EMVA 1288 Data Sheet m1351

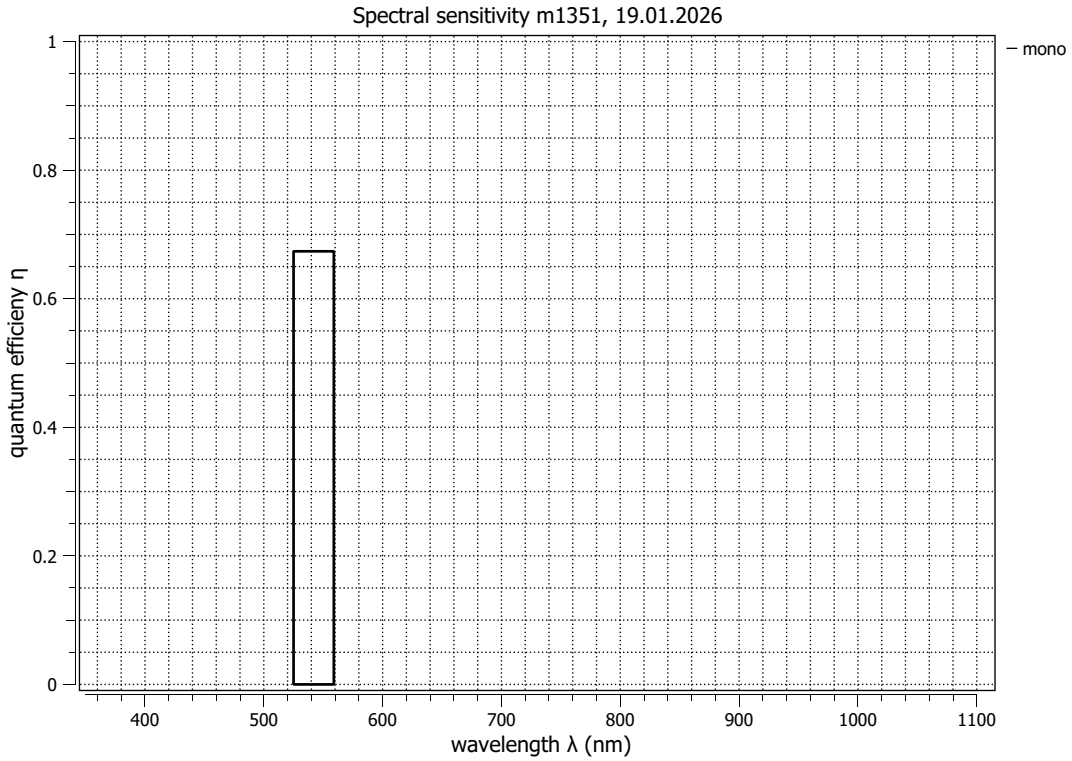
This data sheet describes the specification according to the standard 1288 Release 4.0 Linear issued on 21 June 2021 for "Characterization and Presentation of Specification Data for Image Sensors and Cameras" by the European Machine Vision Association (EMVA), published at `https://www.emva.org/standards-technology/emva-1288/` with proprietary extensions from AEON. The measurements were performed with the AEON ACC2b 14x1 color, Release 9, 13.11.2020, SN 0066(Balluff), software version 3.3.

Measurements performed by Product Development Vision, Balluff GmbH

Type of data presented	Single
Vendor	Balluff GmbH
Model	BVS CA-GW1-0246ZG
Serial number	GW000034
Sensor diagonal	19.27 mm
Lens category	C-Mount
Resolution	5312 × 4608, 12 bit
Offset/size channels	0 × 0/ 5312 × 4608
Pixel size (h×v)	2.74 μm × 2.74 μm
Sensor	IMX530
Sensor type	CMOS
Shutter type	Global
Overlap cap.	Overlapping
Max. frame rate	0.0 Hz
Interface type	GigEVision

