SVS-VISTEK

Information sheet

Spectral Response

A TKH TECHNOLOGY COMPANY

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1 Quad Camera CAMQUAD1.1S

This chapter provides the following information:

1.1 Sensor specifications

1.2 Monochrome and color

1.1 Sensor specifications

Sensor type	LUX13HS, CMOS global shutter
Image sensor size	17.54 x 11.84 mm
Resolution	1.1 Megapixel
Active pixels	1.280 x 864 px
ROI min.	128 x 8 px
Pixel depth	8 bit
Pixel size	13.7 x 13.7 µm
Light sensitivity	20 V/lux*s @ 550 nm (6,400 / 5,000 ASA)
Dynamic range up to	60 dB
Full well charge	20000 e^-
Bayer filter pattern	BayerGR8 Because the pattern must always start at the same field with a colourcamera only even height and even offset-y is possible. The camera will automatically round down if odd values are entered. Also bear in mind when using the invert readout function the pattern must be inverted too.

1.2 Monochrome and color

Fig.: 1-1: Quantum efficiency monochrome

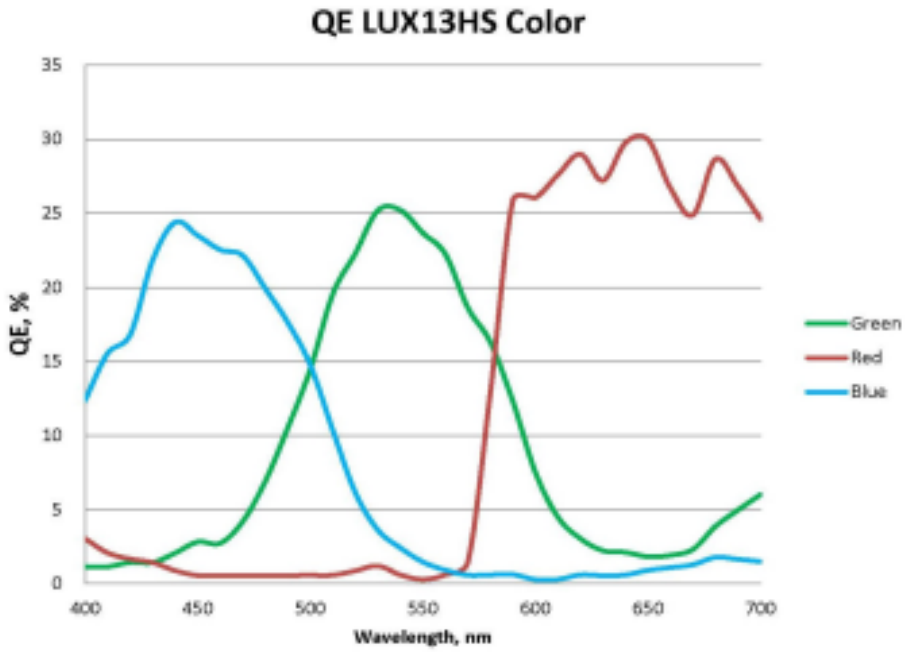

Fig.: 1-2: Quantum efficiency color

2 Cube2, Cube4

This chapter provides the following information:

2.1 Sensor specifications

2.2 Monochrome and color

2.1 Sensor specifications

Sensor type	CMOS, monochrome or RGB (Bayer filter)
Resolution	Cube1: 640 x 512 px Cube2 and Cube4: 1280 x 1024 px MC1302-27: 1280 x 1024 px
Pixel depth	8 bit
Pixel size	12 x 12 µm
Active area	15,36 x 12,29 mm
ROI min. X scale factor	
Offset Y	
Fill factor	40 %
Light sensitivity	1.6 V/lux-sec @ 550 nm
Dynamic range up to	59 dB
Full well charge	63000 e^-
Bayer filter pattern	Bayerxx8 Because the pattern must always start at the same field with a colourcamera only even height and even offset-y is possible. The camera will automatically round down if odd values are entered. Also bear in mind when using the invert readout function the pattern must be inverted too.

