



Grasshopper3 U3

USB 3.0 Camera

Imaging Performance Specification

Version 17.1

Revised 10/17/2016



Point Grey®

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1 Specifications

Model	Sensor	Maximum Resolution	Pixel Size	Firmware	Results
GS3-U3-14S5M-C	Sony ICX285, 2/3", Mono	1384 x 1036	6.45 µm	2.6.3.0	page 4
GS3-U3-14S5C-C	Sony ICX285, 2/3", Color	1384 x 1036	6.45 µm	2.6.3.2	page 5
GS3-U3-15S5M-C	Sony ICX825, 2/3", Mono	1384 x 1032	6.45 µm	2.10.3.0	page 6
GS3-U3-15S5C-C	Sony ICX825, 2/3", Color	1384 x 1032	6.45 µm	2.10.3.0	page 7
GS3-U3-23S6M-C	Sony IMX174, 1/1.2", Mono	1920 x 1200	5.86 µm	1.15.3.0	page 8
GS3-U3-23S6C-C	Sony IMX174, 1/1.2", Color	1920 x 1200	5.86 µm	2.4.3.0	page 9
GS3-U3-28S4M-C	Sony ICX687, 1/1.8", Mono	1928 x 1448	3.69 µm	2.1.3.0	page 10
GS3-U3-28S4C-C	Sony ICX687, 1/1.8", Color	1928 x 1448	3.69 µm	2.1.3.0	page 11
GS3-U3-28S5M-C	Sony ICX674, 2/3", Mono	1920 x 1440	4.54 µm	2.1.3.0	page 12
GS3-U3-28S5C-C	Sony ICX674, 2/3", Color	1920 x 1440	4.54 µm	2.1.3.0	page 13
GS3-U3-32S4M-C	Sony IMX252, 1/1.8", Mono	2048 x 1536	3.45 µm	2.17.3.0	page 14
GS3-U3-32S4C-C	Sony IMX252, 1/1.8", Color	2048 x 1536	3.45 µm	2.20.3.1	page 15
GS3-U3-41C6M-C	CMOSIS CMV4000-3E5, 1", Mono	2048 x 2048	5.5 µm	1.11.3.0	page 16
GS3-U3-41C6C-C	CMOSIS CMV4000-3E5, 1", Color	2048 x 2048	5.5 µm	1.11.3.0	page 17
GS3-U3-41C6NIR	CMOSIS CMV4000-3E12, 1", NIR	2048 x 2048	5.5 µm	2.3.3.0	page 18
GS3-U3-41S4M-C	Sony ICX808, 1/1.8", Mono	2016 x 2016	3.1 µm	2.7.3.0	page 19
GS3-U3-41S4C-C	Sony ICX808, 1/1.8", Color	2016 x 2016	3.1 µm	2.7.3.0	page 20
GS3-U3-50S5M-C	Sony ICX625, 2/3", Mono	2448 x 2048	3.45 µm	1.15.3.0	page 21
GS3-U3-50S5C-C	Sony ICX625, 2/3", Color	2448 x 2048	3.45 µm	1.15.3.0	page 22
GS3-U3-51S5M-C	Sony IMX250, 2/3", Mono	2448 x 2048	3.45 µm	2.17.3.0	page 23
GS3-U3-51S5C-C	Sony IMX250, 2/3", Color	2448 x 2048	3.45 µm	2.20.3.1	page 24
GS3-U3-60S6M-C	Sony ICX694, 1", Mono	2736 x 2192	4.54 µm	2.3.3.0	page 25
GS3-U3-60S6C-C	Sony ICX694, 1", Color	2736 x 2192	4.54 µm	2.3.3.0	page 26
GS3-U3-60QS6M-C	Sony ICX694, 1", Mono	2736 x 2192	4.54 µm	2.7.3.0	page 27
GS3-U3-60QS6C-C	Sony ICX694, 1", Color	2736 x 2192	4.54 µm	2.7.3.0	page 28
GS3-U3-89S6M-C	Sony IMX255, 1", Mono	4096 x 2160	3.45 µm	2.25.3.1	page 29
GS3-U3-89S6C-C	Sony IMX255, 1", Color	4096 x 2160	3.45 µm	2.25.3.1	page 30
GS3-U3-91S6M-C	Sony ICX814, 1", Mono	3376 x 2704	3.69 µm	1.8.3.0	page 31
GS3-U3-91S6C-C	Sony ICX814, 1", Color	3376 x 2704	3.69 µm	1.8.3.0	page 32
GS3-U3-120S6M-C	Sony ICX834, 1", Mono	4240 x 2824	3.1 µm	2.12.3.0	page 33
GS3-U3-120S6C-C	Sony ICX834, 1", Color	4240 x 2824	3.1 µm	2.12.3.0	page 34
GS3-U3-123S6M-C	Sony IMX253, 1.1", Mono	4096 x 3000	3.45 µm	2.25.3.1	page 35
GS3-U3-123S6C-C	Sony IMX253, 1.1", Color	4096 x 3000	3.45 µm	2.25.3.1	page 36

