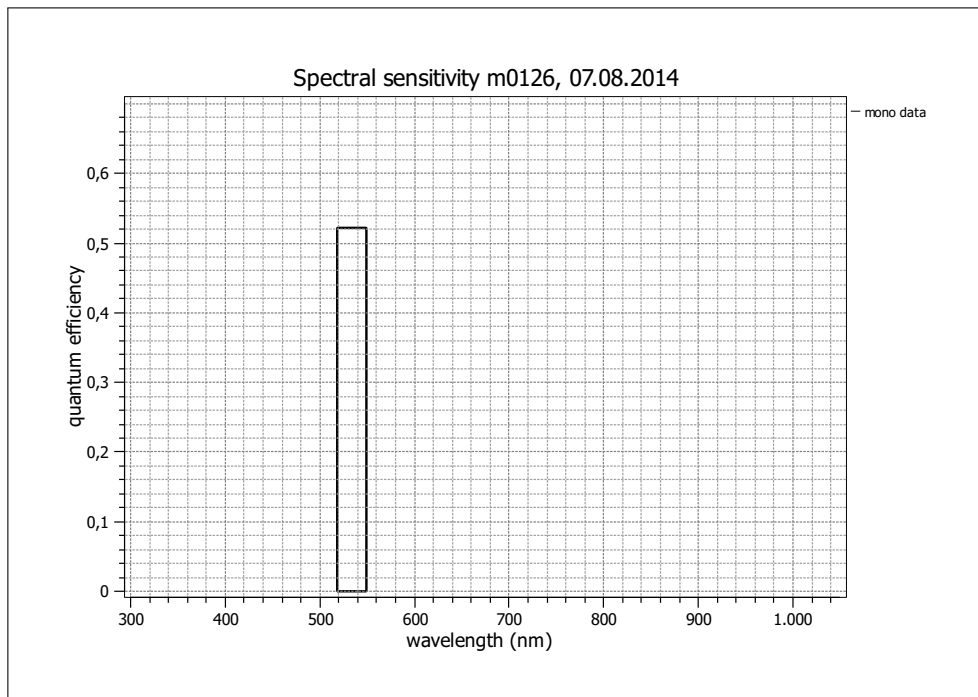


EMVA 1288 Summary Sheet

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.

