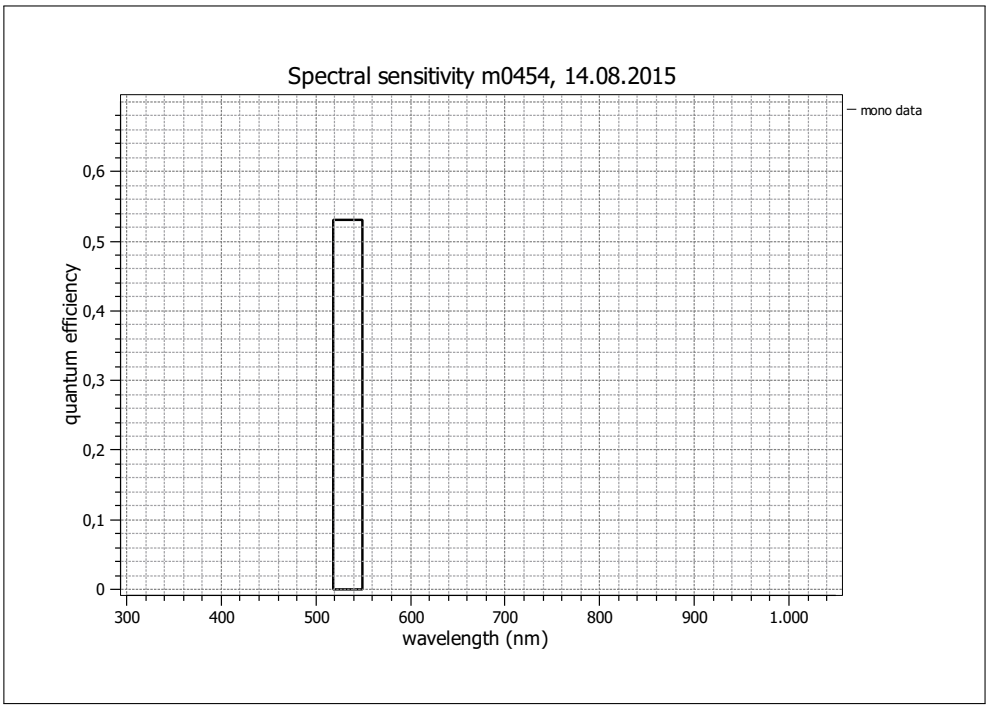
EMVA 1288 Summary Sheet

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`). The measurements were performed with an AEON ACC3 RGB Release 3, 20.01.2104, SN 0005() . The performance parameters and estimated accuracy of the measurements are described in the technical report for the instrument, its calibration in the corresponding calibration report.

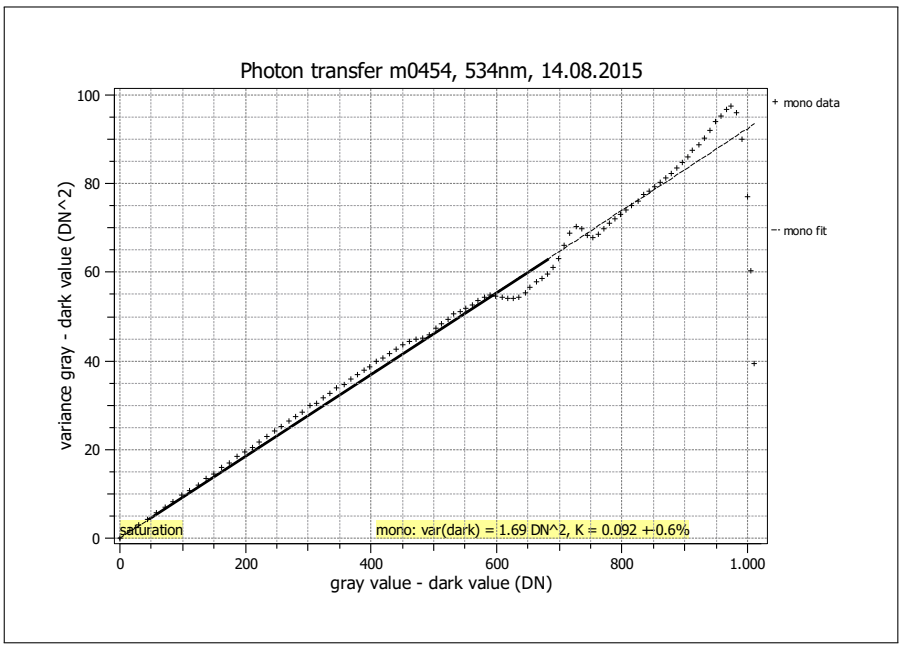
Vendor	MATRIX VISION
Model	mvBlueCOUGAR-XD204bG
Serial number	GX200070
Sensor diagonal	15.93 mm
Lens category	C-Mount
Resolution	2048 × 2048, 10 bit
Pixel size	5.50 μm × 5.50 μm
Sensor type	CMOS
Shutter type	Global
Overlap capabilities	Overlapping
Maximum frame rate	28.2 Hz
Interface type	GigE Vision