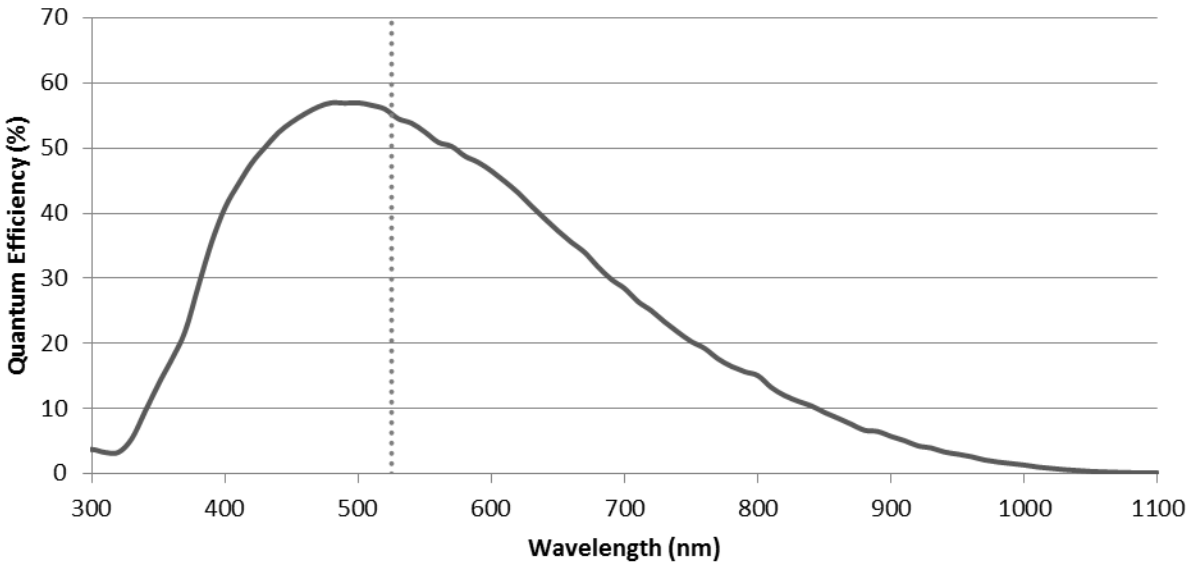


Measurements are taken based on guidelines in the EMVA 1288 standard; the full definition can be found at EMVA.org. Camera settings are at maximum bit depth unless otherwise noted. Temporal Dark Noise is measured at minimum exposure time. The center wavelength is 525 nm unless otherwise noted. The pixel format is Raw 16 or Mono 16 for mono cameras and Raw 16 for color cameras. Results are captured at room temperature (20°C).

2 GS3-U3-14S5M-C Imaging Performance

Measurement	Video Mode 0	Video Mode 7
Pixel Clock (MHz)	56	10
ADC (Bits)	14-bit	14-bit
Quantum Efficiency (% at 525 nm)	55	57
Temporal Dark Noise (Read Noise) (e-)	11.90	7.30
Signal to Noise Ratio Maximum (dB)	42.15	42.37
Signal to Noise Ratio Maximum (Bits)	7.00	7.04
Absolute Sensitivity Threshold (γ)	23.19	14.02
Saturation Capacity (Well Depth) (e-)	16408	17273
Dynamic Range (dB)	62.43	66.91
Dynamic Range (Bits)	10.37	11.11
Gain (e-/ADU)	0.28	0.28

