

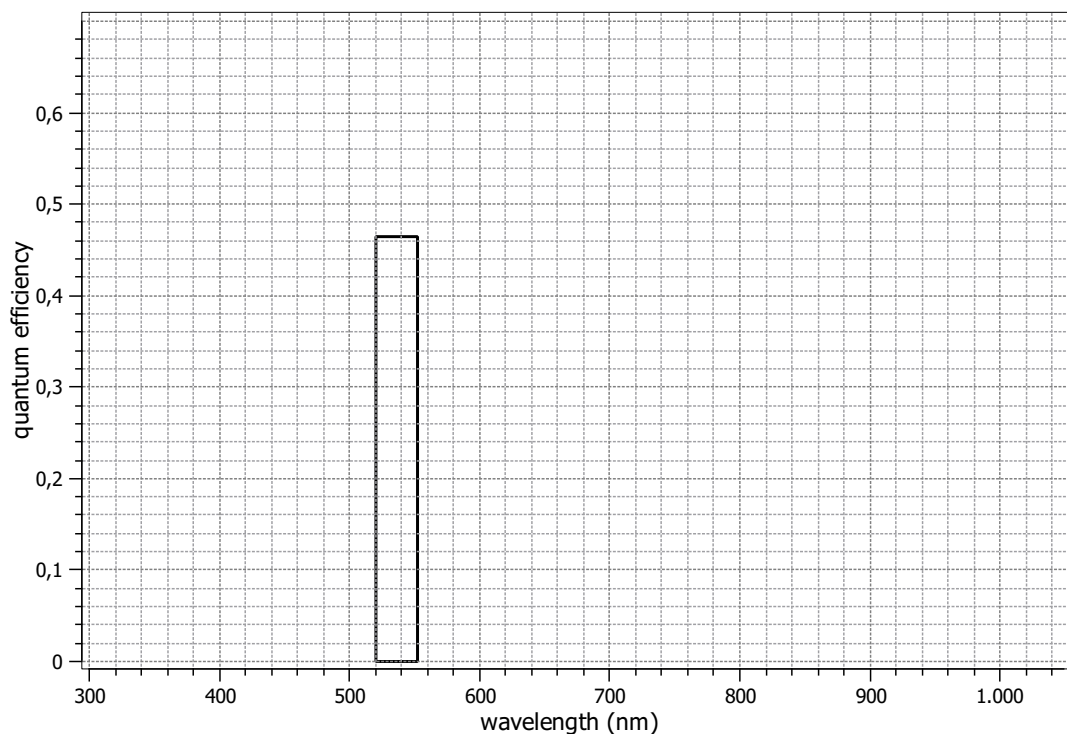
EMVA 1288 Summary Sheet

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.

