

EMVA 1288 Datasheet

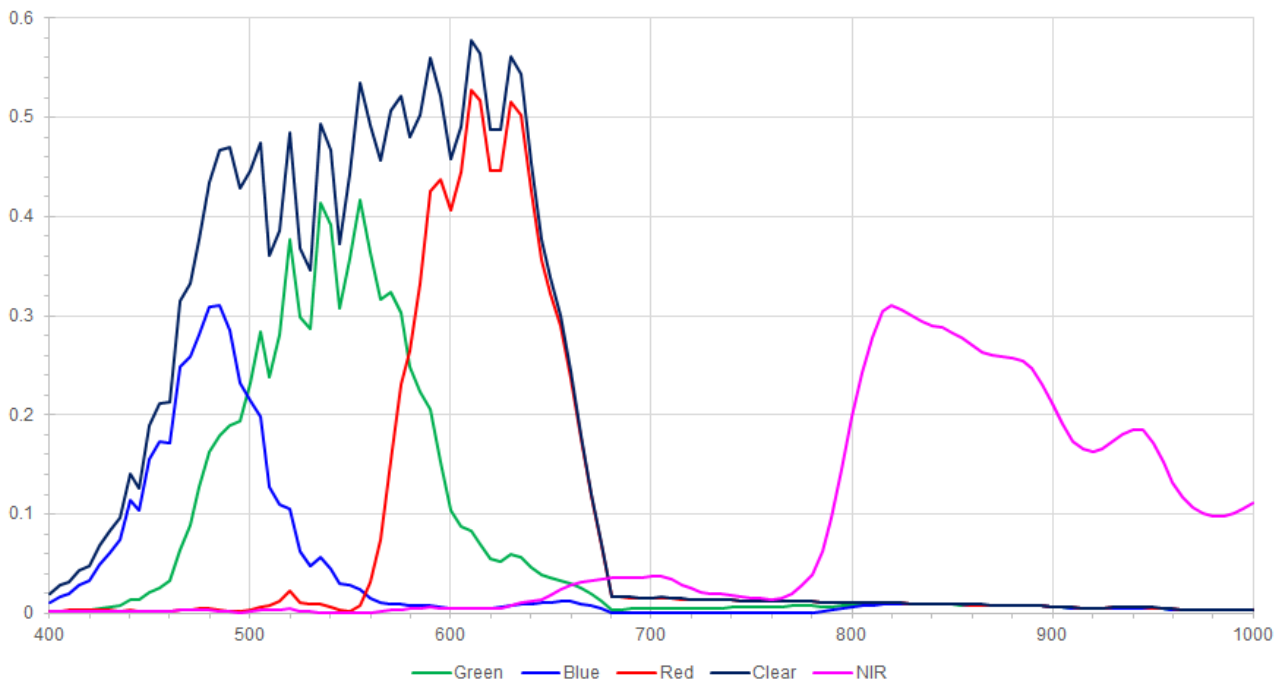
This datasheet describes the specification according to the standard 1288 Standard for Characterization and Presentation of Specification Data for Image Sensors and Cameras of European Machine Vision Association (EMVA) (See www.standard1288.org).

<i>Vendor</i>	Photolitics	<i>Dark current compensation</i>	no compensation
<i>Model</i>	LS2G-6k-LS2G-6k-UIR-0140-Row-5-red-filter	<i>Interface type</i>	PH dev board/Camera Link
<i>Data type</i>	-	<i>Light source</i>	PH Dome (RED Cree channel) 625 nm
<i>Sensor type</i>	LS2G-6k-UIR-0140	<i>Light source non uniformity</i>	-
<i>Diagonal</i>	-	<i>Irradiation calibration accuracy</i>	-
<i>Lens category</i>	no lens	<i>Irradiation measurement error</i>	-
<i>Resolution</i>	500 x 1 pixels	<i>Standard version</i>	3.1
<i>Pixel size</i>	25.0 μm^2		
<i>Maximum readout rate</i>	-		

Operation Point: Variable illumination, Constant exposure (Page 2)