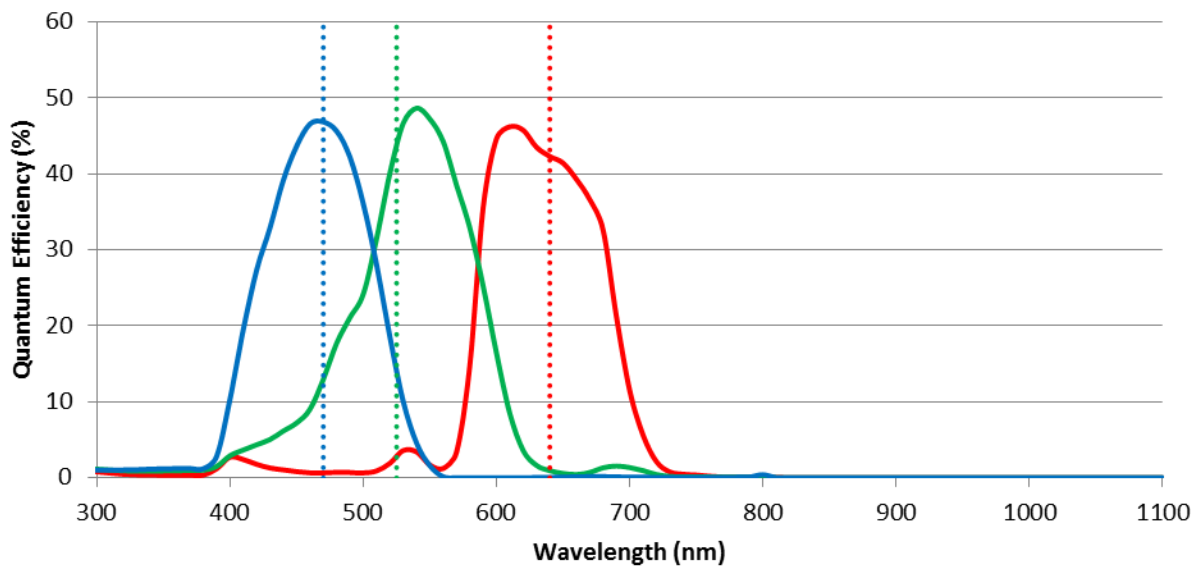
GS3-U3-14S5M



3 GS3-U3-14S5C-C Imaging Performance

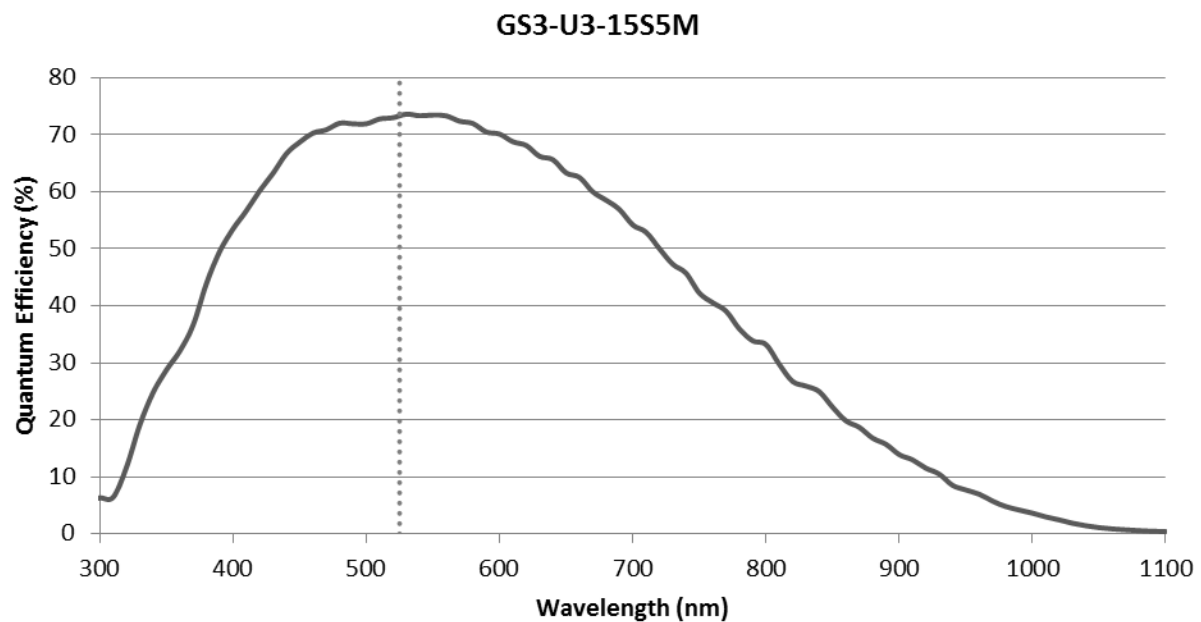
Measurement	Video Mode 0	Video Mode 7
Pixel Clock (MHz)	56	56
ADC (Bits)	14-bit	14-bit
Quantum Efficiency Blue (% at 470 nm)	46	46
Quantum Efficiency Green (% at 525 nm)	43	42
Quantum Efficiency Red (% at 640 nm)	42	41
Temporal Dark Noise (Read Noise) (e-)	12.08	7.84
Signal to Noise Ratio Maximum (dB)	42.42	42.08
Signal to Noise Ratio Maximum (Bits)	7.05	6.99
Absolute Sensitivity Threshold (γ)	29.87	19.87
Saturation Capacity (Well Depth) (e-)	17473	16144
Dynamic Range (dB)	62.86	65.74
Dynamic Range (Bits)	10.44	10.92
Gain (e-/ADU)	0.29	0.27

GS3-U3-14S5C



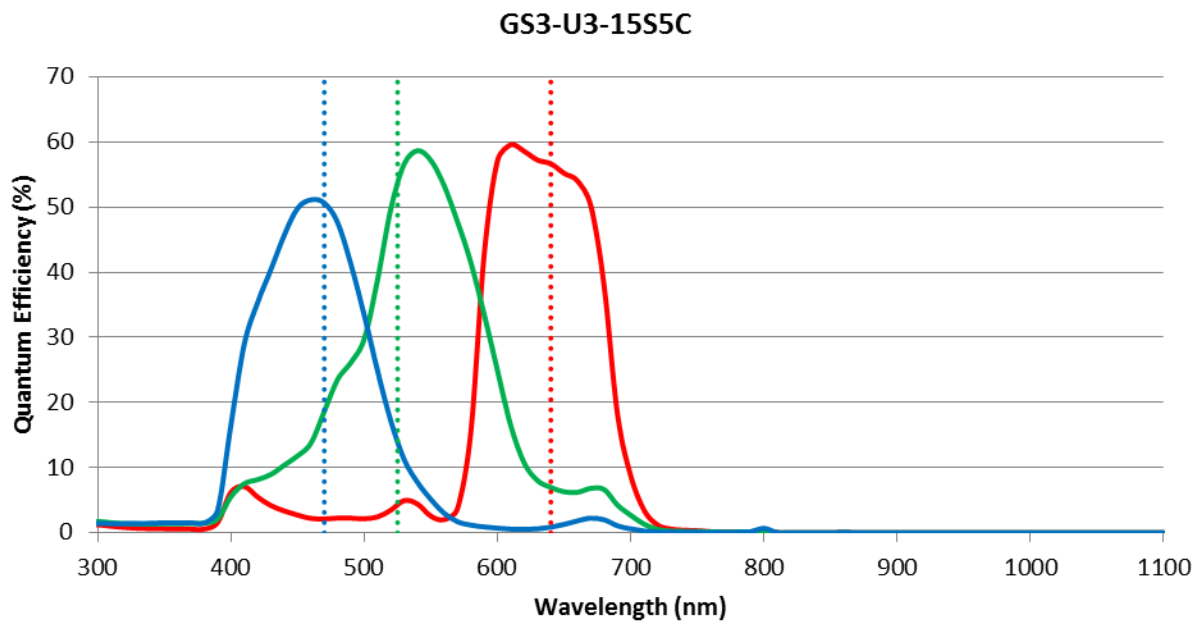
4 GS3-U3-15S5M-C Imaging Performance

Measurement	Video Mode 0	Video Mode 7
Pixel Clock (MHz)	49	12
ADC (Bits)	14-bit	14-bit
Quantum Efficiency (% at 525 nm)	73	77
Temporal Dark Noise (Read Noise) (e-)	8.31	7.02
Signal to Noise Ratio Maximum (dB)	43.59	43.55
Signal to Noise Ratio Maximum (Bits)	7.24	7.23
Absolute Sensitivity Threshold (γ)	12.15	9.88
Saturation Capacity (Well Depth) (e-)	22856	22621
Dynamic Range (dB)	68.28	69.56
Dynamic Range (Bits)	11.34	11.55
Gain (e-/ADU)	0.37	0.36



