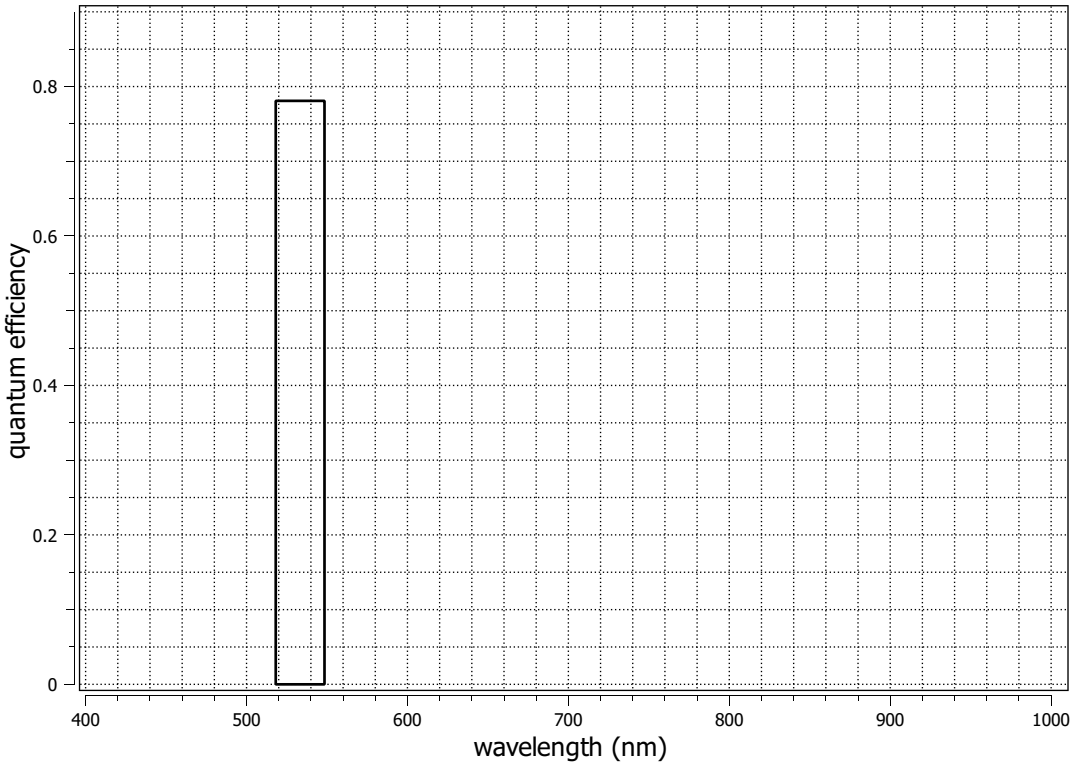
EMVA 1288 Summary Sheet

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
Model	VCXG.2-201M.R
Serial number	700009391981
Sensor diagonal	15.78 mm
Lens category	C-Mount
Resolution	5472 × 3648, 12 bit
Pixel size (h×v)	2.40 μm × 2.40 μm
Sensor	Sony IMX183
Sensor type	CMOS
Shutter type	Rolling shutter
Overlap cap.	Overlapped
Max. frame rate	0.0 Hz
Interface type	GEV

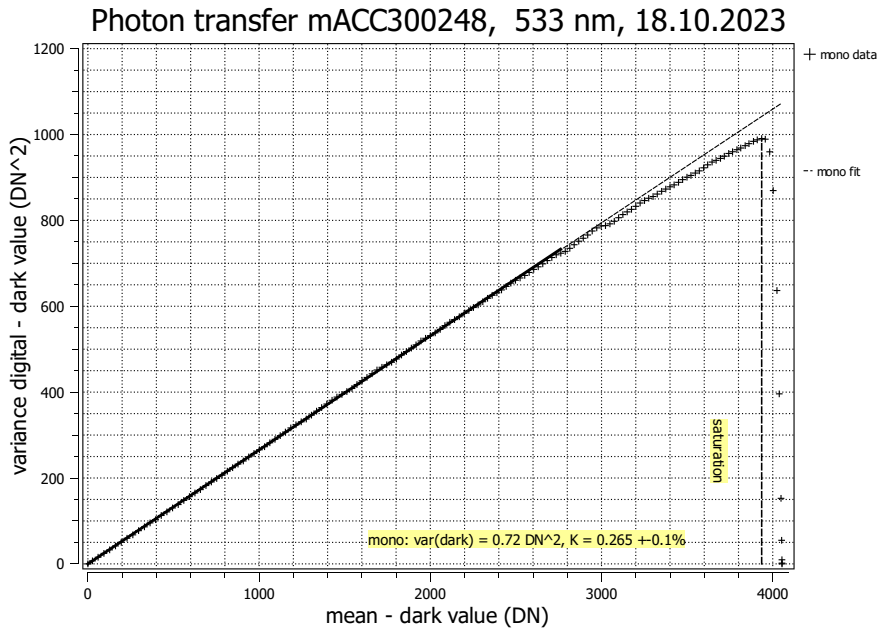
Type of data presented	Single
Operation point 1	
Wavelength centroid	533.3 nm
Wavelength FWHM	30.3 nm
Gain, black-level	1.0 / 43.0
Optional data measured	
None	