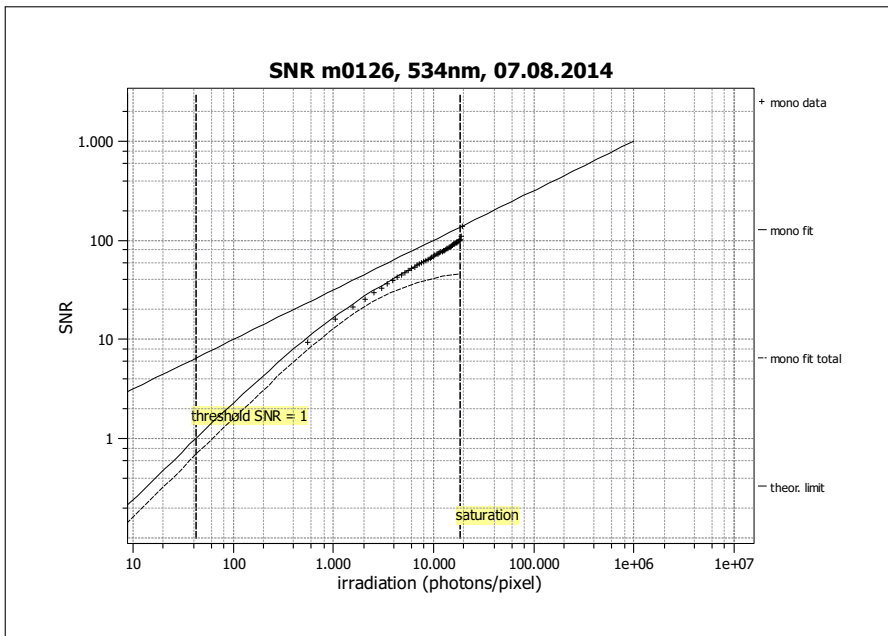
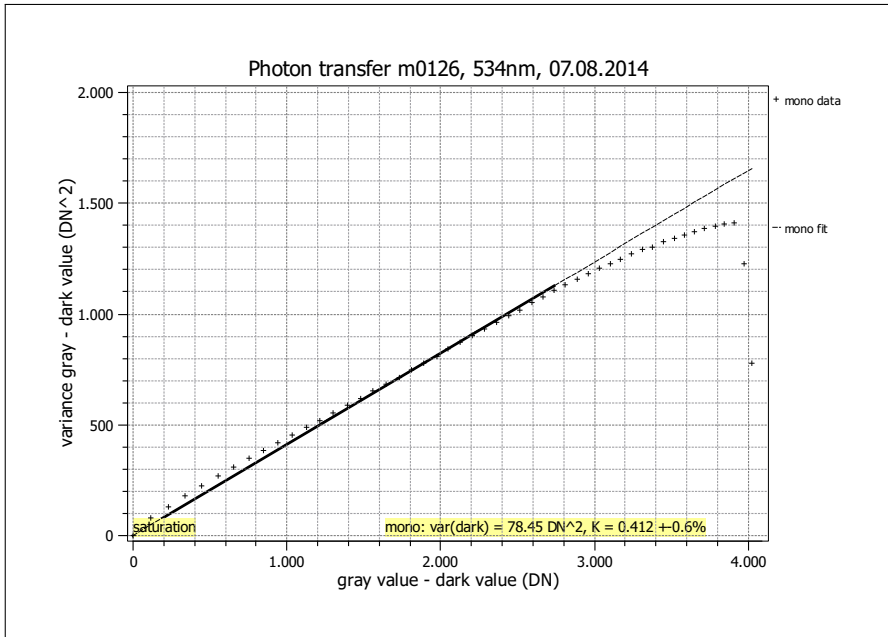
Vendor	MATRIX VISION
Model	mvBlueCOUGAR-X102eG
Serial number	GX007985
Sensor diagonal	8.69 mm
Lens category	C-Mount
Resolution	1280 × 1024, 12 bit
Pixel size	5.30 μm × 5.30 μm
Sensor type	CMOS
Shutter type	Global
Overlap capabilities	Overlapping
Maximum frame rate	50.0 Hz
Interface type	GigE Vision

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
Optional data measured	
None	



EMVA 1288 Summary Sheet for Operating Point 1

Type of data	Single	Gain, offset	Gain = 0dB, Offset = 0
Exposure time	500.0 μ s	Environmental temperature	27.3°C
Frame rate	0.0 Hz	Camera temperature	36.2°C
Data transfer mode	Mono12	Wavelength, centr., FWHM	534 nm, 30.9 nm