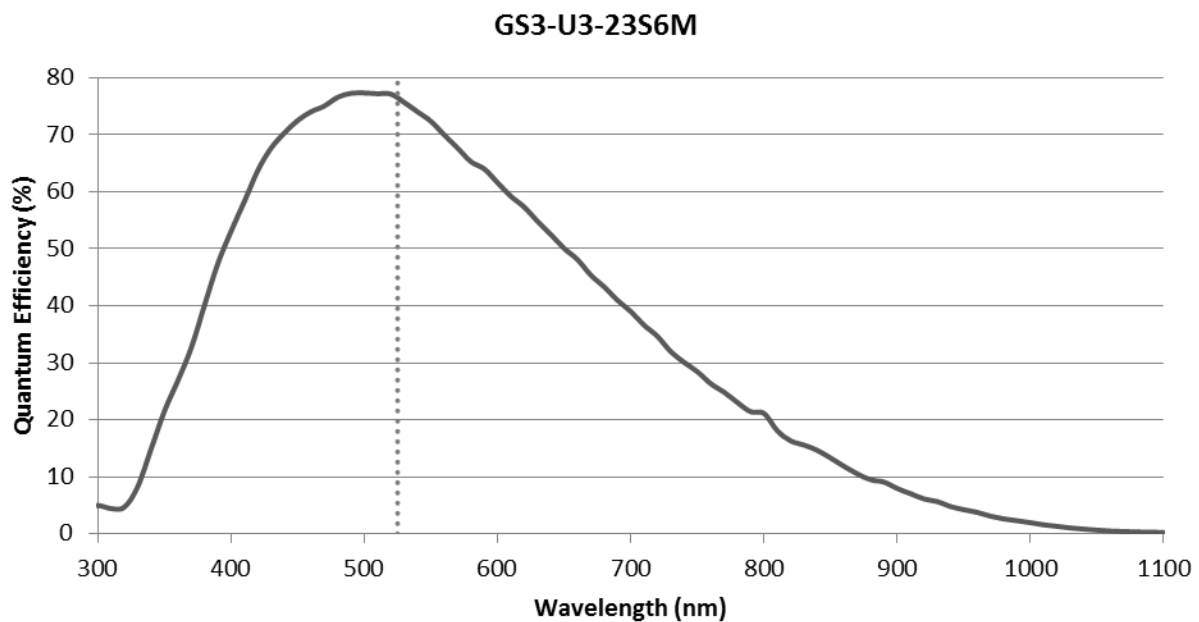
5 GS3-U3-15S5C-C Imaging Performance

Measurement	Video Mode 0	Video Mode 7
Pixel Clock (MHz)	49	49
ADC (Bits)	14-bit	14-bit
Quantum Efficiency Blue (% at 470 nm)	50	53
Quantum Efficiency Green (% at 525 nm)	53	55
Quantum Efficiency Red (% at 640 nm)	56	58
Temporal Dark Noise (Read Noise) (e-)	8.78	6.08
Signal to Noise Ratio Maximum (dB)	42.97	43.19
Signal to Noise Ratio Maximum (Bits)	7.14	7.17
Absolute Sensitivity Threshold (γ)	18.24	12.21
Saturation Capacity (Well Depth) (e-)	19807	20841
Dynamic Range (dB)	66.59	70.02
Dynamic Range (Bits)	11.06	11.63
Gain (e-/ADU)	0.35	0.34



6 GS3-U3-23S6M-C Imaging Performance

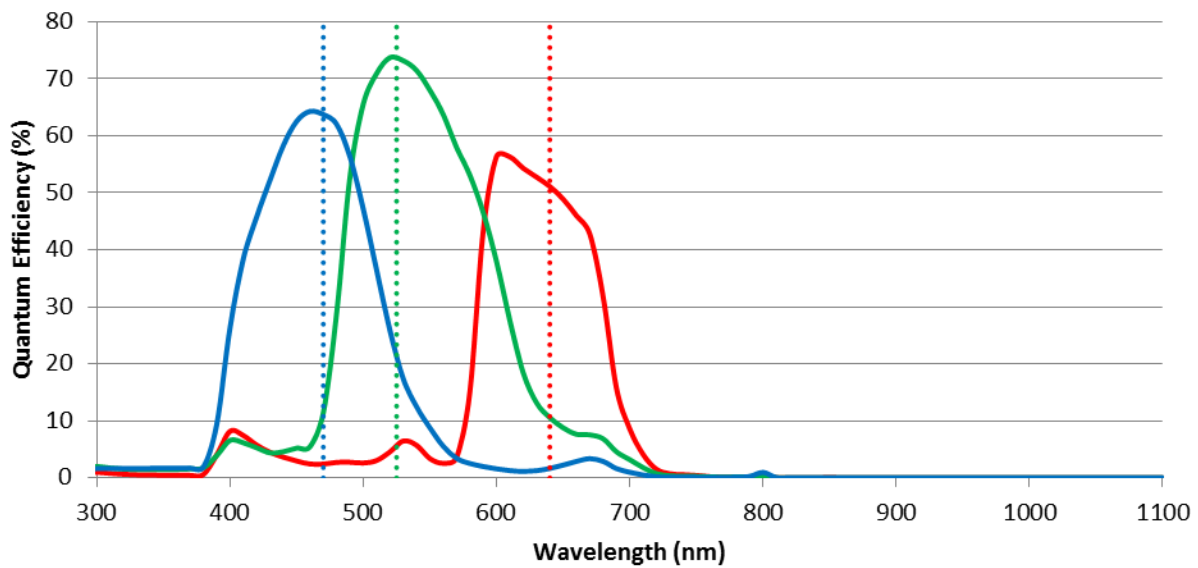
Measurement	Video Mode 0	Video Mode 7
Pixel Clock (MHz)	37.13	37.13
ADC (Bits)	10-bit	12-bit
Quantum Efficiency (% at 525 nm)	76	76
Temporal Dark Noise (Read Noise) (e-)	14.19	6.83
Signal to Noise Ratio Maximum (dB)	45.11	45.12
Signal to Noise Ratio Maximum (Bits)	7.49	7.49
Absolute Sensitivity Threshold (γ)	19.69	9.77
Saturation Capacity (Well Depth) (e-)	32406	32513
Dynamic Range (dB)	66.87	72.94
Dynamic Range (Bits)	11.11	12.11
Gain (e-/ADU)	0.51	0.52



7 GS3-U3-23S6C-C Imaging Performance

Measurement	Video Mode 0	Video Mode 7
Pixel Clock (MHz)	37.13	37.13
ADC (Bits)	10-bit	12-bit
Quantum Efficiency Blue (% at 470 nm)	63	63
Quantum Efficiency Green (% at 525 nm)	73	74
Quantum Efficiency Red (% at 640 nm)	51	51
Temporal Dark Noise (Read Noise) (e-)	13.89	6.78
Signal to Noise Ratio Maximum (dB)	45.14	45.15
Signal to Noise Ratio Maximum (Bits)	7.50	7.50
Absolute Sensitivity Threshold (γ)	20.70	10.44
Saturation Capacity (Well Depth) (e-)	32675	32761
Dynamic Range (dB)	67.13	73.07
Dynamic Range (Bits)	11.15	12.14
Gain (e-/ADU)	0.51	0.51