2.2 Monochrome and color

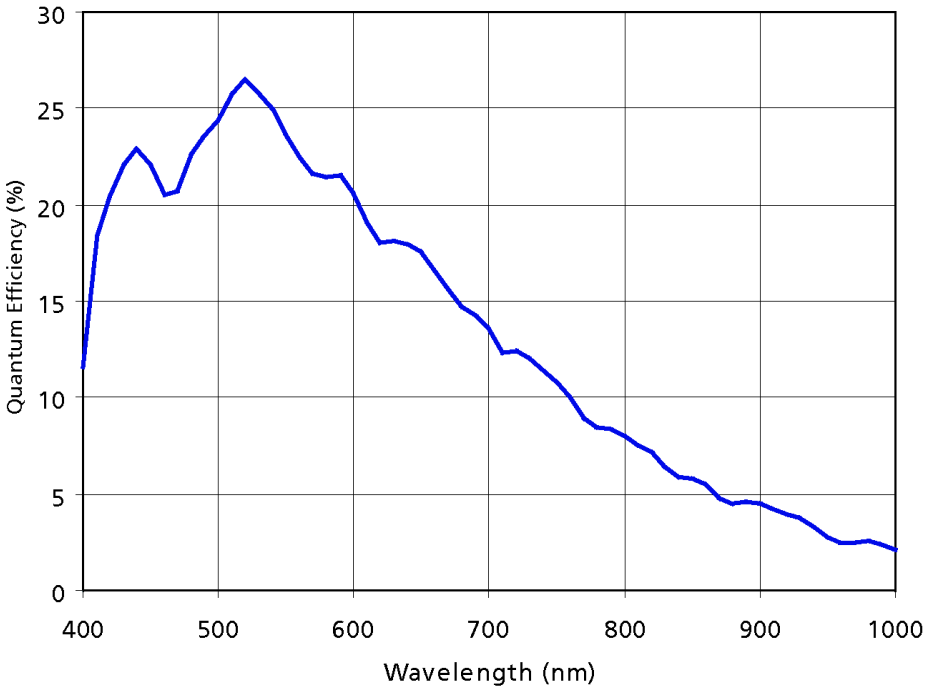

Fig.: 2-1: Quantum efficiency monochrome

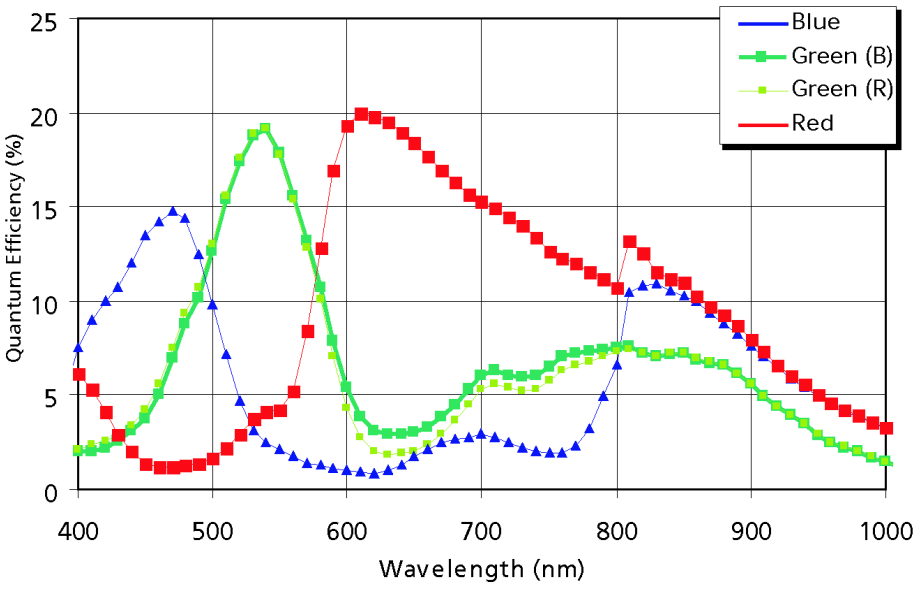

Fig.: 2-2: Quantum efficiency colourwithout UV/IR cut filter

3 EoSens Cube6, mini1, and EoSens CL

This chapter provides the following information:

3.1 Sensor specifications
3.2 Monochrome and colourwithout UV/IR Cut Filter
3.3 Monochrome and colourwith UV/IR Cut Filter

3.1 Sensor specifications

Sensor type	CMOS, monochrome or RGB (Bayer filter)
Image sensor size	17.92 x 14.34 mm
Resolution	1280 x 1024 px
Pixel depth	Cube6, mini1, EoSens GE: 8 bit EoSens CL: 10 bit
Pixel size	14 x 14 µm
Active area	17,92 x 14,34 mm
ROI min.	128 x 2 px
Fill factor	40 %
Light sensitivity	10,16 V/lux-sec @ 550 nm
Full well charge	30000 e^-
Bayer filter pattern	BayerGB8 / BayerGB10 Because the pattern must always start at the same field with a colourcamera only even height and even offset-y is possible. The camera will automatically round down if odd values are entered. Also bear in mind when using the invert readout function the pattern must be inverted too.