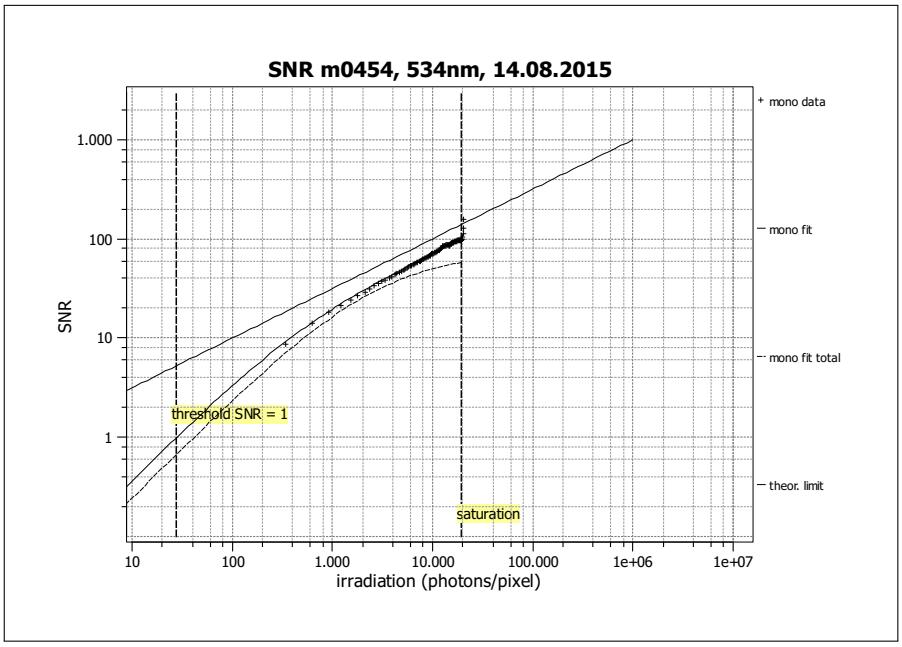
Type of data presented	Single
Operation point 1, (page 3)	
Wavelength centroid	534.2 nm
Wavelength FWHM	30.9 nm
Gain, offset	Gain = 0dB, Offset = 0.3
Optional data measured	
None	



EMVA 1288 Summary Sheet for Operating Point 1

Type of data	Single	Gain, offset	Gain = 0dB, Offset = 0.3
Exposure time	8.0 ms	Environmental temperature	25.7°C
Frame rate	0.0 Hz		
Data transfer mode	Mono10	Camera temperature	42.9°C
		Wavelength, centr., FWHM	534 nm, 30.9 nm





Quantum efficiency	
η	0.531
Gain	
K (DN/e)	0.092
$1/K$ (e/DN)	10.819
Dark noise & DSNU	
σ_d (DN)	1.30
σ_0 (e)	13.7
$DSNU_{1288}$ (DN)	1.49
$DSNU_{1288}$ (e)	16.15
Signal-to-noise ratio & PRNU	
SNR_{max}	102
SNR_{max} (dB)	40.2
SNR_{max} (bits)	6.7
$1/SNR_{max}$ (%)	0.98
$PRNU_{1288}$ (%)	1.405
Nonlinearity	
LE (%)	0.54
Sensitivity & saturation	
$\mu_{p,min}$ (p)	27.4
$\mu_{e,min}$ (e)	14.6
$\mu_{p,sat}$ (p)	19563
$\mu_{e,sat}$ (e)	10395
Dynamic range	
DR	714
DR (dB)	57.1
DR (bit)	9.5
Dark current	
$\mu_{c,mean}$ (DN/s)	-20.48
$\mu_{c,mean}$ (e/s)	-221.59
$\mu_{c,var}$ (e/s)	832.88