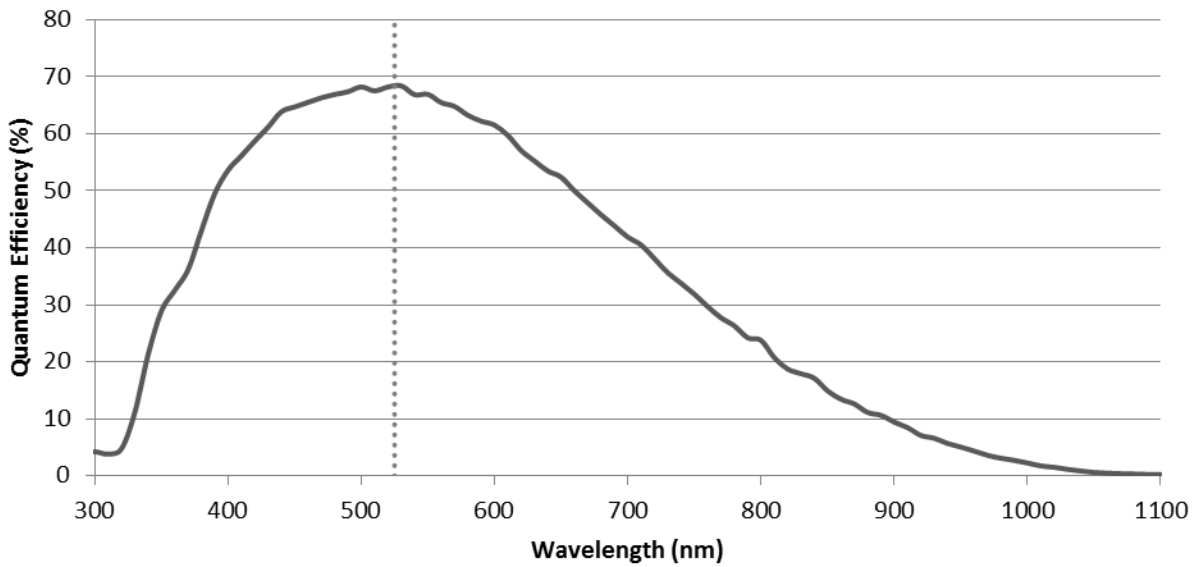
GS3-U3-23S6C



8 GS3-U3-28S4M-C Imaging Performance

Measurement	Video Mode 0	Video Mode 7
Pixel Clock (MHz)	54	31.25
ADC (Bits)	14-bit	14-bit
Quantum Efficiency (% at 525 nm)	68	69
Temporal Dark Noise (Read Noise) (e-)	10.17	7.43
Signal to Noise Ratio Maximum (dB)	39.56	39.30
Signal to Noise Ratio Maximum (Bits)	6.57	6.53
Absolute Sensitivity Threshold (γ)	15.78	11.64
Saturation Capacity (Well Depth) (e-)	9039	8517
Dynamic Range (dB)	58.56	60.62
Dynamic Range (Bits)	9.73	10.07
Gain (e-/ADU)	0.15	0.15

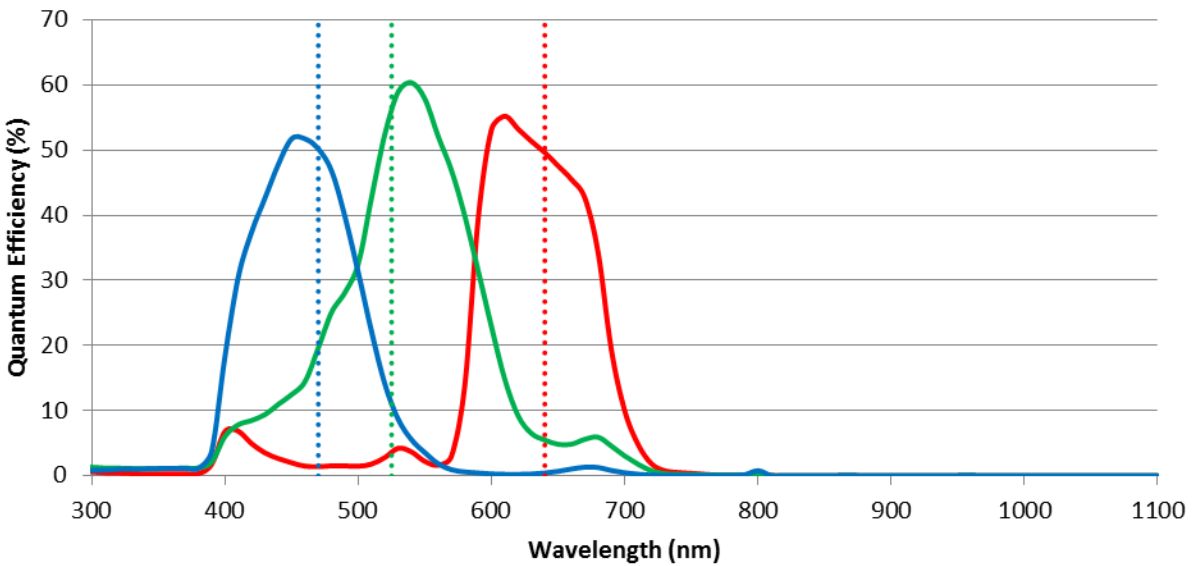
GS3-U3-28S4M



9 GS3-U3-28S4C-C Imaging Performance

Measurement	Video Mode 0	Video Mode 7
Pixel Clock (MHz)	54	54
ADC (Bits)	14-bit	14-bit
Quantum Efficiency Blue (% at 470 nm)	50	51
Quantum Efficiency Green (% at 525 nm)	55	56
Quantum Efficiency Red (% at 640 nm)	49	49
Temporal Dark Noise (Read Noise) (e-)	10.17	7.90
Signal to Noise Ratio Maximum (dB)	39.52	39.36
Signal to Noise Ratio Maximum (Bits)	6.56	6.54
Absolute Sensitivity Threshold (γ)	20.37	15.82
Saturation Capacity (Well Depth) (e-)	8948	8637
Dynamic Range (dB)	58.47	60.24
Dynamic Range (Bits)	9.71	10.01
Gain (e-/ADU)	0.16	0.15