3.2 Monochrome and colourwithout UV/IR Cut Filter

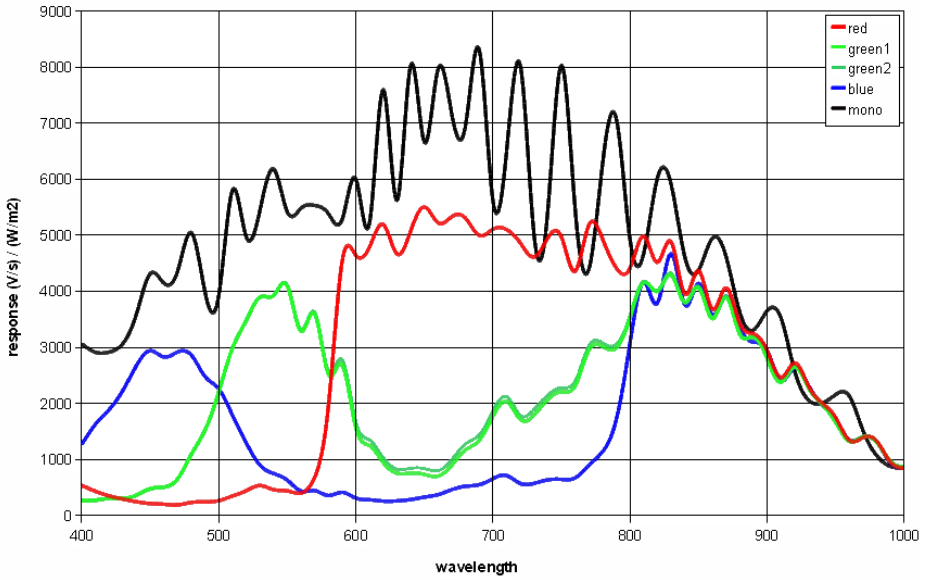

Fig.: 3-1: Quantum Efficiency mono and colourwithout UV/IR Cut Filter

3.3 Monochrome and colourwith UV/IR Cut Filter

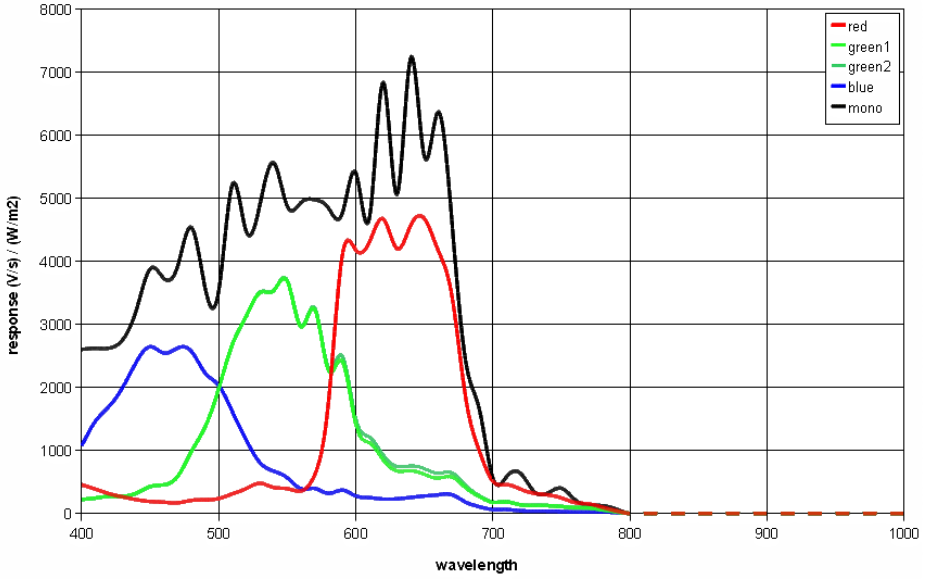

Fig.: 3-2: Quantum Efficiency mono and colourwith UV/IR Cut Filter

4 EoSens mini2, 3CL, and 3CXP

This chapter provides the following information:

4.1 Sensor specifications
4.2 Monochrome and colourwithout UV/IR Cut Filter
4.3 Monochrome and colourwith UV/IR Cut Filter

4.1 Sensor specifications

Sensor type	CMOS, monochrome or RGB (Bayer Filter)
Image sensor size	13.57 x 13.68 mm
Resolution	1696 x 1710 px
Pixel depth	8 bit
Pixel size	8 x 8 μm
Active area	13,57 x 13,68 mm
ROI min.	128 x 2 px
Fill factor	36 %
Light sensitivity	1270 V.m^2/W.s @ 600 nm with microlens
Dynamic range up to	80 dB with multiple slope
Full well charge	27000 e$^-$
Bayer filter pattern	BayerGB8 Because the pattern must always start at the same field with a colourcamera only even height and even offset-y is possible. The camera will automatically round down if odd values are entered. Also bear in mind when using the invert readout function the pattern must be inverted too.

