

SPECIFICATIONS | **PRELIMINARY DATA SHEET**

MV8-D8424-G01-GT-58 

51MP FULL-FORMAT CMOS CAMERA



General

Type	35mm Full Frame CMOS, Global shutter Sensor: GPixel GMAX 4651
Free run frame rate, full resolution	24 frames/sec. @ 8 bit with 10 GigE connection
Optical area	38.75 mm (h) x 27.75 mm (b)
Pixel Size	4.6µm, square, CDS, mono and Bayer RGB Global Shutter
Active Pixels	8,424 (h) x 6,032 (v)
Read-out modes	1x2*, 2x1*, 2x2*, 4x4*, 8x8* subsampling (mono and color*)

EMVA 1288 Parameters

Absolute Responsivity (mono)	To Be Measured
Maximum SNR (mono)	To Be Measured

Sensor parameter

Max. Frame Rate	30 fps @ 12 bit
SNR	43 dB (134:1)
Full well capacity	18ke- @ gain x 3.5
Dark noise	7.6e- @ gain x 5.0
Dark current	9e/s @ 50°C, 4e-/s @ 10°C
Dynamic Range	65.8 dB @ gain 3.5x
Quantum Efficiency	67.1% @ 510nm
PLS	1/40.000/-92dB @ 0°CRA

Pixelpipeline output

Mono	8 bit, 10 bit, 12 bit monochrome
Color	8 bit, 10 bit, 12 bit, 14 bit*, 16 bit* Bayer RAW/YUV422*/RGB24/30/36*

Gain | Offset

Digital	Master Gain (0 .. ~24 dB), 48 dB Bitshift*
---------	--

Exposure

	30µs -466ms (10µs* - 30s*)
--	----------------------------

I/O interface

	Input, Trigger, Shaft encoder, TTL, RS422, HTL, dHTL Output, Strobe, 2 Open Drain, 1 Fast TTL
--	---

Trigger modes

	Single Shot, Burst, Level Controlled Exposure
--	---

Exposure modes

	Freerun, Interleave, single timed and single trigger level controlled
--	---

MV8-D8424-G01-GT-58

51MP high-resolution camera with 24fps.

Full format global shutter CMOS sensor with large 4.6µm square pixels.

M58 x 0.75 lens mount connection.

Fast readout with a cost effective standard 10GigE interface and up to 300m long cables.

Robust Industrie 4.0 design for an excellent total cost of ownership.

Modular design for fast integration into your application.

OEM design available.

MV8-D8424-G01-GT-58

Main Interface

	10GigE, Auto Negotiation*, Backwards compatible to NBase T, 1GigE
--	--

Software features

	GigE Vision 1.2 2.2* PTP Precision Timing Protocol (IEEE1588)* Auto Gain*, Exposure*, White Balance* Single ROI, Multi ROI*, Flip*, Mirror, Sequencer* Readout optical black area* Sensor and camera temperature
--	---

Housing

	Lens Mount M58 x 0.75, adjustable back flange* Dimensions Front 80 mm x 80 mm x < 127 mm Mounting 4x M5 on each side (16 total) Weight < 900g Mono: Protection Glass Color: IR Cut @ 660nm
--	--

Power

	12 – 24V ± 10%, < 15W, 17 Pin M1 PoE 802.3af Class 4 (25W)
--	---

Temperature

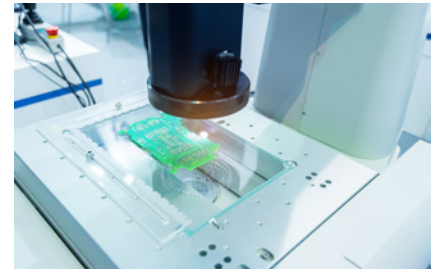
	Operating 0 to 45 °C Ambient Extended Temp. Option* Storage -20 to 70 °C Ambient
--	---

Humidity

	20 – 80% Non-condensing
--	-------------------------

Regulations

	CE Class A (B*), FCC Class A (B*), RoHS, UL, WEEE
--	---



AOI
PCB Inspection

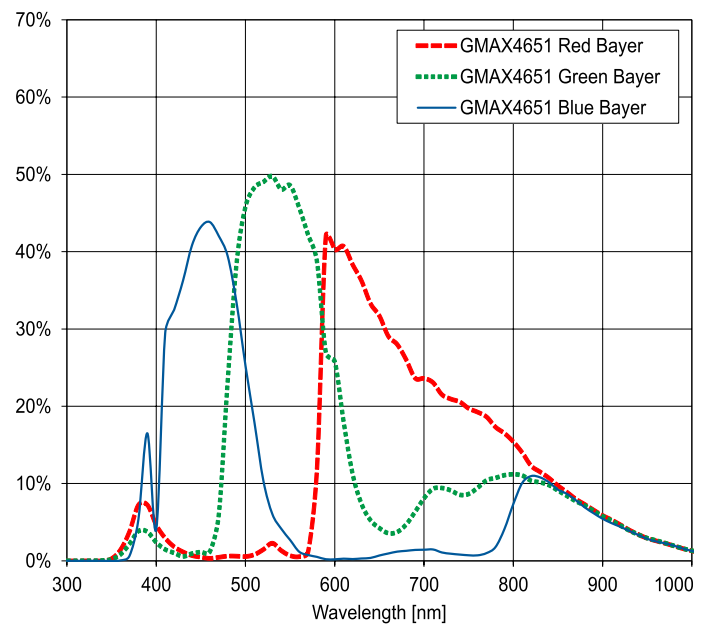
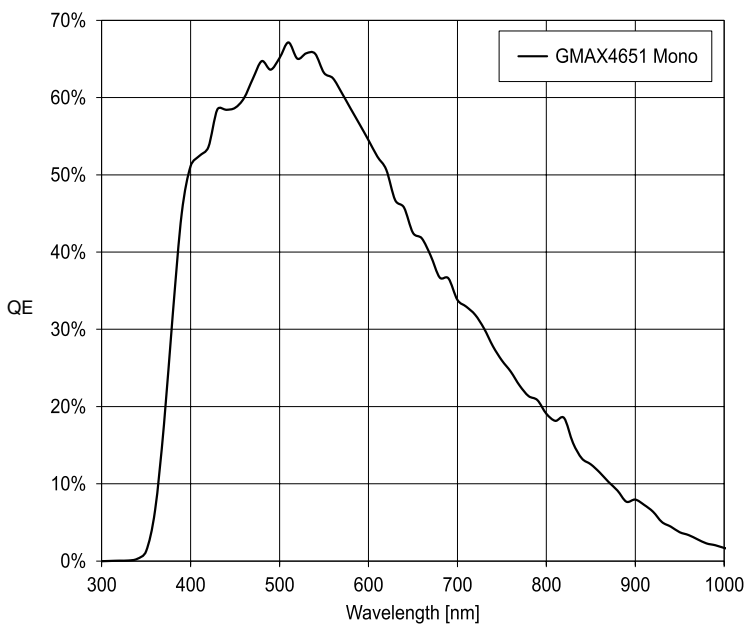


AUTOMOTIVE
Exterior / Interior Quality



RAILWAY
Obstacle Recognition

Quantum Efficiency vs. Wavelength (Typical Spectral response) – Ta = 25 °C



Photonfocus cannot be held responsible for any technical or typographical errors and reserves the right for any changes.

*On demand / customer project
Version 2.3 | January 20 2021
This specification may change without notice