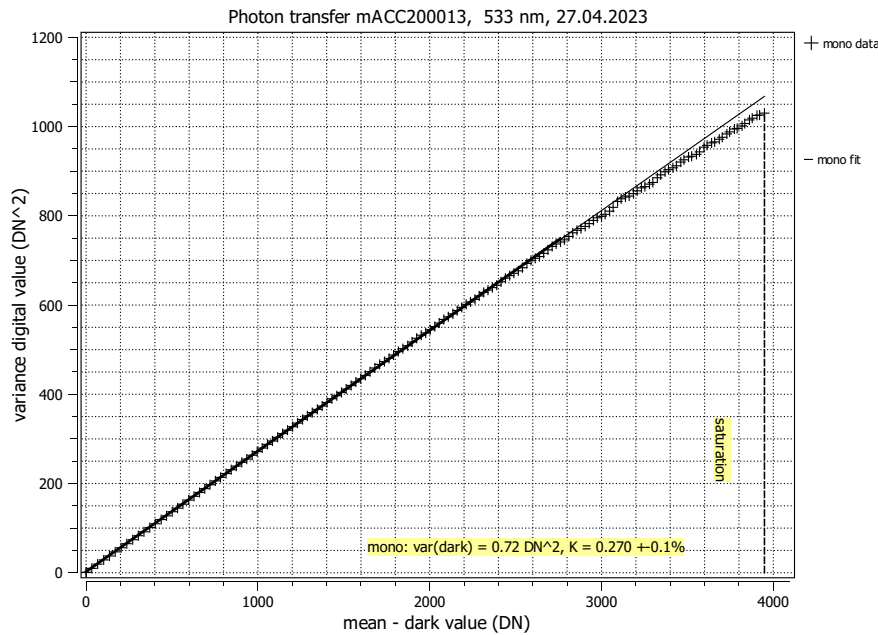
Optional data measured: None



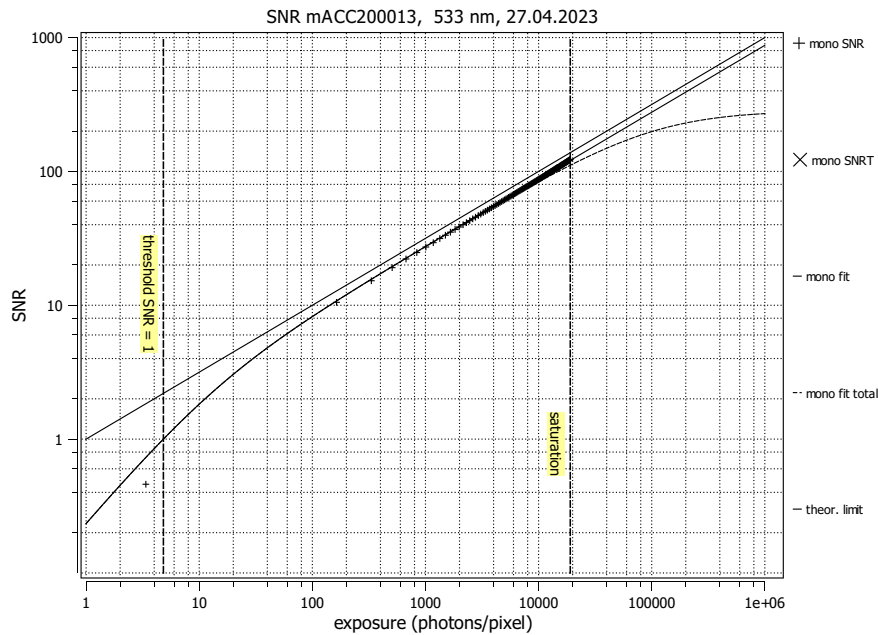
Summary Sheet for Operation Point 1 at a Wavelength of 533 nm

Type of data	Single	Gain, black-level	1.0 / 40.0
Exposure control	By irradiance	Environmental temperature	21.8°C
Exposure time	3.000 ms	Camera body temperature	28.1°C
Frame rate	9.6 Hz	Internal temperature(s)	—
Data transfer mode	Mono12	Wavelength, centr., FWHM	533 nm, 29.8 nm

Photon Transfer



Signal-to-Noise Ratio



Quantum efficiency

η 76.6%

Overall system gain

K 0.2698 DN/e⁻

1/ K 3.707 e⁻/DN

Temporal dark noise

σ_d 2.96 e⁻

$\sigma_{y,\text{dark}}$ 0.850 DN

Signal-to-noise ratio

SNR_{max} 120.8

41.6 dB

6.92 bit

1/SNR_{max} 0.828%

Absolute sensitivity threshold

$\mu_{p,\text{min}}$ 4.82 p

$\mu_{p,\text{min,area}}$ 0.837 p/μm²

$\mu_{e,\text{min}}$ 3.69 e⁻

$\mu_{e,\text{min,area}}$ 0.641 e⁻/μm²

Saturation capacity

$\mu_{p,\text{sat}}$ 19061 p

$\mu_{p,\text{sat,area}}$ 3309 p/μm²

$\mu_{e,\text{sat}}$ 14591 e⁻

$\mu_{e,\text{sat,area}}$ 2533 e⁻/μm²

Dynamic range

DR 3953

71.94 dB

11.95 bit

Spatial nonuniformities

DSNU₁₂₈₈ 0.179 e⁻

0.04835 DN

PRNU₁₂₈₈ 0.352%

Linearity error

LE_{min} -0.54%

LE_{max} 1.39%

Dark current

$\mu_{c,\text{mean}}$ 0.08185 e⁻/s

0.02208 DN/s

$\mu_{c,\text{var}}$ 0.521 e⁻/s

T_D — °C