4.2 Monochrome and colourwithout UV/IR Cut Filter

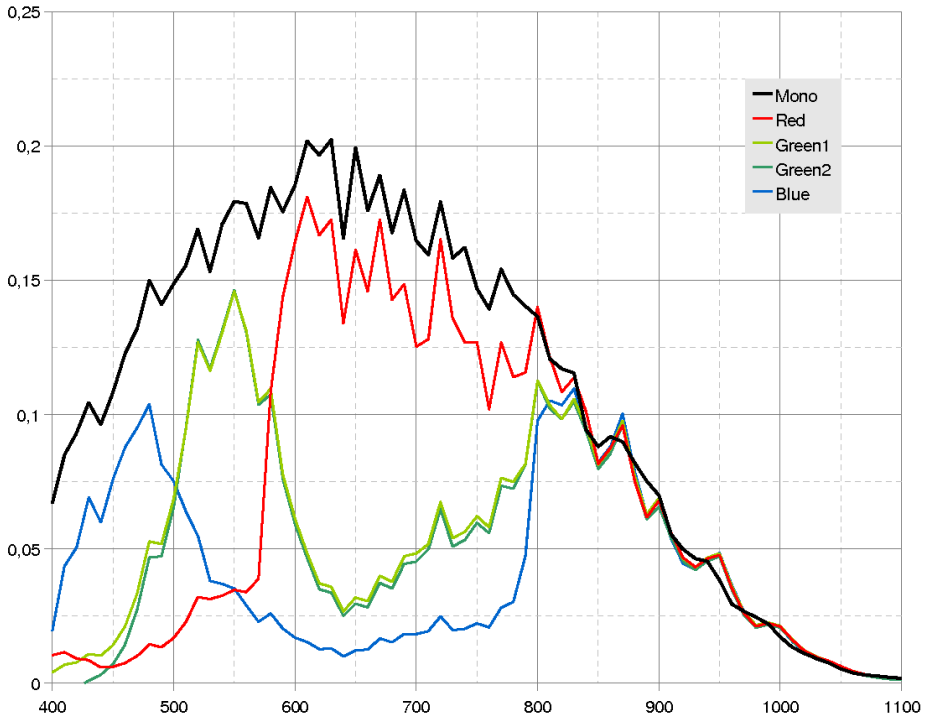

Fig.: 4-1: Quantum Efficiency mono and colourwithout UV/IR Cut Filter

4.3 Monochrome and colourwith UV/IR Cut Filter

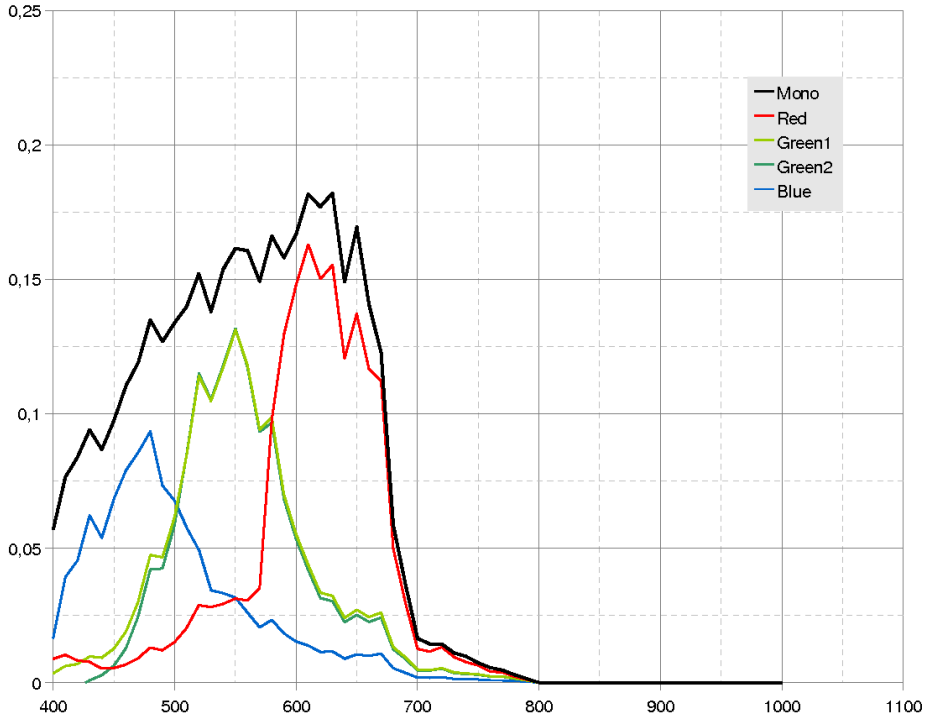

Fig.: 4-2: Quantum Efficiency mono and colourwith UV/IR Cut Filter

5 EoSens 1.1CXP2

This chapter provides the following information:

5.1 Sensor specifications 1.1CPX2

5.2 Monochrome and color 1.1CXP2

5.1 Sensor specifications 1.1CPX2

Sensor type	LUX13HS, CMOS global shutter
Image sensor size	17.54 x 11.84 mm
Resolution	1.1 Mega pixel
Active pixels	1.280 x 864 px
ROI min	128 x 8 px
Pixel depth	8 bit / 10 bit
Pixel size	13.7 x 13.7 µm
Light sensitivity	20 V/lux*s @ 550 nm (6,400 / 5,000 ASA)
Dynamic range up to	60 dB
Full well charge	20000 e^-
Bayer filter pattern	BayerGR8 / BayerGR10 Because the pattern must always start at the same field with a colourcamera only even height and even offset-y is possible. The camera will automatically round down if odd values are entered. Also bear in mind when using the invert readout function the pattern must be inverted too.