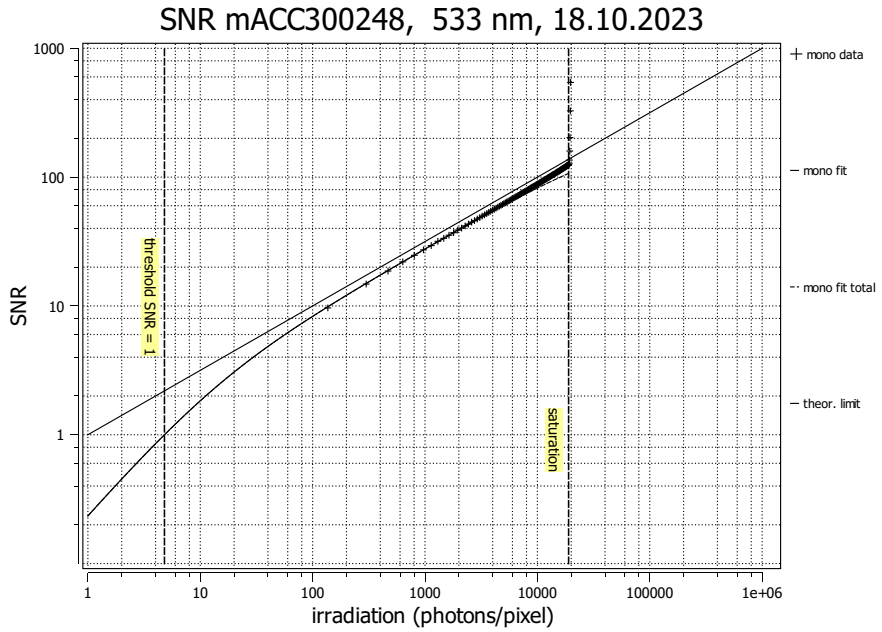
Summary Sheet for Operation Point 1 at a Wavelength of 533 nm

Type of data	Single	Gain, black-level	1.0 / 43.0
Exposure control	By irradiance	Environmental temperature	23.2 °C
Exposure time	1.62 ms	Camera body temperature	23.4 °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	78.1%

Overall system gain

K	0.265 DN/e$^-$
$1/K$	3.777 e$^-$/DN

Temporal dark noise

σ_d	3.02 e$^-$
$\sigma_{y.\mathrm{dark}}$	0.85 DN

Signal-to-noise ratio

$\mathrm{SNR}_{\max}$	122
	41.7 dB
	6.9 bit
$1/\mathrm{SNR}_{\max}$	0.82 %

Absolute sensitivity threshold

$\mu_{p.\mathrm{min}}$	4.80 p
$\mu_{p.\mathrm{min.area}}$	0.833 p/μm^2
$\mu_{e.\mathrm{min}}$	3.75 e$^-$
$\mu_{e.\mathrm{min.area}}$	0.651 e$^-$/μm^2

Saturation capacity

$\mu_{p.\mathrm{sat}}$	18957 p
$\mu_{p.\mathrm{sat.area}}$	3291 p/μm^2
$\mu_{e.\mathrm{sat}}$	14802 e$^-$
$\mu_{e.\mathrm{sat.area}}$	2570 e$^-$/μm^2

Dynamic range

DR	3950
	71.9 dB
	11.9 bit

Spatial nonuniformities

DSNU_{1288}	0.20 e$^-$
	0.05 DN
PRNU_{1288}	0.45 %

Linearity error

$\mathrm{LE}_{\min}$	-0.58%
$\mathrm{LE}_{\max}$	1.55%

Dark current

$\mu_{c.\mathrm{mean}}$	1.4 ± 0.0 e$^-$/s
	0.38 DN/s
$\mu_{c.\mathrm{var}}$	1.4 ± 0.0 e$^-$/s
T_d	— °C