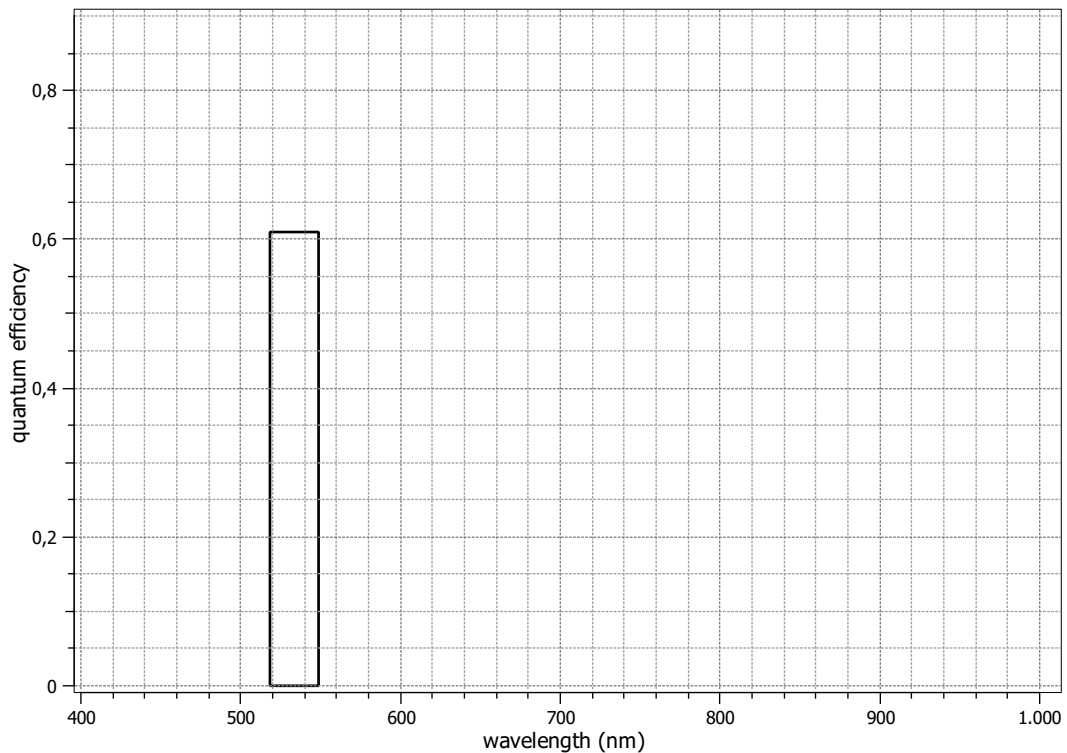


EMVA 1288 Summary Sheet

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 Release 7, 21.08.2018, SN 0018(AEON).

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

Vendor	Baumer	Type of data presented	Single
Model	VLXT-490M.I.EF	Operation point 1	
Serial number	700007848799	Wavelength centroid	533.3 nm
Sensor diagonal	31.70 mm	Wavelength FWHM	30.3 nm
Lens category	M58 mount	Gain, black-level	1.0 / 41.0
Resolution	7008 × 7000, 12 bit	Optional data measured	None
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		

