

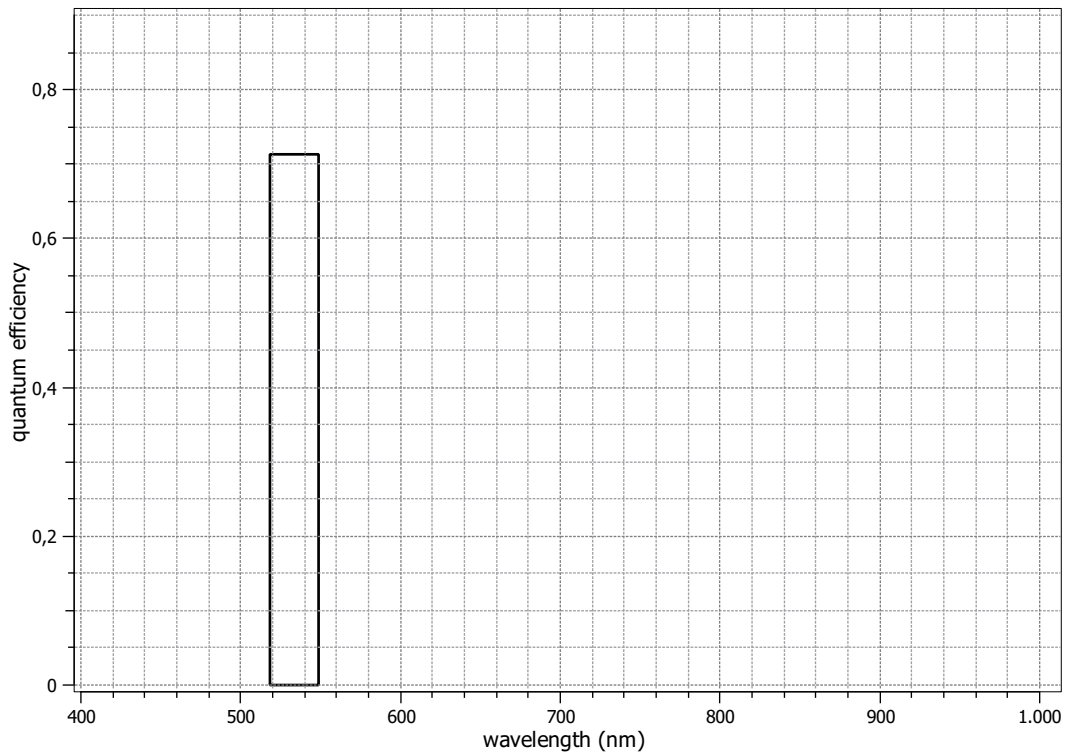


EMVA 1288 Summary Sheet

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	VCXG.2-241M.XC	Operation point 1	
Serial number	700009541151	Wavelength centroid	533.3 nm
Sensor diagonal	17.03 mm	Wavelength FWHM	30.3 nm
Lens category	C-Mount	Gain, black-level	1.0 / 40.0
Resolution	4672 × 4100, 12 bit	Optional data measured	
Pixel size (h×v)	2.74 μm × 2.74 μm	None	
Sensor	Sony IMX540		
Sensor type	CMOS		
Shutter type	Global shutter		
Overlap cap.	Overlapped		
Max. frame rate	0.0 Hz		
Interface type	GEV		