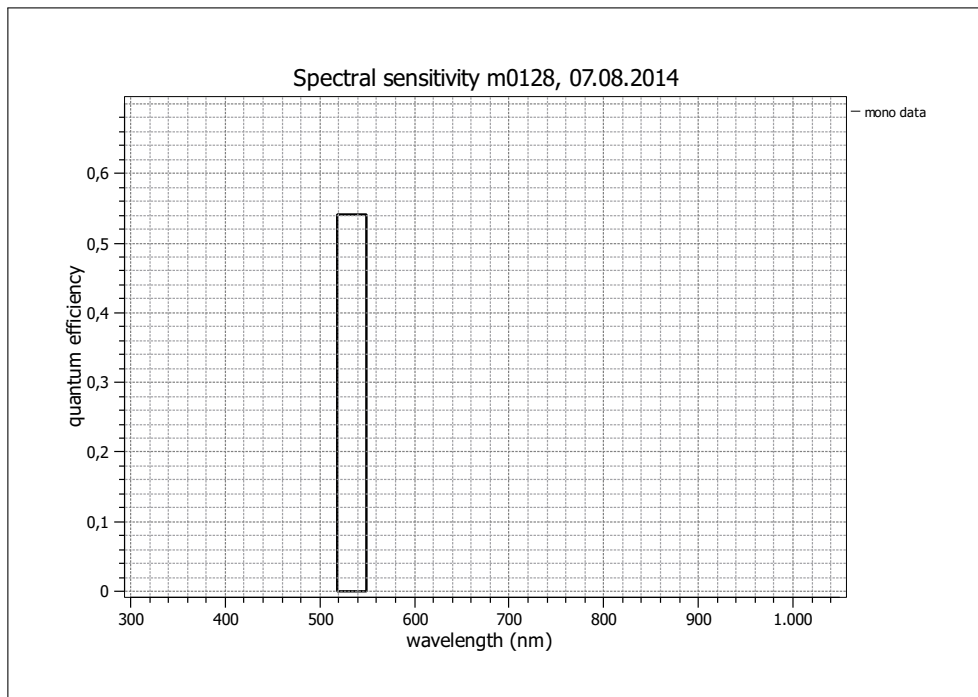
Quantum efficiency	
η	0.521
Gain	
K (DN/e)	0.412
$1/K$ (e/DN)	2.427
Dark noise & DSNU	
σ_d (DN)	8.86
σ_0 (e)	21.5
DSNU ₁₂₈₈ (DN)	9.66
DSNU ₁₂₈₈ (e)	23.45
Signal-to-noise ratio & PRNU	
SNR _{max}	98
SNR _{max} (dB)	39.8
SNR _{max} (bits)	6.6
$1/\text{SNR}_{\text{max}}$ (%)	1.02
PRNU ₁₂₈₈ (%)	1.885
Nonlinearity	
LE (%)	0.35
Sensitivity & saturation	
$\mu_{p,\text{min}}$ (p)	42.2
$\mu_{e,\text{min}}$ (e)	22.0
$\mu_{p,\text{sat}}$ (p)	18489
$\mu_{e,\text{sat}}$ (e)	9640
Dynamic range	
DR	438
DR (dB)	52.8
DR (bit)	8.8
Dark current	
$\mu_{c,\text{mean}}$ (DN/s)	-645.83
$\mu_{c,\text{mean}}$ (e/s)	-1567.17
$\mu_{c,\text{var}}$ (e/s)	-10519.20

