

EMVA 1288 Datasheet

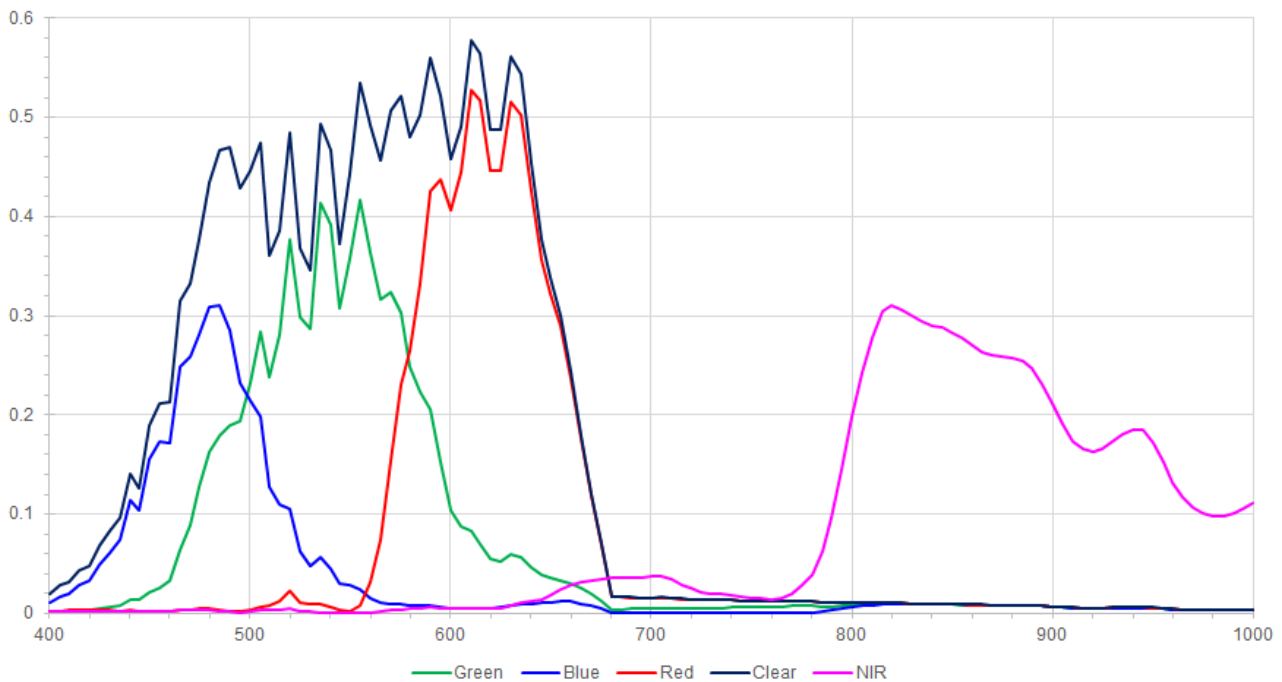
This datasheet describes the specification according to the standard 1288 Standard for Characterization and Presentation of Specification Data for Image Sensors and Cameras of European Machine Vision Association (EMVA) (See www.standard1288.org).