5.2 Monochrome and color 1.1CXP2

Monochrome

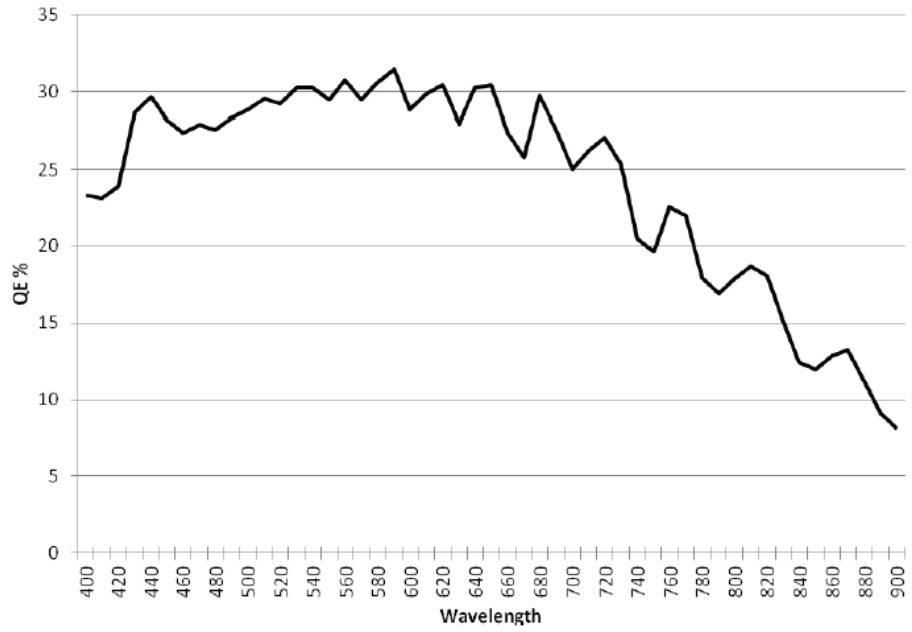

Fig.: 5-1: Spectral response - monochrome

Color

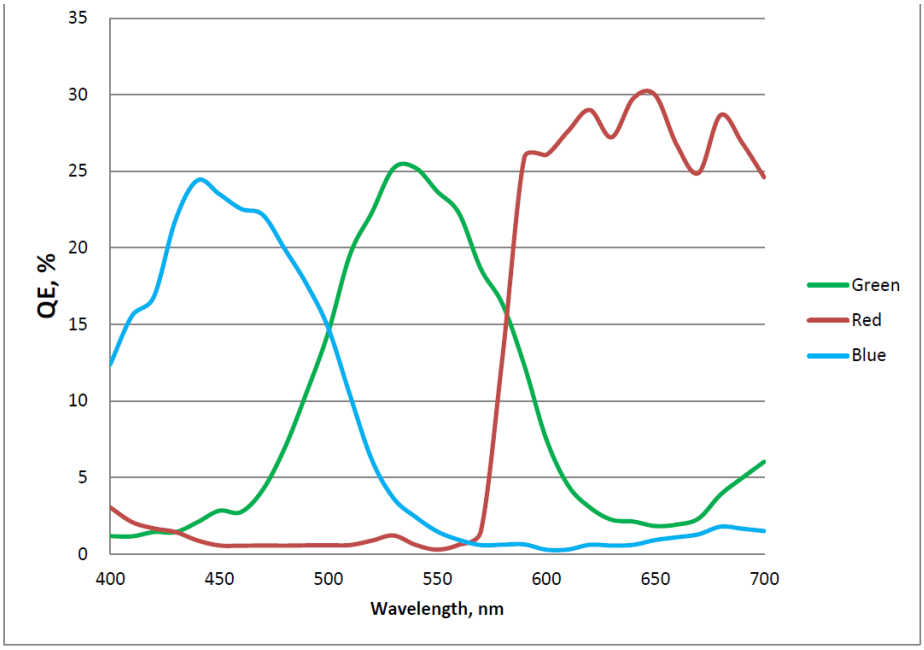

Fig.: 5-2: Spectral response - color

6 EoSens 2.0CXP2

This chapter provides the following information:

6.1 Sensor specifications 2.0CXP2

6.2 Monochrome 2.0CXP22.0XGE

6.1 Sensor specifications 2.0CXP2

Sensor type	LUX19HS, CMOS global shutter
Image sensor size	19.02 x 10.8 mm
Resolution	2.0 Mega pixel
Active pixels	1920 x 1080 px
ROI min	128 x 8 px
Pixel depth	8 bit / 10 bit
Pixel size	10 x 10 µm
Light sensitivity	20 V/lux*s @ 550 nm (6,400 / 5,000 ASA)
Dynamic range up to	56 dB
Full well charge	15000 e-
Bayer filter pattern	BayerGR8 / BayerGR10 Because the pattern must always start at the same field with a colourcamera only even height and even offset-y is possible. The camera will automatically round down if odd values are entered. Also bear in mind when using the invert readout function the pattern must be inverted too.