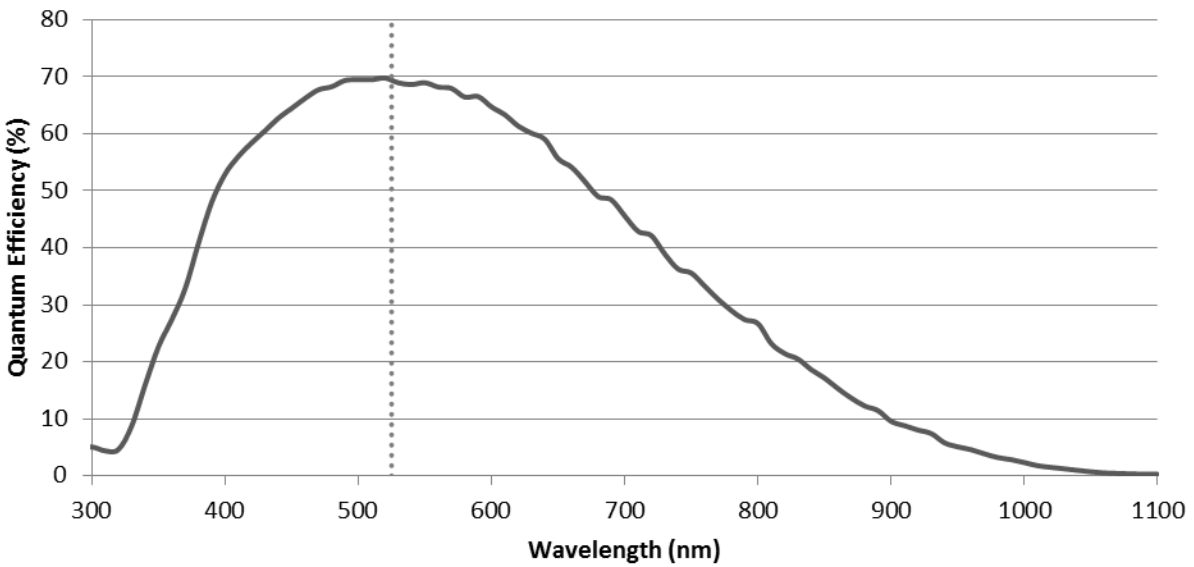
GS3-U3-28S4C



10 GS3-U3-28S5M-C Imaging Performance

Measurement	Video Mode 0	Video Mode 7
Pixel Clock (MHz)	54	54
ADC (Bits)	14-bit	14-bit
Quantum Efficiency (% at 525 nm)	69	68
Temporal Dark Noise (Read Noise) (e-)	9.47	9.56
Signal to Noise Ratio Maximum (dB)	41.42	41.30
Signal to Noise Ratio Maximum (Bits)	6.88	6.86
Absolute Sensitivity Threshold (γ)	14.53	14.74
Saturation Capacity (Well Depth) (e-)	13866	13490
Dynamic Range (dB)	62.87	62.55
Dynamic Range (Bits)	10.44	10.39
Gain (e-/ADU)	0.24	0.24

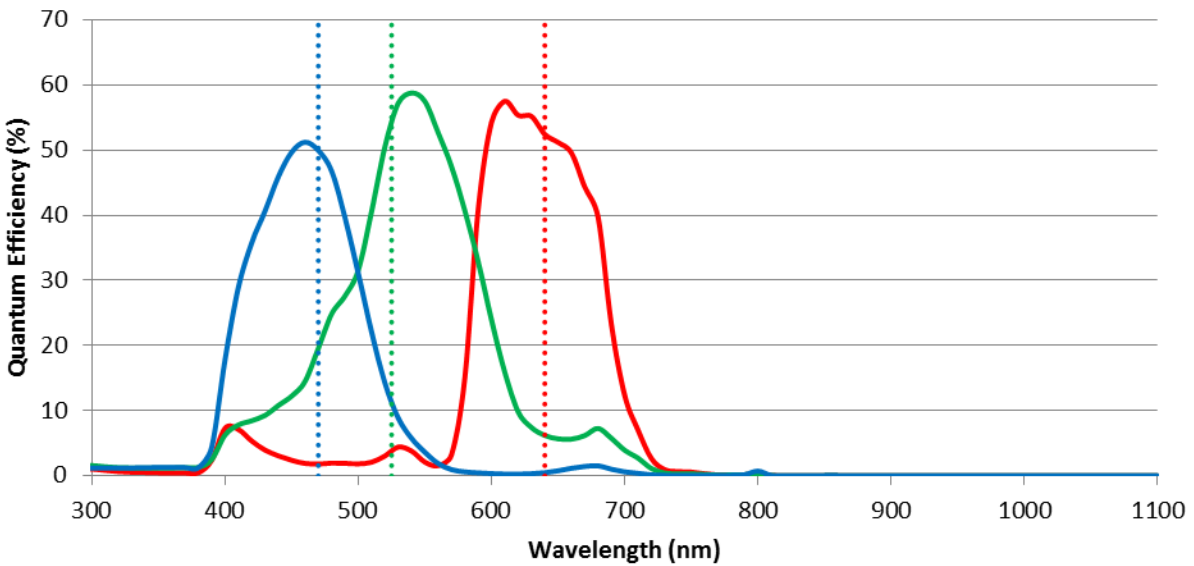
GS3-U3-28S5M



11 GS3-U3-28S5C-C Imaging Performance

Measurement	Video Mode 0	Video Mode 7
Pixel Clock (MHz)	54	54
ADC (Bits)	14-bit	14-bit
Quantum Efficiency Blue (% at 470 nm)	49	49
Quantum Efficiency Green (% at 525 nm)	53	53
Quantum Efficiency Red (% at 640 nm)	52	51
Temporal Dark Noise (Read Noise) (e-)	8.85	8.91
Signal to Noise Ratio Maximum (dB)	41.57	41.45
Signal to Noise Ratio Maximum (Bits)	6.90	6.89
Absolute Sensitivity Threshold (γ)	18.27	18.50
Saturation Capacity (Well Depth) (e-)	14341	13971
Dynamic Range (dB)	63.71	63.43
Dynamic Range (Bits)	10.58	10.54
Gain (e-/ADU)	0.23	0.23

