

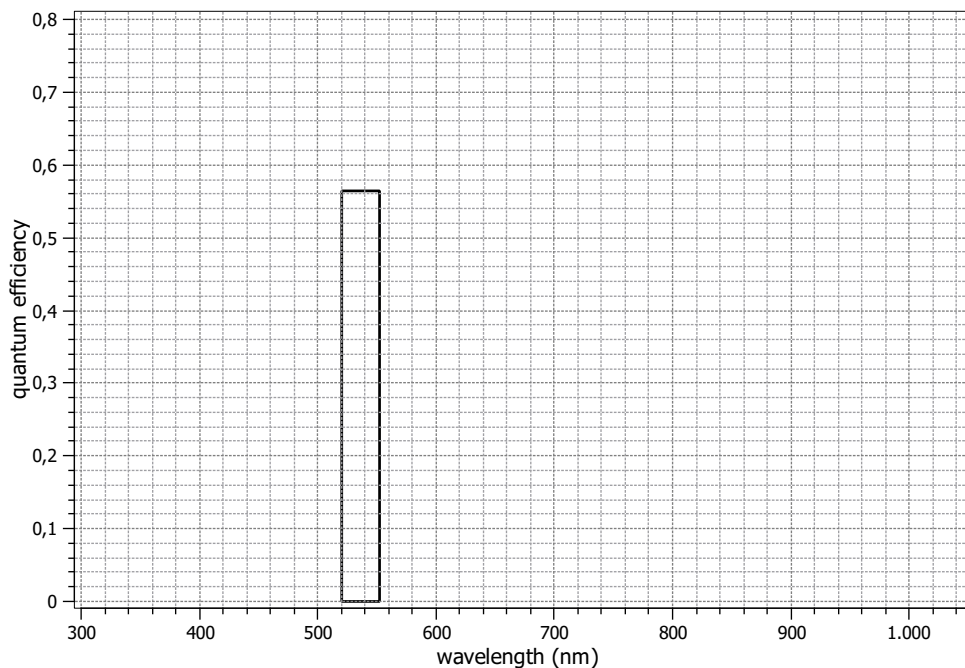
EMVA 1288 Summary Sheet

This datasheet describes the specification according to the standard 1288 for "Characterization and Presentation of Specification Data for Image Sensors and Cameras of the European Machine Vision Association (EMVA)" (see www.standard1288.org or the *Zenodo EMVA 1288 community*) release 3.0 with proprietary extensions from AEON. The measurements were performed with the AEON ACC3 RGB Release 3, 15.08.2015, SN 0001(Baumer) . The performance parameters and estimated accuracy of the measurements are described in the technical report for the instrument, its calibration in the corresponding specification and calibration report.

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

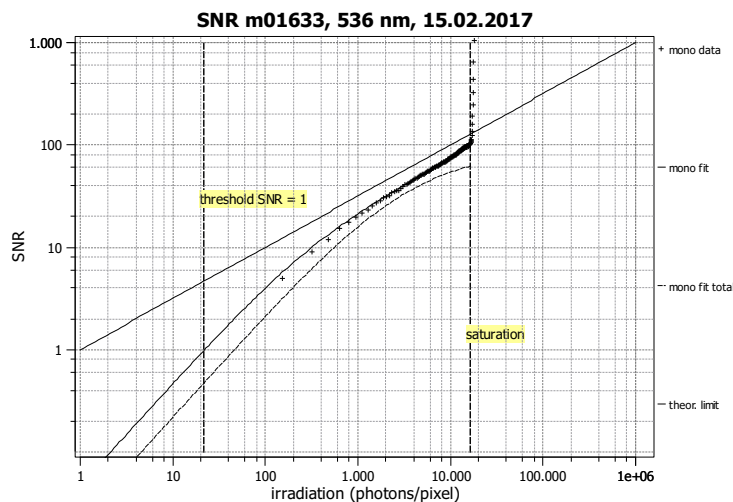
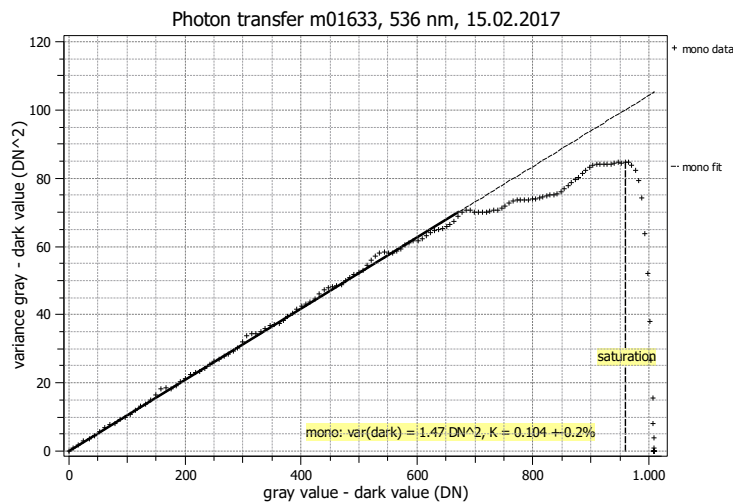
Vendor	Baumer
Model	VCXU-53M
Serial number	700001810827
Sensor diagonal	15.86 mm
Lens category	C-Mount
Resolution	2592 × 2048, 10 bit
Pixel size	4.80 μm × 4.80 μm
Sensor	OnSemi PYTHON5000
Sensor type	CMOS
Shutter type	Global shutter
Overlap capabilities	Overlapped
Maximum frame rate	0.0 Hz
Interface type	U3V

Type of data presented	Single
Operation point 1	
Wavelength centroid	535.8 nm
Wavelength FWHM	32.0 nm
Gain / BlackLevel	1.0 / 12
Optional data measured	
None	



EMVA 1288 Summary Sheet for Operating Point 1

Type of data	Single	Gain / BlackLevel	1.0 / 12
Exposure control	By irradiance	Environmental temperature	23.0°C
Exposure time	811.00 μ s	Camera body temperature	36.7°C
Frame rate	10.0 Hz	Internal temperature(s)	—
Data transfer mode	Mono10	Wavelength, centr., FWHM	536 nm, 32.0 nm



Quantum efficiency

η 56.4%

Overall system gain

K 0.104 DN/e⁻

1/ K 9.589 e⁻/DN

Temporal dark noise & DSNU

$\sigma_{y,\text{dark}}$ 1.21 DN

DSNU₁₂₈₈ 2.37 DN

σ_d 11.29 e⁻

DSNU₁₂₈₈ 22.75 e⁻

Signal-to-noise ratio & PRNU

SNR_{max} 96

39.7 dB

6.6 bit

1/SNR_{max} 1.04 %

PRNU₁₂₈₈ 1.20 %

Nonlinearity

LE 0.56%

LE_{min} -0.76%

LE_{max} 0.37%

Sensitivity & saturation

$\mu_{p,\text{min}}$ 21.5 p

0.93 p/ μ m²

$\mu_{p,\text{sat}}$ 16410 p

712 p/ μ m²

$\mu_{e,\text{min}}$ 12.1 e⁻

0.53 e⁻/ μ m²

$\mu_{e,\text{sat}}$ 9260 e⁻

402 e⁻/ μ m²

Dynamic range

DR 763

57.7 dB

9.6 bit

Dark current

$\mu_{c,\text{mean}}$ 118.9 DN/s

$\mu_{c,\text{mean}}$ 1139.8 e⁻/s

$\mu_{c,\text{var}}$ 567.6 e⁻/s