6.2 Monochrome 2.0CXP22.0XGE

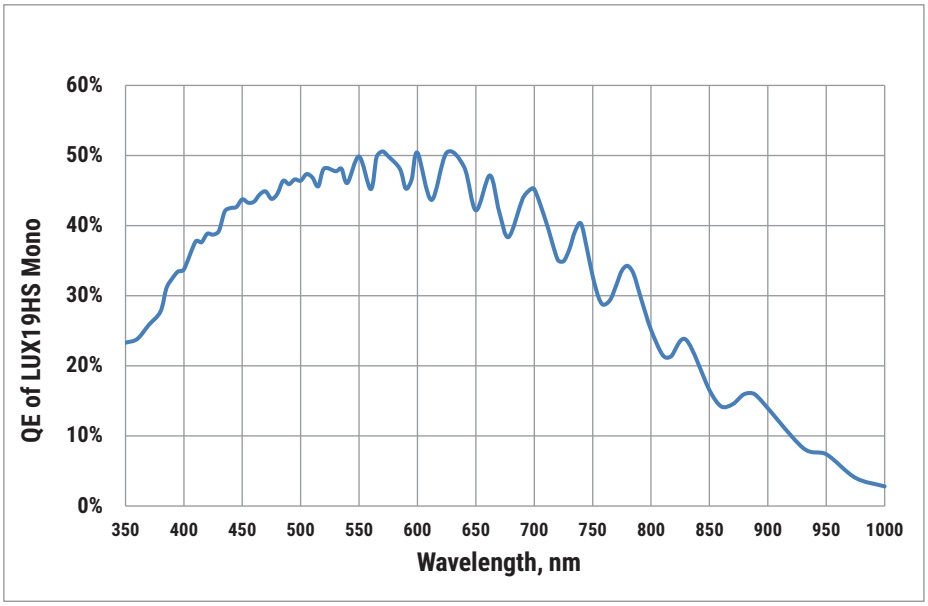

Fig.: 6-1: Spectral response - monochrome

7 EoSens 10CXP2

This chapter provides the following information:

7.1 Sensor specifications 10CXP2

7.2 Monochrome and colour 10CXP2

7.1 Sensor specifications 10CXP2

Sensor type	CMOS global shutter
Image sensor size	20.74 mm x 9.79 mm
Resolution	10 Megapixel
Active pixels	4,608 x 2,176 px
ROI min	128 x 32 px
Pixel depth	8 bit / 12 bit
Pixel size	4.5 x 4.5 µm
Dynamic range up to	68 dB (12 bit Gain 2)
Full well charge	>30 ke- (12 bit Gain 0) >120 ke- (12 bit Gain 2)
Bayer filter pattern	BayerGR8 / BayerGR10 / BayerGR12 Because the pattern must always start at the same field with a colourcamera only even height and even offset-y is possible. The camera will automatically round down if odd values are entered. Also bear in mind when using the invert readout function the pattern must be inverted too.

7.2 Monochrome and colour 10CXP2

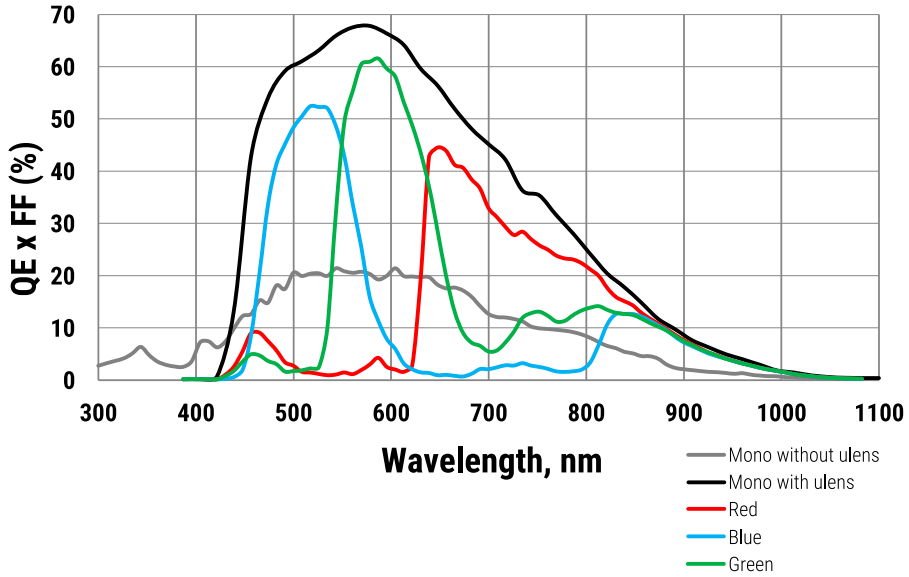

Fig.: 7-1: Spectral response - monochrome and colour

8 EoSens 4CXP

This chapter provides the following information:

