

EMVA 1288 Data Sheet mACC200154

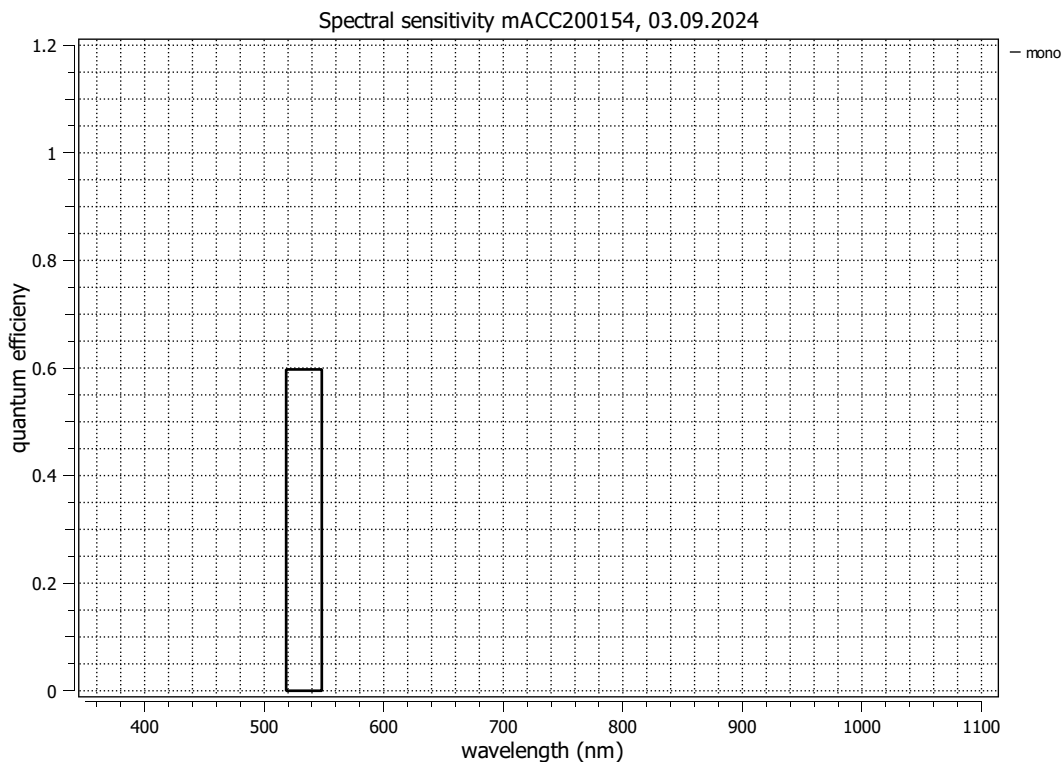
This data sheet describes the specification according to the standard 1288 Release 4.0 Linear issued on 21 June 2021 for "Characterization and Presentation of Specification Data for Image Sensors and Cameras" by the European Machine Vision Association (EMVA), published at <https://www.emva.org/standards-technology/emva-1288/> 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 Baumer Optronic GmbH. The product features and technical data specified do not express or imply any warranty. Technical modifications subject to change.

Type of data presented	Single
Vendor	Baumer
Model	VLXN-490M.I.JP
Serial number	700011310392
Sensor diagonal	31.70 mm
Lens category	M58 mount
Resolution	7008 × 7000, 12 bit
Offset/Size used	0 × 0/ 7008 × 7000
Pixel size (h×v)	3.20 μm × 3.20 μm
Sensor	GPixel GPIXEL_GMAX3249
Sensor type	CMOS
Shutter type	Global 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 / 41.0	2.50