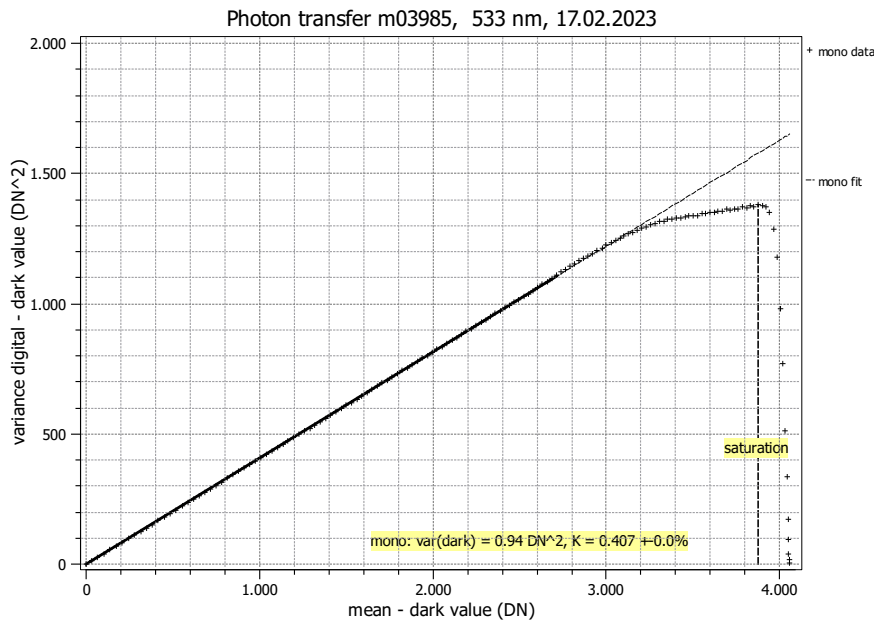




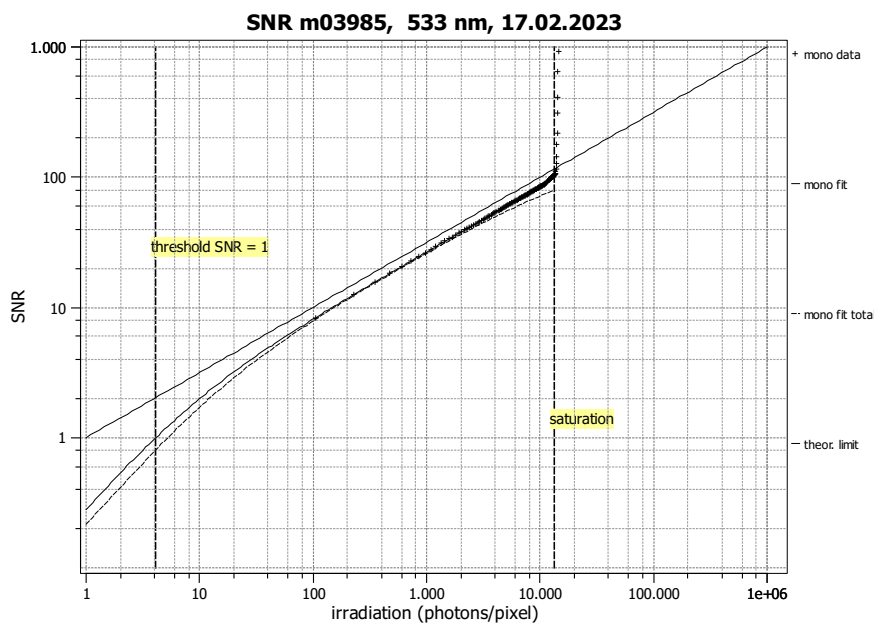
Summary Sheet for Operation Point 1 at a Wavelength of 533 nm

Type of data	Single	Gain, black-level	1.0 / 40.0
Exposure control	By irradiance	Environmental temperature	24.3°C
Exposure time	820.00 μs	Camera body temperature	36.3°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	71.3%
Overall system gain	K	0.407 DN/e ⁻
	$1/K$	2.457 e ⁻ /DN
Temporal dark noise	σ_d	2.28 e ⁻
	$\sigma_{y,\text{dark}}$	0.97 DN
Signal-to-noise ratio	SNR_{max}	98
		39.8 dB
		6.6 bit
	$1/\text{SNR}_{\text{max}}$	1.02 %
Absolute sensitivity threshold	$\mu_{p,\text{min}}$	4.12 p
	$\mu_{p,\text{min,area}}$	0.549 p/μm ²
	$\mu_{e,\text{min}}$	2.94 e ⁻
	$\mu_{e,\text{min,area}}$	0.391 e ⁻ /μm ²
Saturation capacity	$\mu_{p,\text{sat}}$	13426 p
	$\mu_{p,\text{sat,area}}$	1788 p/μm ²
	$\mu_{e,\text{sat}}$	9576 e ⁻
	$\mu_{e,\text{sat,area}}$	1275 e ⁻ /μm ²
Dynamic range	DR	3258
		70.3 dB
		11.7 bit
Spatial nonuniformities	DSNU_{1288}	2.14 e ⁻
		0.87 DN
	PRNU_{1288}	0.74 %
Linearity error	LE_{min}	-0.29%
	LE_{max}	0.53%
Dark current	$\mu_{c,\text{mean}}$	0 ± 0 e ⁻ /s
		0.1 DN/s
	$\mu_{c,\text{var}}$	23 ± 1 e ⁻ /s
	T_d	— °C