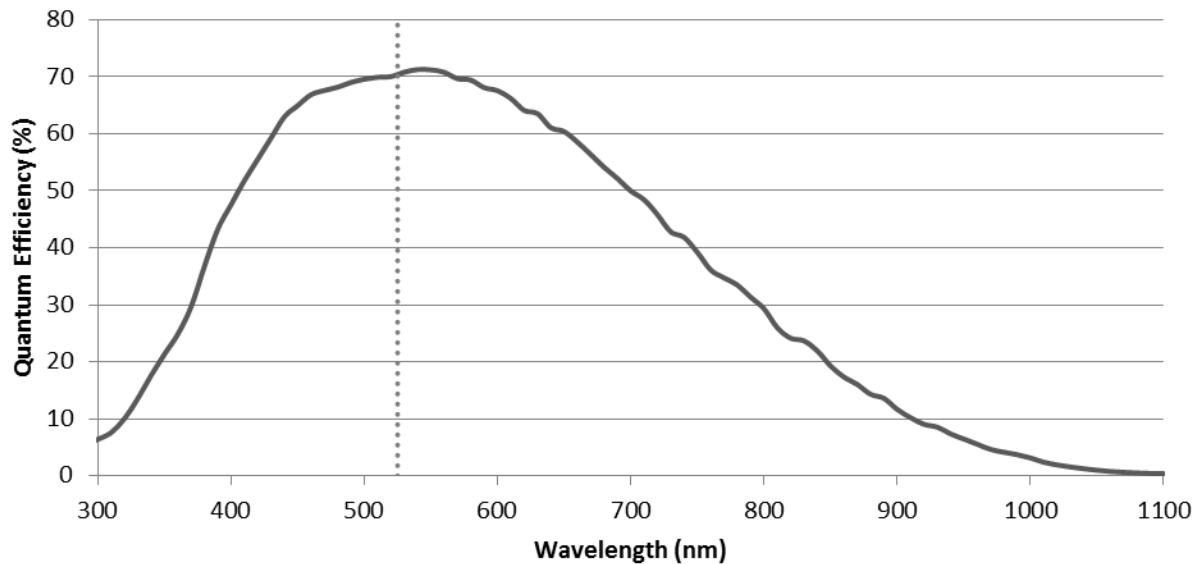
GS3-U3-28S5C



12 GS3-U3-32S4M-C Imaging Performance

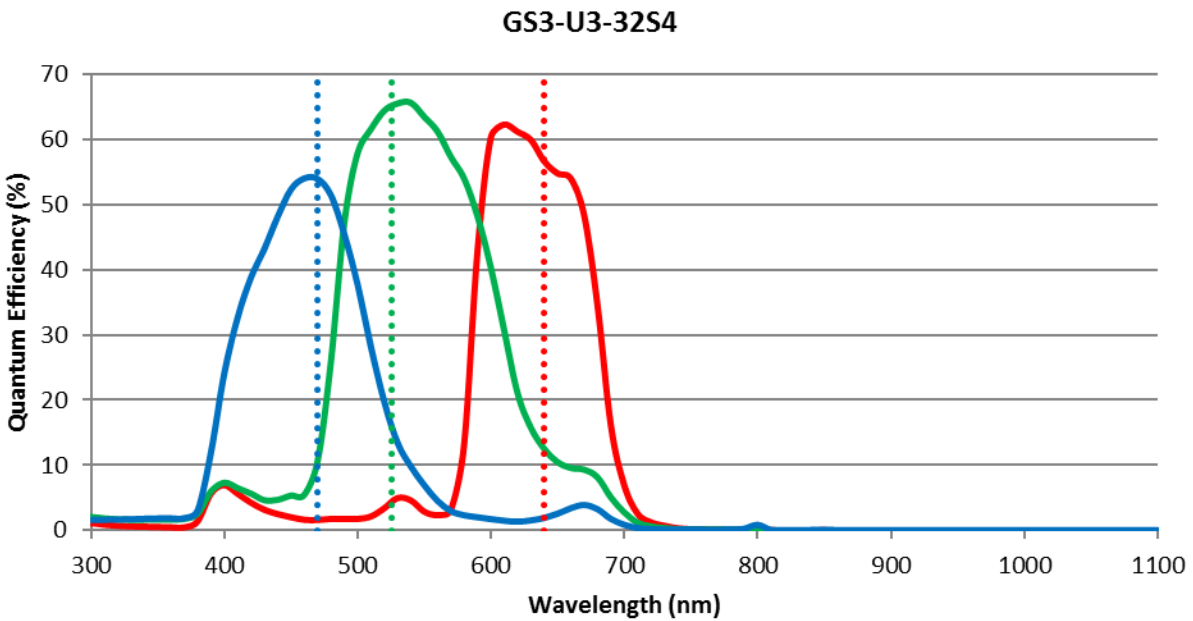
Measurement	Video Mode 0	Video Mode 7
Pixel Clock (MHz)	37.13	37.13
ADC (Bits)	10-bit	12-bit
Quantum Efficiency (% at 525 nm)	70	76
Temporal Dark Noise (Read Noise) (e-)	5.11	2.34
Signal to Noise Ratio Maximum (dB)	40.15	40.20
Signal to Noise Ratio Maximum (Bits)	6.67	6.68
Absolute Sensitivity Threshold (γ)	7.97	3.98
Saturation Capacity (Well Depth) (e-)	10341	10482
Dynamic Range (dB)	65.31	71.34
Dynamic Range (Bits)	10.85	11.85
Gain (e-/ADU)	0.17	0.17