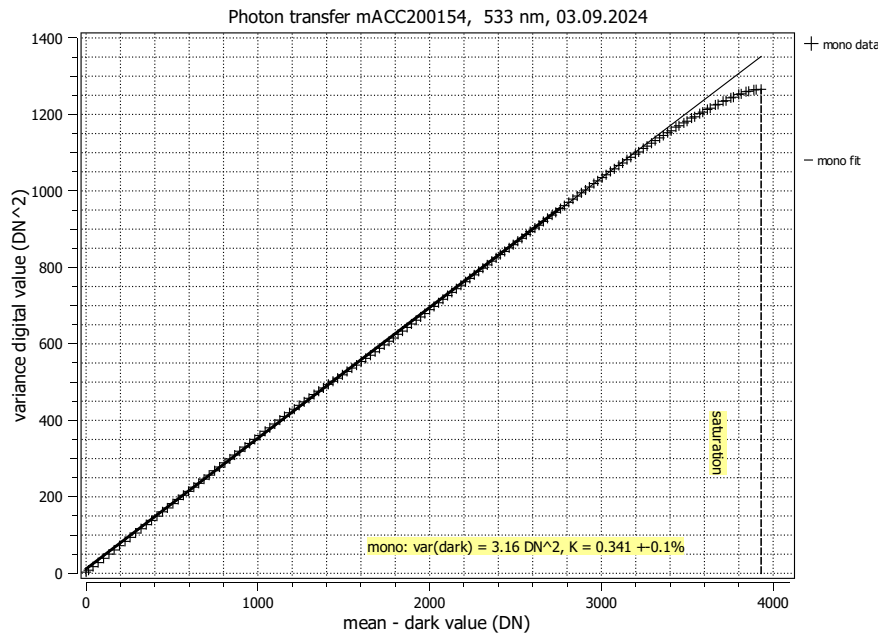
Optional data measured: None



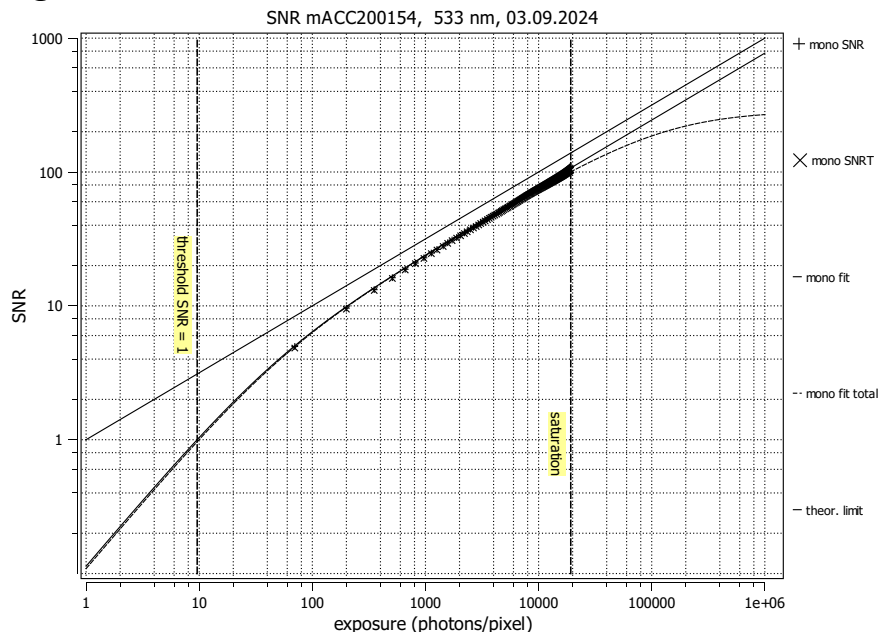
Summary Sheet for Operation Point 1 at a Wavelength of 533 nm

Type of data	Single	Gain, black-level	1.0 / 41.0
Exposure control	By irradiance	Environmental temperature	24.9°C
Exposure time	2.500 ms	Camera body temperature	27.8°C
Frame rate	10.0 Hz	Internal temperature(s)	36.3°C
Data transfer mode	Mono12	Wavelength, centr., FWHM	533 nm, 29.8 nm

Photon Transfer



Signal-to-Noise Ratio



Quantum efficiency	
η	59.7%
Overall system gain	
K	0.3415 DN/e ⁻
$1/K$	2.928 e ⁻ /DN
Temporal dark noise	
σ_d	5.14 e ⁻
$\sigma_{y,\text{dark}}$	1.78 DN
Signal-to-noise ratio	
SNR _{max}	107.2
	40.6 dB
$1/\text{SNR}_{\text{max}}$	0.932 %
Absolute sensitivity threshold	
$\mu_{e,\text{min}}$	5.73 e ⁻
$\mu_{e,\text{min,area}}$	0.560 e ⁻ /μm ²
Saturation capacity	
$\mu_{e,\text{sat}}$	11501 e ⁻
$\mu_{e,\text{sat,area}}$	1123 e ⁻ /μm ²
Dynamic range	
DR	2007
	66.05 dB
Spatial nonuniformities	
DSNU ₁₂₈₈	1.56 e ⁻
DSNU _{1288.col}	0.35 e ⁻
DSNU _{1288.row}	0.08 e ⁻
DSNU _{1288.pix}	1.52 e ⁻
PRNU ₁₂₈₈	0.349 %
PRNU _{1288.col}	0.080 %
PRNU _{1288.row}	0.015 %
PRNU _{1288.pix}	0.340 %
Linearity error	
LE	0.17%
Dark current	
$\mu_{c,\text{mean}}$	6.94 e ⁻ /s
$\mu_{c,\text{var}}$	6.14 e ⁻ /s