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

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

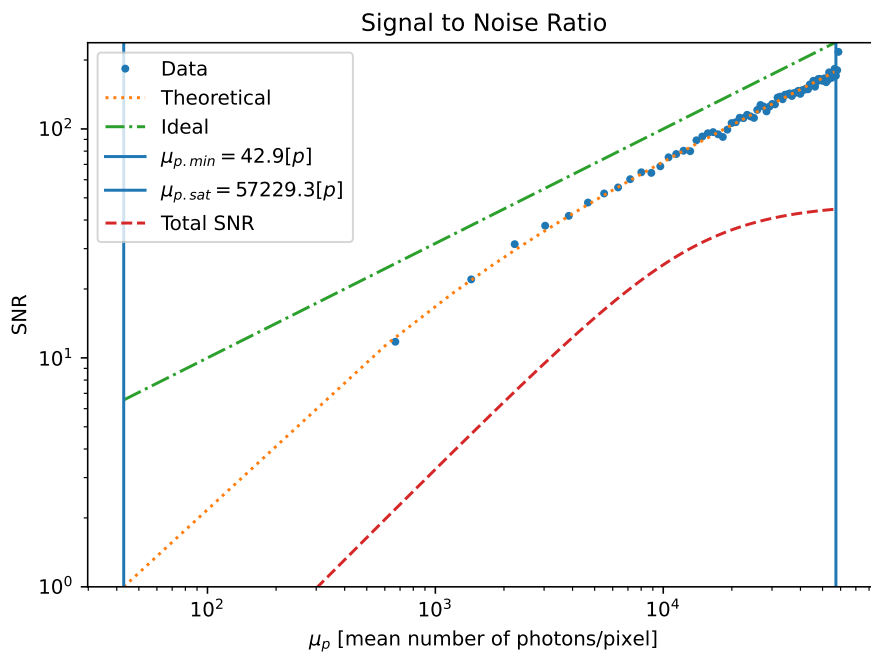
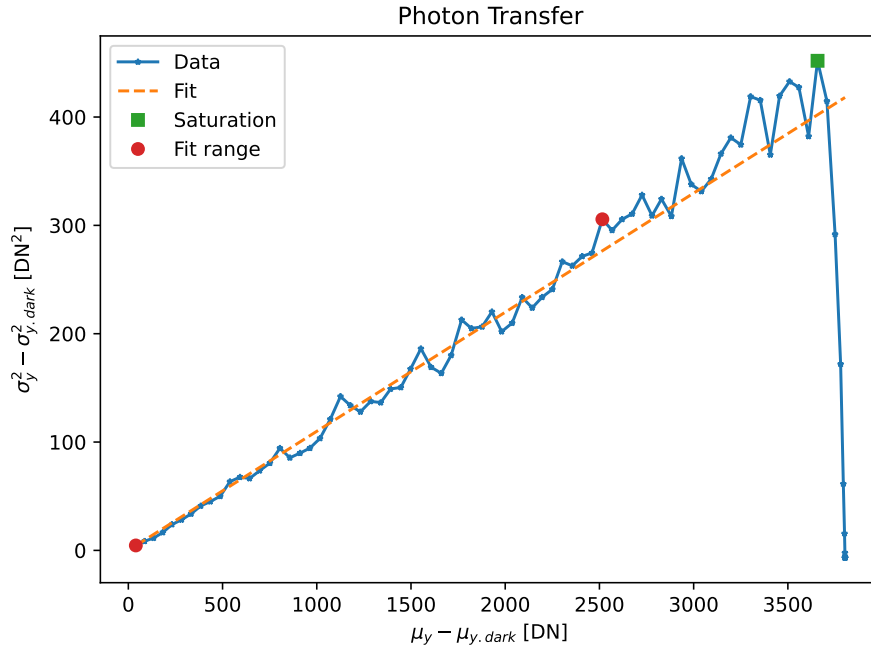
Camera setting		Analyzed RoI Y	(0, 1, 1)
Bit depth	12 bits	Analyzed RoI X	(2000, 2500, 1)
Operation point parameters		RoI format - python style	(start, stop+1, step)
Original image Y size	32	Experiment	LS2G-6k-UIR-0140-5u-LCG-DAC-0000-0050-4050-CH-A
Original image X size	6400		

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-LCG-DAC-0000-0050-4050-CH-A
Original image X size	6400		



Performance

Quantum efficiency	
η	56.75 %
System gain	
K	0.110 DN/e ⁻
1/K	9.097 e ⁻ /DN
Temporal dark noise	
σ_d	23.705 e ⁻
$\sigma_{y, dark}$	2.622 DN
Signal-to-Noise Ratio	
SNR_{max}	180
	45.12 dB
	7.5 bit
SNR_{max}^{-1}	0.555 %
Absolute sensitivity threshold	
$\mu_{p, min}$	42.909 p
$\mu_{p, min, area}$	1.716 p/ μm^2
$\mu_{e, min}$	24.350 e ⁻
$\mu_{e, min, area}$	0.974 e ⁻ / μm^2
Saturation Capacity p	
$\mu_{p, sat}$	57229 p
$\mu_{p, sat, area}$	2289.173 p/ μm^2
$\mu_{e, sat}$	32477 e ⁻
$\mu_{e, sat, area}$	1299 e ⁻ / μm^2
Dynamic Range	
DR	1334
	62.5 dB
	10.4 bit
Spatial Nonuniformities	
$DSNU_{1288}$	170.3 e ⁻
	18.7 DN
$PRNU_{1288}$	2.1 %
Linearity error	
LE_{min}	-1.095 %
LE_{max}	2.127 %
Dark current	
$\mu_{I, mean}$	1387.935 e ⁻ /s
	152.563 DN/s
$\mu_{I, var}$	1579.852 e ⁻ /s
	173.658 DN/s