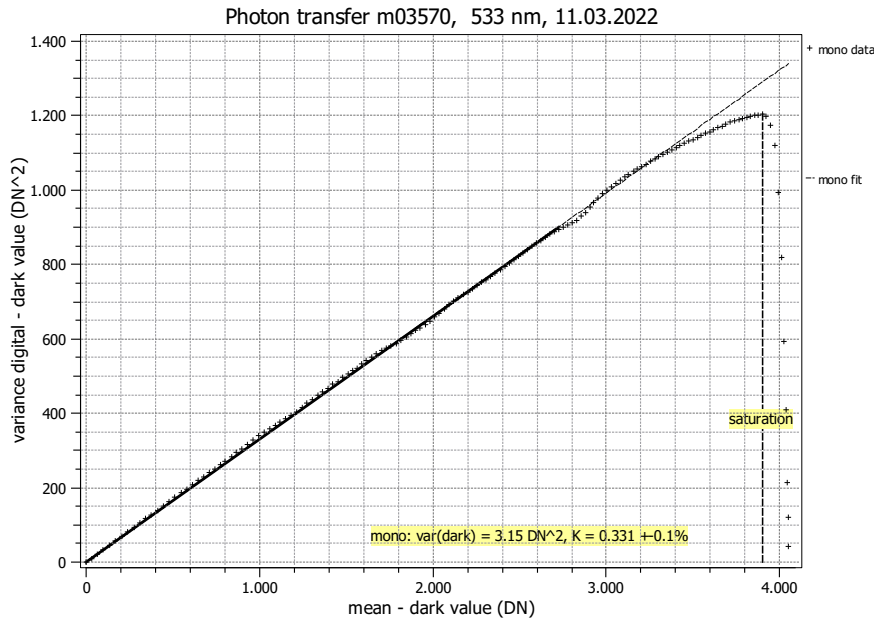




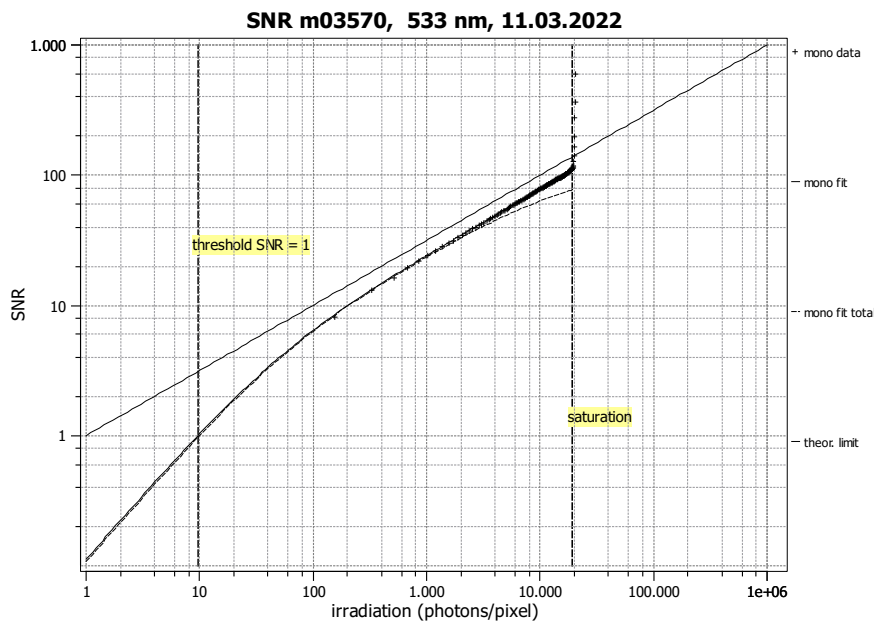
Summary Sheet for Operation Point 1 at a Wavelength of 533 nm

Type of data	Single	Gain, black-level	1.0 / 41.0
Exposure control	By irradiance	Environmental temperature	23.3°C
Exposure time	801.00 μs	Camera body temperature	33.9°C
Frame rate	10.0 Hz	Internal temperature(s)	—
Data transfer mode	Mono12	Wavelength, centr., FWHM	533 nm, 30.3 nm

Photon Transfer



Signal-to-Noise Ratio



Quantum efficiency

η 60.9%

Overall system gain

K 0.331 DN/e⁻

$1/K$ 3.023 e⁻/DN

Temporal dark noise

σ_d 5.30 e⁻

$\sigma_{y,\text{dark}}$ 1.78 DN

Signal-to-noise ratio

SNR_{max} 109

40.7 dB

6.8 bit

$1/\text{SNR}_{\text{max}}$ 0.92 %

Absolute sensitivity threshold

$\mu_{p,\text{min}}$ 9.67 p

$\mu_{p,\text{min,area}}$ 0.944 p/μm²

$\mu_{e,\text{min}}$ 5.89 e⁻

$\mu_{e,\text{min,area}}$ 0.575 e⁻/μm²

Saturation capacity

$\mu_{p,\text{sat}}$ 19358 p

$\mu_{p,\text{sat,area}}$ 1890 p/μm²

$\mu_{e,\text{sat}}$ 11797 e⁻

$\mu_{e,\text{sat,area}}$ 1152 e⁻/μm²

Dynamic range

DR 2003

66.0 dB

11.0 bit

Spatial nonuniformities

DSNU₁₂₈₈ 1.61 e⁻

0.53 DN

PRNU₁₂₈₈ 0.92 %

Linearity error

LE_{min} -0.32%

LE_{max} 0.72%

Dark current

$\mu_{c,\text{mean}}$ 8.9 ± 0.1 e⁻/s

2.95 DN/s

$\mu_{c,\text{var}}$ 8.0 ± 0.1 e⁻/s

T_d — °C