EMVA 1288 Summary Sheet

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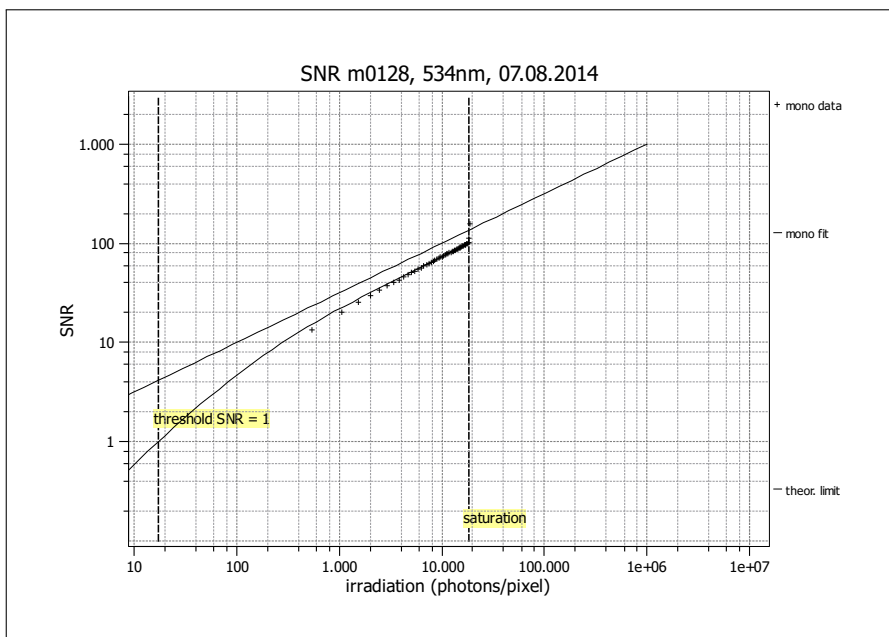
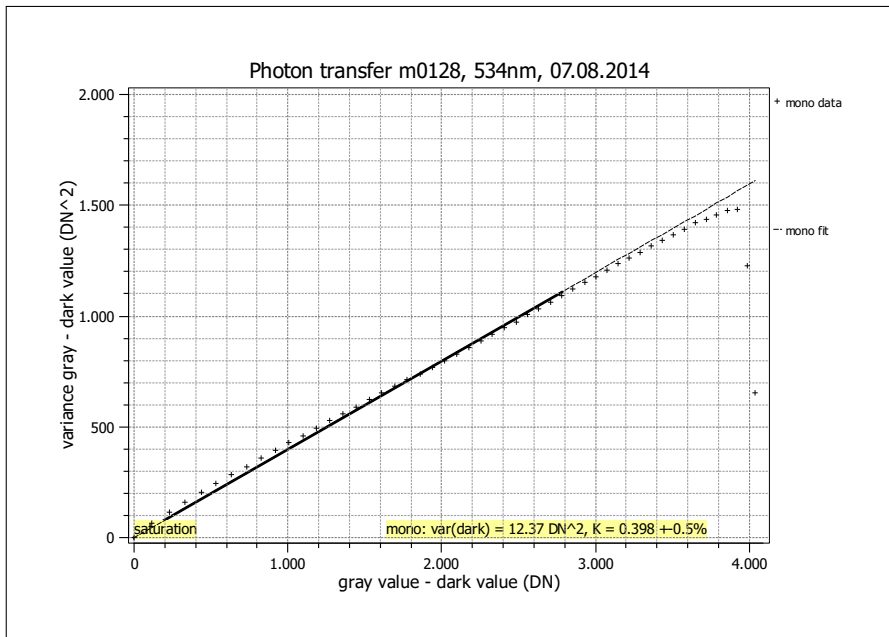
Vendor	MATRIX VISION
Model	mvBlueCOUGAR-X102eG
Serial number	GX007985
Sensor diagonal	8.69 mm
Lens category	C-Mount
Resolution	1280 × 1024, 12 bit
Pixel size	5.30 μm × 5.30 μm
Sensor type	CMOS
Shutter type	Rolling Shutter Mode
Overlap capabilities	
Maximum frame rate	50.0 Hz
Interface type	GigE Vision

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 = 4
Optional data measured	
None	



EMVA 1288 Summary Sheet for Operating Point 1

Type of data	Single	Gain, offset	Gain = 0dB, Offset = 4
Exposure time	500.0 μ s	Environmental temperature	27.4°C
Frame rate	0.0 Hz	Camera temperature	37.3°C
Data transfer mode	Mono12	Wavelength, centr., FWHM	534 nm, 30.9 nm



Quantum efficiency	
η	0.541
Gain	
K (DN/e)	0.398
$1/K$ (e/DN)	2.509
Dark noise & DSNU	
σ_d (DN)	3.52
σ_0 (e)	8.8
DSNU ₁₂₈₈ (DN)	—
DSNU ₁₂₈₈ (e)	—
Signal-to-noise ratio & PRNU	
SNR _{max}	99
SNR _{max} (dB)	39.9
SNR _{max} (bits)	6.6
$1/\text{SNR}_{\text{max}}$ (%)	1.01
PRNU ₁₂₈₈ (%)	—
Nonlinearity	
LE (%)	0.14
Sensitivity & saturation	
$\mu_{p,\text{min}}$ (p)	17.3
$\mu_{e,\text{min}}$ (e)	9.3
$\mu_{p,\text{sat}}$ (p)	18136
$\mu_{e,\text{sat}}$ (e)	9814
Dynamic range	
DR	1051
DR (dB)	60.4
DR (bit)	10.0
Dark current	
$\mu_{c,\text{mean}}$ (DN/s)	—
$\mu_{c,\text{mean}}$ (e/s)	—
$\mu_{c,\text{var}}$ (e/s)	—