8.1 Sensor specifications

8.2 Monochrome and color

8.1 Sensor specifications

Sensor type	CMOS; monochrome or RGB (Bayer filter)
Image sensor size	16.35 x 12.1 mm
Resolution	2336 x 1728 pixel
Pixel depth	8 bit / 10 bit
Pixel size	7 x 7 µm
Active area	16,35 x 12,10 mm
ROI min.	128 x 2 px
Fill factor	50 %
Light sensitivity	11 V/lux-s
Dynamic range up to	60 dB
Full well charge	22000 e^-
Bayer filter pattern	BayerGR8 / BayerGR10 Because the pattern must always start at the same field with a colourcamera only even height and even offset-y is possible. The camera will automatically round down if odd values are entered. Also bear in mind when using the invert readout function the pattern must be inverted too.

8.2 Monochrome and color

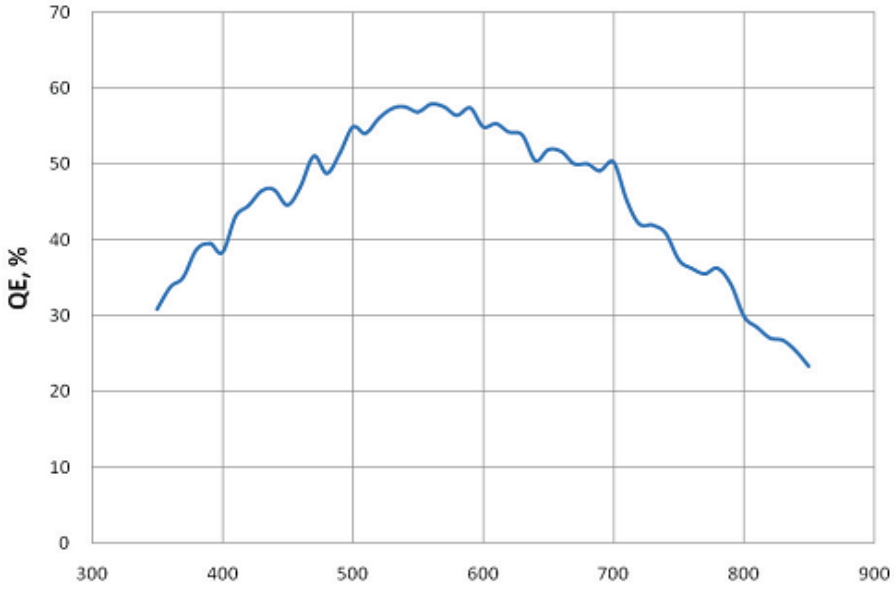

Fig.: 8-1: Quantum Efficiency Monochrome

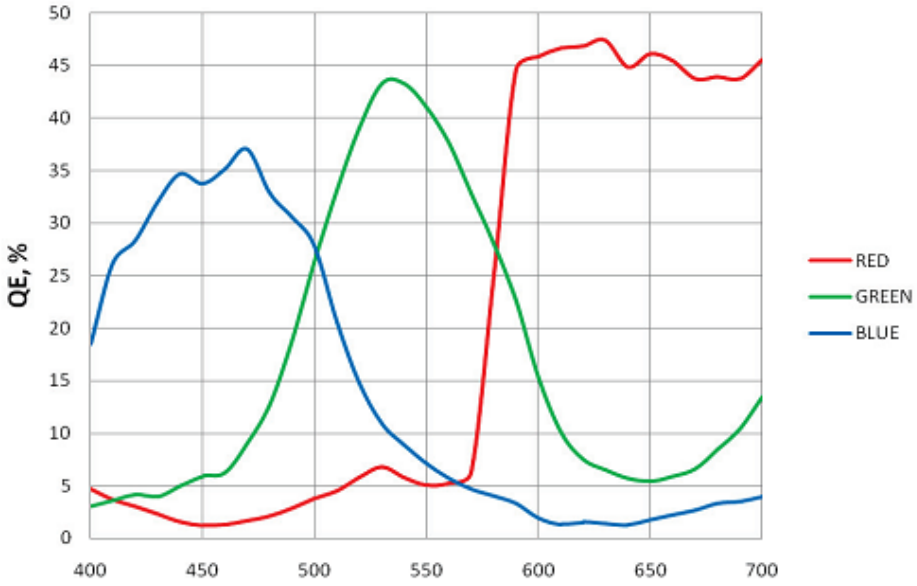

Fig.: 8-2: Quantum Efficiency Color

9 EoSens 21CXP2

This chapter provides the following information:

9.1 Sensor specifications 21CXP2

9.2 Monochrome 21CXP2

9.1 Sensor specifications 21CXP2

Sensor type	CMOS global shutter
Image sensor size	23.04 x 18.432 mm
Resolution	21 Megapixel
Active pixels	5,120 x 4,096 px
ROI min	128 x 32 px
Pixel depth	8 bit / 10 bit / 12 bit
Pixel size	4.5 x 4.5 µm
Dynamic range up to	68.8 dB (12 bit Gain 2)
Full well charge	28,000 e- (12 bit Gain 0) 16,500 e- (12 bit Gain 2)
Bayer filter pattern	BayerGR8 / BayerGR10 / BayerGR12 Because the pattern must always start at the same field with a colourcamera only even height and even offset-y is possible. The camera will automatically round down if odd values are entered. Also bear in mind when using the invert readout function the pattern must be inverted too.

9.2 Monochrome 21CXP2

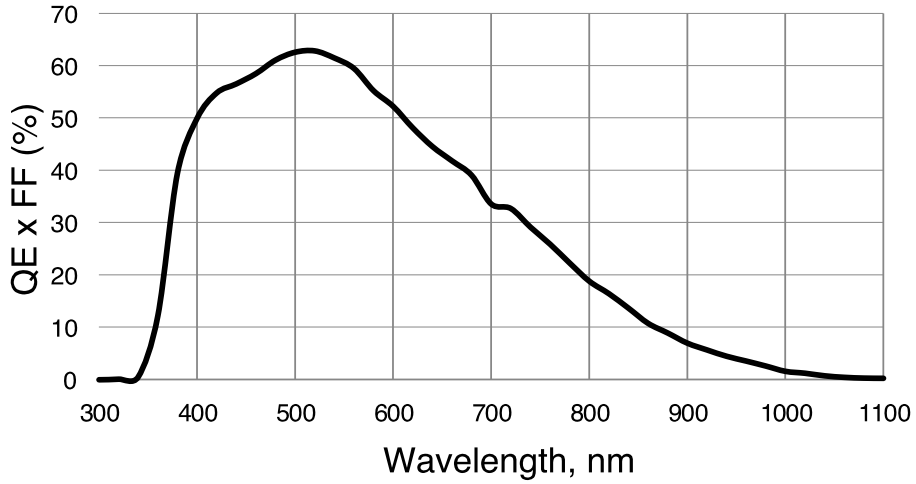

Fig.: 9-1: Spectral response - monochrome

10 EoSens 25CXP

This chapter provides the following information:

10.1 Spectral response

10.2 Monochrome and color

10.1 Spectral response

Sensor type	CMOS; monochrome or RGB (Bayer filter)
Resolution	5120 x 5120 px
Pixel depth	10 bit
Pixel size	4.5 x 4.5 μm
Active area	35 mm diagonal
ROI min. X scale factor	64
Offset Y	
Fill factor	50 %
Light sensitivity	3.4 V/lux-s @ 550 nm
Dynamic range up to	56 dB
Full well charge	22000 e^-
Bayer filter pattern	BayerGR10 Because the pattern must always start at the same field with a colourcamera only even height and even offset-y is possible. The camera will automatically round down if odd values are entered. Also bear in mind when using the invert readout function the pattern must be inverted too.

10.2 Monochrome and color

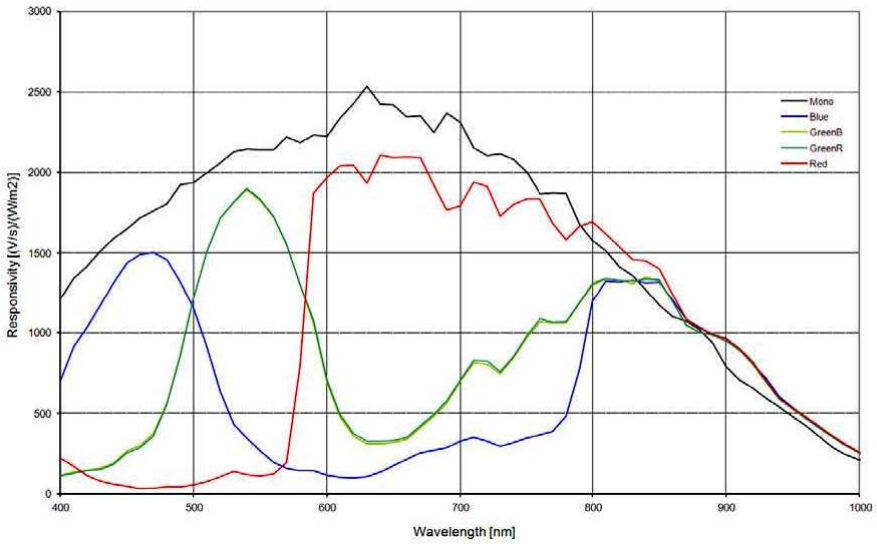

Fig.: 10-1: Quantum Efficiency for Monochrome and Color

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