Nr.	Centroid/FWHM	Gain, blacklevel	t_{exp} (ms)
1	542.0/33.9 nm	0.0dB, 0.1	2.00

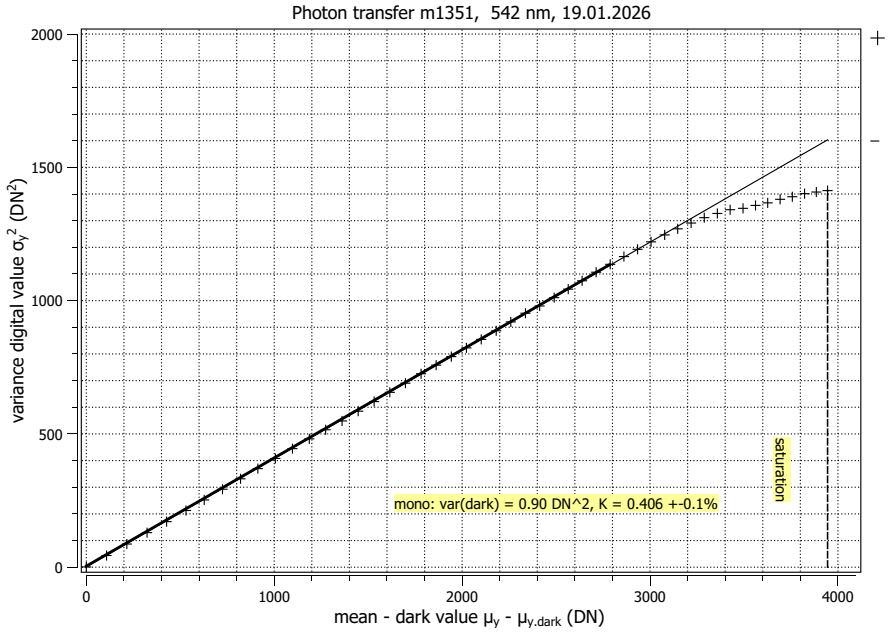
Optional data measured: None



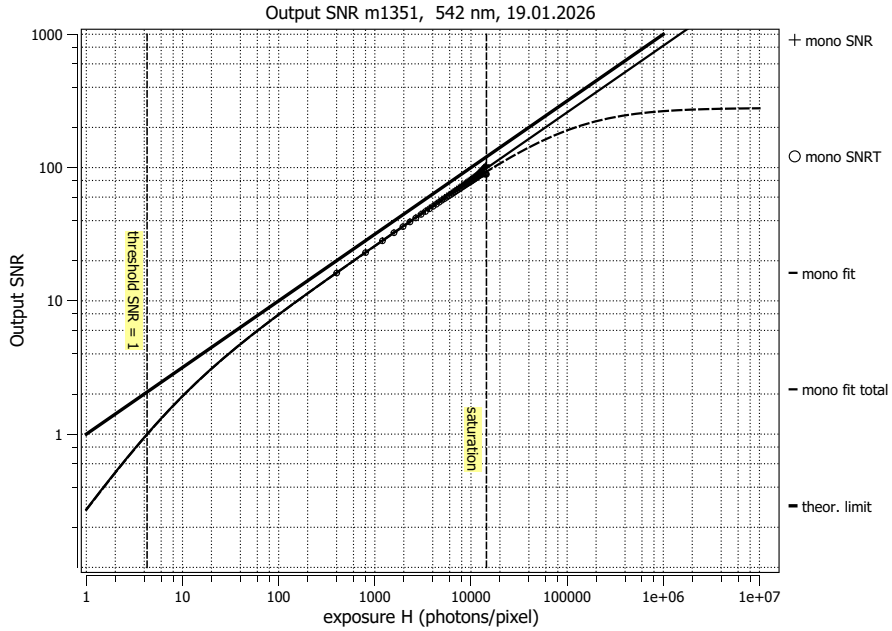
Summary Sheet for Operation Point 1 at a Wavelength of 542 nm

Type of data	Single	Gain, black-level	0.0dB, 0.1
Exposure control	By irradiance	Environmental temperature	20.3°C
Exposure time	2.000 ms	Camera body temperature	30.9°C
Frame rate	75.2 Hz	Internal temperature(s)	45.1°C, 35.2°C
Data transfer mode	Mono12p	Wavelength, centr., FWHM	542 nm, 33.9 nm

Photon Transfer



Signal-to-Noise Ratio



Quantum efficiency

η	67.4%

Overall system gain

K	0.4061 DN/e$^-$
$1/K$	2.462 e$^-$/DN

Temporal dark noise

σ_d	2.22 e$^-$
$\sigma_{y.dark}$	0.947 DN

Signal-to-noise ratio

SNR_{max}	98.8
	39.9 dB
$1/SNR_{max}$	1.012 %

Absolute sensitivity threshold

$\mu_{e.min}$	2.88 e$^-$
$\mu_{e.min.area}$	0.384 e$^-$/μm^2

Saturation capacity

$\mu_{e.sat}$	9755 e$^-$
$\mu_{e.sat.area}$	1299 e$^-$/μm^2

Dynamic range

DR	3381
	70.58 dB

Spatial nonuniformities

$DSNU_{1288}$	0.308 e$^-$
$DSNU_{1288.col}$	0.060 e$^-$
$DSNU_{1288.row}$	0.043 e$^-$
$DSNU_{1288.pix}$	0.299 e$^-$
$PRNU_{1288}$	0.357 %
$PRNU_{1288.col}$	0.022 %
$PRNU_{1288.row}$	0.025 %
$PRNU_{1288.pix}$	0.355 %

Linearity error

LE	0.17%

Dark current

$\mu_{c.mean}$	5.11E-01 e$^-$/s
$\mu_{c.var}$	9.90E-01 e$^-$/s