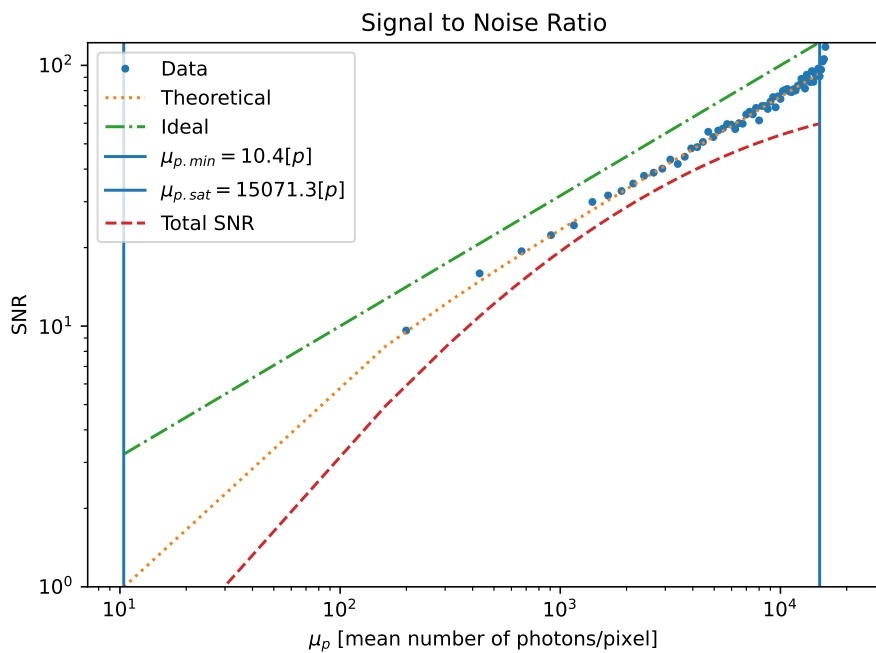
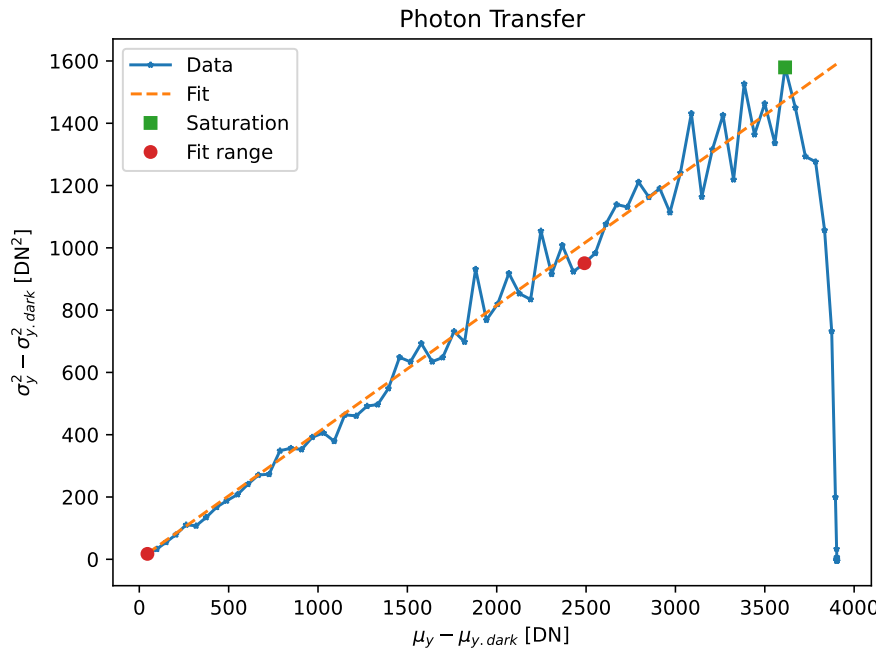
Camera setting		<i>Analyzed RoI Y</i>	(0, 1, 1)
<i>Bit depth</i>	12 bits	<i>Analyzed RoI X</i>	(2000, 2500, 1)
Operation point parameters		<i>RoI format - python style</i>	(start, stop+1, step)
<i>Original image Y size</i>	32	<i>Experiment</i>	LS2G-6k-UIR-0140-5u-HCG-DAC-0000-0050-4050-CH-A
<i>Original image X size</i>	6400		

QE LS2G Total QE of color channels



Summary sheet for Operation Point: **Variable illumination, Constant exposure** (@ wavelength)

Camera setting		Analyzed RoI Y	(0, 1, 1)
Bit depth	12 bits	Analyzed RoI X	(2000, 2500, 1)
Operation point parameters		RoI format - python style	(start, stop+1, step)
Original image Y size	32	Experiment	LS2G-6k-UIR-0140-5u-HCG-DAC-0000-0050-4050-CH-A
Original image X size	6400		



Performance

Quantum efficiency

η 57.66 %

System gain

K 0.408 DN/e⁻
1/K 2.453 e⁻/DN

Temporal dark noise

σ_d 5.454 e⁻
 $\sigma_{y, dark}$ 2.241 DN

Signal-to-Noise Ratio

SNR_{max} 93
39.39 dB
6.5 bit
 SNR_{max}^{-1} 1.073 %

Absolute sensitivity threshold

$\mu_{p, min}$ 10.404 p
 $\mu_{p, min, area}$ 0.416 p/ μm^2
 $\mu_{e, min}$ 5.999 e⁻
 $\mu_{e, min, area}$ 0.240 e⁻/ μm^2

Saturation Capacity p

$\mu_{p, sat}$ 15071 p
 $\mu_{p, sat, area}$ 602.852 p/ μm^2
 $\mu_{e, sat}$ 8690 e⁻
 $\mu_{e, sat, area}$ 348 e⁻/ μm^2

Dynamic Range

DR 1449
63.2 dB
10.5 bit

Spatial Nonuniformities

$DSNU_{1288}$ 15.1 e⁻
6.2 DN
 $PRNU_{1288}$ 1.3 %

Linearity error

LE_{min} -1.244 %
 LE_{max} 2.384 %

Dark current

$\mu_{I, mean}$ 1387.935 e⁻/s
565.700 DN/s
 $\mu_{I, var}$ 1579.852 e⁻/s
643.922 DN/s

