

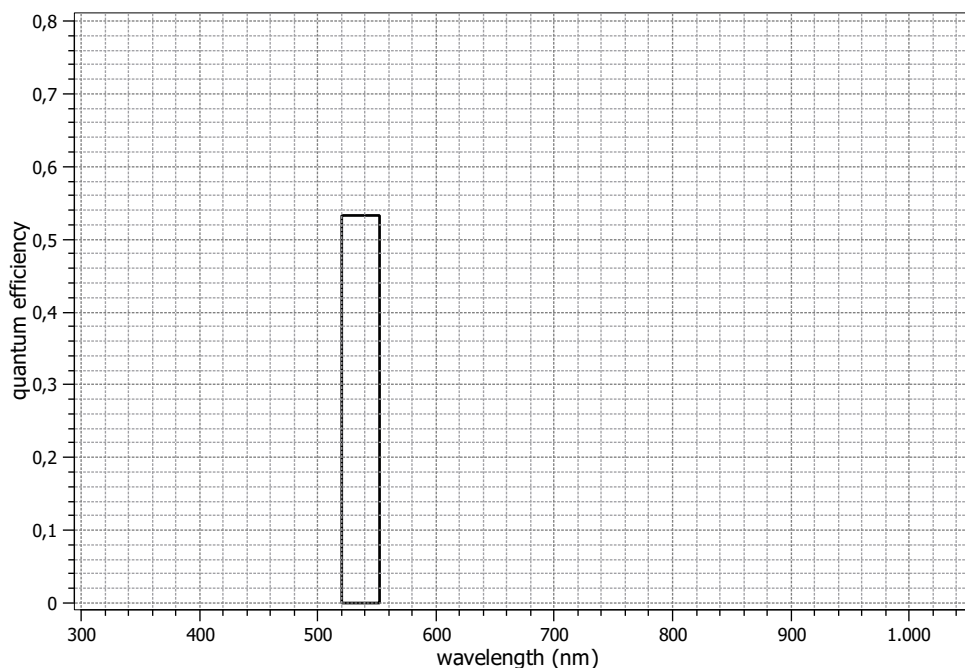
## EMVA 1288 Summary Sheet

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](http://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.

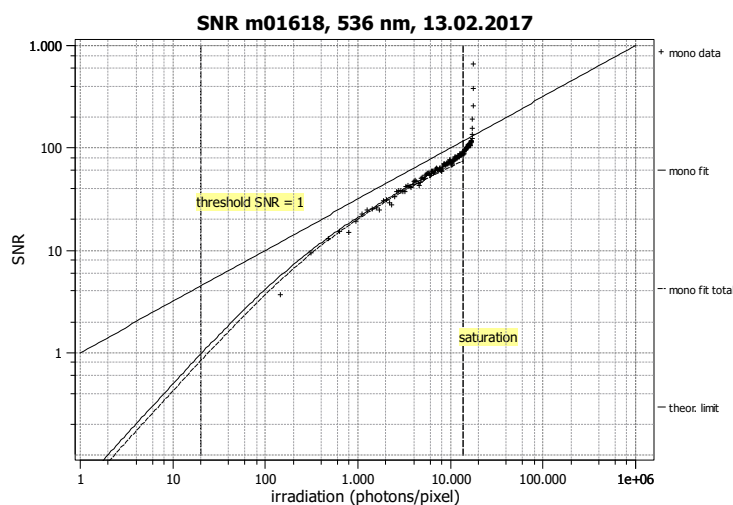
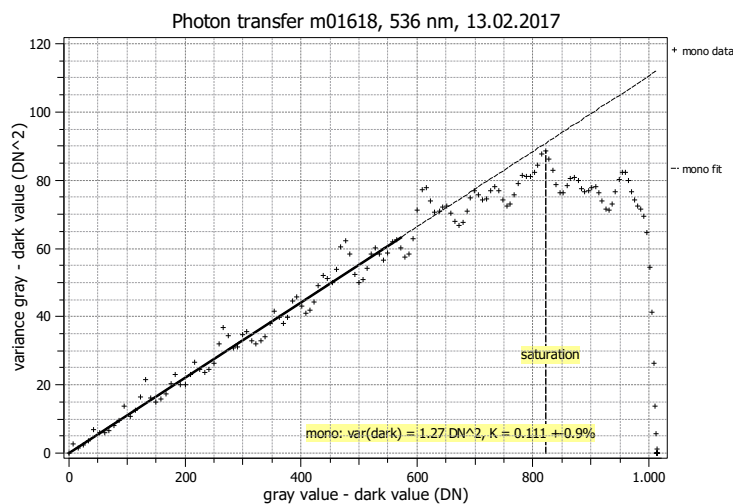
Vendor	Baumer
Model	VCXU-02M
Serial number	700001947820
Sensor diagonal	3.84 mm
Lens category	C-Mount
Resolution	640 × 480, 10 bit
Pixel size	4.80 μm × 4.80 μm
Sensor	OnSemi PYTHON300
Sensor type	CMOS
Shutter type	Global shutter
Overlap capabilities	Overlapped
Maximum frame rate	0.0 Hz
Interface type	U3V

Type of data presented	Single
<b>Operation point 1</b>	
Wavelength centroid	535.8 nm
Wavelength FWHM	32.0 nm
Gain / BlackLevel	1.0 / 9
<b>Optional data measured</b>	
None	



## EMVA 1288 Summary Sheet for Operating Point 1

Type of data	Single	Gain / BlackLevel	1.0 / 9
Exposure control	By irradiance	Environmental temperature	25.6°C
Exposure time	811.00 $\mu$ s	Camera body temperature	36.0°C
Frame rate	10.0 Hz	Internal temperature(s)	—
Data transfer mode	Mono10	Wavelength, centr., FWHM	536 nm, 32.0 nm



### Quantum efficiency

$\eta$  53.3%

### Overall system gain

$K$  0.111 DN/e<sup>-</sup>  
 $1/K$  9.048 e<sup>-</sup>/DN

### Temporal dark noise & DSNU

$\sigma_{y,\text{dark}}$  1.13 DN  
 DSNU<sub>1288</sub> 0.72 DN  
 $\sigma_d$  9.86 e<sup>-</sup>  
 DSNU<sub>1288</sub> 6.54 e<sup>-</sup>

### Signal-to-noise ratio & PRNU

SNR<sub>max</sub> 86  
 38.7 dB  
 6.4 bit  
 $1/\text{SNR}_{\text{max}}$  1.17 %  
 PRNU<sub>1288</sub> 0.64 %

### Nonlinearity

LE 0.38%  
 LE<sub>min</sub> -0.28%  
 LE<sub>max</sub> 0.48%

### Sensitivity & saturation

$\mu_{p,\text{min}}$  20.1 p  
 0.87 p/ $\mu\text{m}^2$   
 $\mu_{p,\text{sat}}$  13800 p  
 599 p/ $\mu\text{m}^2$   
 $\mu_{e,\text{min}}$  10.7 e<sup>-</sup>  
 0.47 e<sup>-</sup>/ $\mu\text{m}^2$   
 $\mu_{e,\text{sat}}$  7352 e<sup>-</sup>  
 319 e<sup>-</sup>/ $\mu\text{m}^2$

### Dynamic range

DR 686  
 56.7 dB  
 9.4 bit

### Dark current

$\mu_{c,\text{mean}}$  29.5 DN/s  
 $\mu_{c,\text{mean}}$  267.3 e<sup>-</sup>/s  
 $\mu_{c,\text{var}}$  77.0 e<sup>-</sup>/s