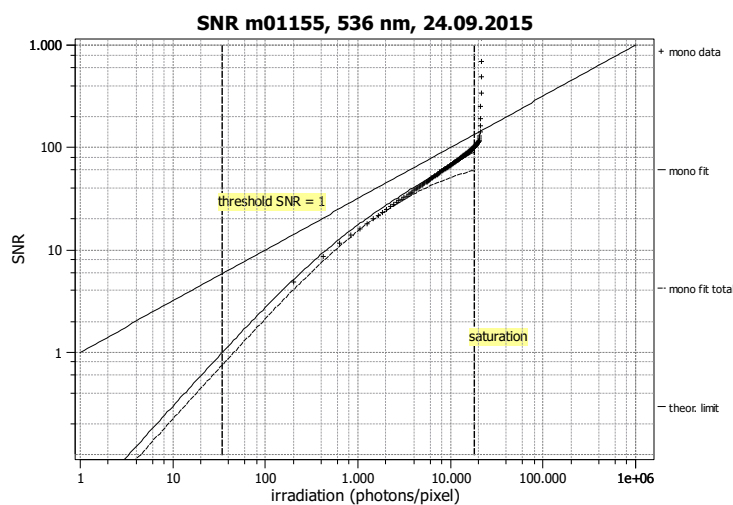
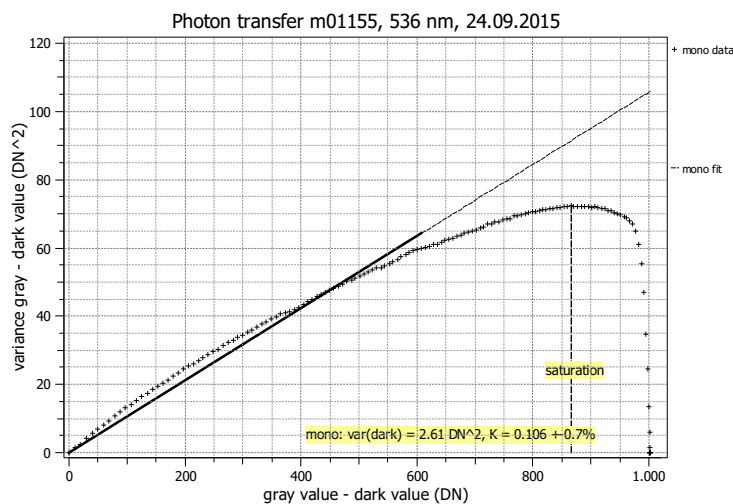
Vendor	Baumer
Model	LXG-40M
Serial number	0687423315
Sensor diagonal	15.93 mm
Lens category	C-Mount
Resolution	2048 × 2048, 10 bit
Pixel size	5.50 μm × 5.50 μm
Sensor	CMOSIS CMV4000
Sensor type	CMOS
Shutter type	Global shutter
Overlap capabilities	Overlapped
Maximum frame rate	0.0 Hz
Interface type	GEV

Type of data presented	Single
Operation point 1	
Wavelength centroid	535.8 nm
Wavelength FWHM	32.0 nm
Gain, offset	BlackLevel = 0
Optional data measured	
None	



EMVA 1288 Summary Sheet for Operating Point 1

Type of data	Single	Gain, offset	BlackLevel = 0
Exposure time	500.00 μ s	Environmental temperature	25.1°C
Frame rate	10.0 Hz	Camera body temperature	34.4°C
Data transfer mode	Mono10	Intern temperature(s)	—
		Wavelength, centr., FWHM	536 nm, 32.0 nm



Results

Quantum efficiency η 46.5%

Overall system gain

K 0.106 DN/e⁻
 $1/K$ 9.468 e⁻/DN

Temporal dark noise & DSNU

$\sigma_{y,\text{dark}}$ 1.62 DN
 DSNU₁₂₈₈ 1.46 DN
 σ_d 15.05 e⁻
 DSNU₁₂₈₈ 13.84 e⁻

Signal-to-noise ratio & PRNU

SNR_{max} 91
 SNR_{max} 39.2 dB
 SNR_{max} 6.5 bit
 $1/\text{SNR}_{\text{max}}$ 1.10 %
 PRNU₁₂₈₈ 1.23 %

Nonlinearity

LE (%) 0.63

Sensitivity & saturation

$\mu_{p,\text{min}}$ 34.0 p
 1.12 p/ μm^2
 $\mu_{p,\text{sat}}$ 17895 p
 592 p/ μm^2
 $\mu_{e,\text{min}}$ 15.8 e⁻
 0.52 e⁻/ μm^2
 $\mu_{e,\text{sat}}$ 8326 e⁻
 275 e⁻/ μm^2

Dynamic range

DR 527
 DR 54.4 dB
 DR 9.0 bit

Dark current

$\mu_{c,\text{mean}}$ 32.6 DN/s
 $\mu_{c,\text{mean}}$ 308.7 e⁻/s
 $\mu_{c,\text{var}}$ 168.7 e⁻/s