GS3-U3-32S4M



13 GS3-U3-32S4C-C Imaging Performance

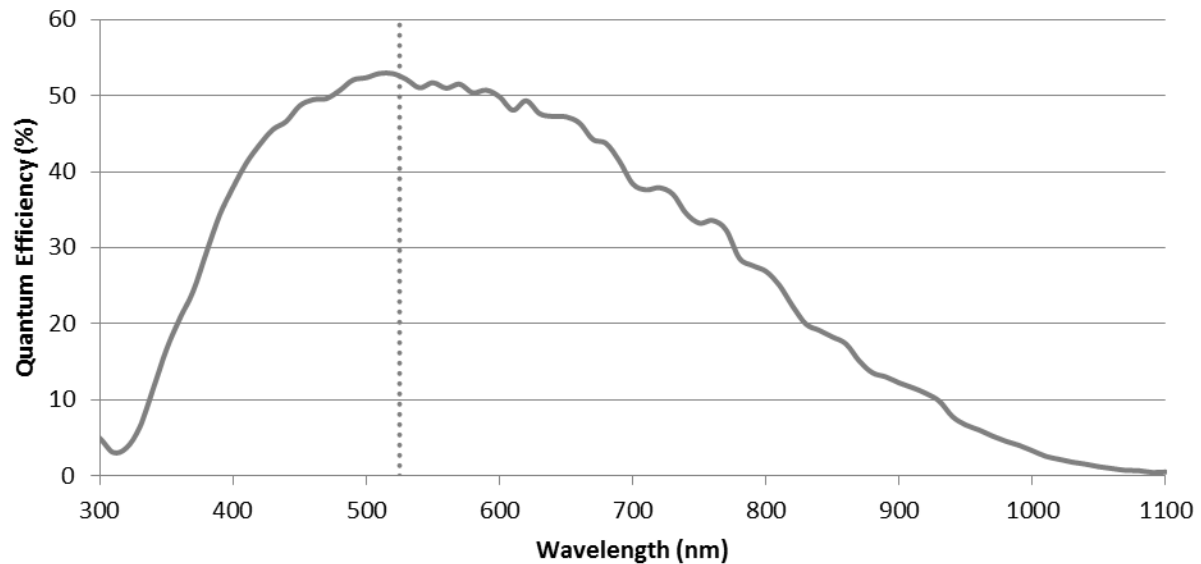
Measurement	Video Mode 0	Video Mode 7
Pixel Clock (MHz)	37.13	37.13
ADC (Bits)	10-bit	12-bit
Quantum Efficiency Blue (% at 470 nm)	53	54
Quantum Efficiency Green (% at 525 nm)	65	65
Quantum Efficiency Red (% at 640 nm)	56	57
Temporal Dark Noise (Read Noise) (e-)	4.75	2.33
Signal to Noise Ratio Maximum (dB)	39.89	39.93
Signal to Noise Ratio Maximum (Bits)	6.63	6.63
Absolute Sensitivity Threshold (γ)	8.33	4.45
Saturation Capacity (Well Depth) (e-)	9747	9838
Dynamic Range (dB)	65.38	70.82
Dynamic Range (Bits)	10.86	11.76
Gain (e-/ADU)	0.17	0.17



14 GS3-U3-41C6M-C Imaging Performance

Measurement	Video Mode 0
Pixel Clock (MHz)	384
ADC (Bits)	10-bit
Quantum Efficiency (% at 525 nm)	53
Temporal Dark Noise (Read Noise) (e-)	16.81
Signal to Noise Ratio Maximum (dB)	38.82
Signal to Noise Ratio Maximum (Bits)	6.45
Absolute Sensitivity Threshold (γ)	33.38
Saturation Capacity (Well Depth) (e-)	7620
Dynamic Range (dB)	52.78
Dynamic Range (Bits)	8.78
Gain (e-/ADU)	0.15

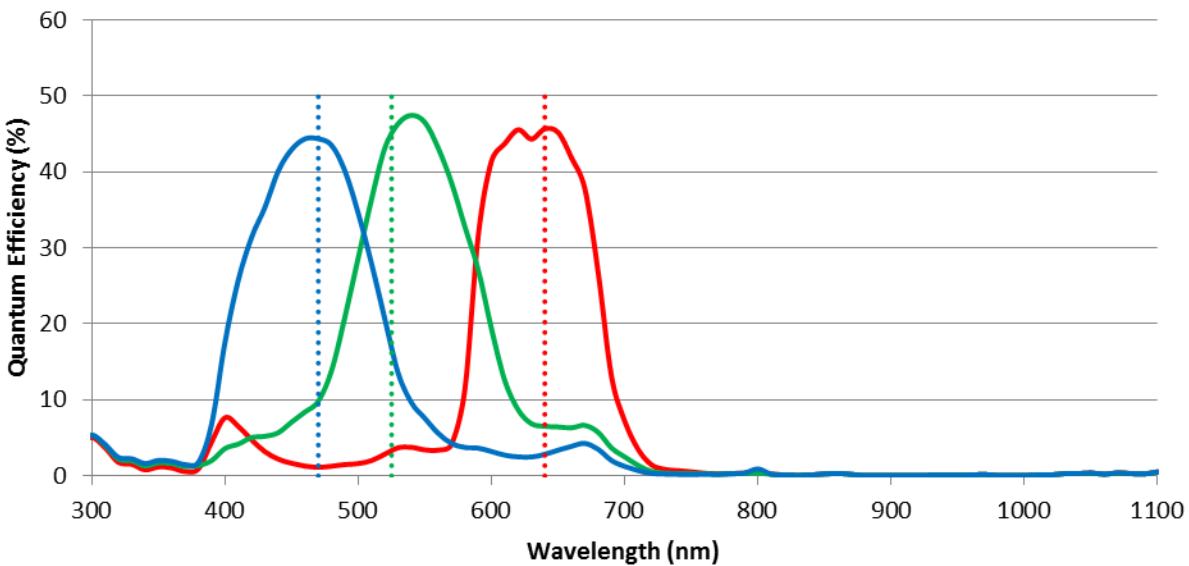
GS3-U3-41C6M



15 GS3-U3-41C6C-C Imaging Performance

Measurement	Video Mode 0
Pixel Clock (MHz)	384
ADC (Bits)	10-bit
Quantum Efficiency Blue (% at 470 nm)	44
Quantum Efficiency Green (% at 525 nm)	45
Quantum Efficiency Red (% at 640 nm)	46
Temporal Dark Noise (Read Noise) (e-)	17.25
Signal to Noise Ratio Maximum (dB)	39.09
Signal to Noise Ratio Maximum (Bits)	6.49
Absolute Sensitivity Threshold (γ)	41.69
Saturation Capacity (Well Depth) (e-)	8104
Dynamic Range (dB)	53.19
Dynamic Range (Bits)	8.83
Gain (e-/ADU)	0.14

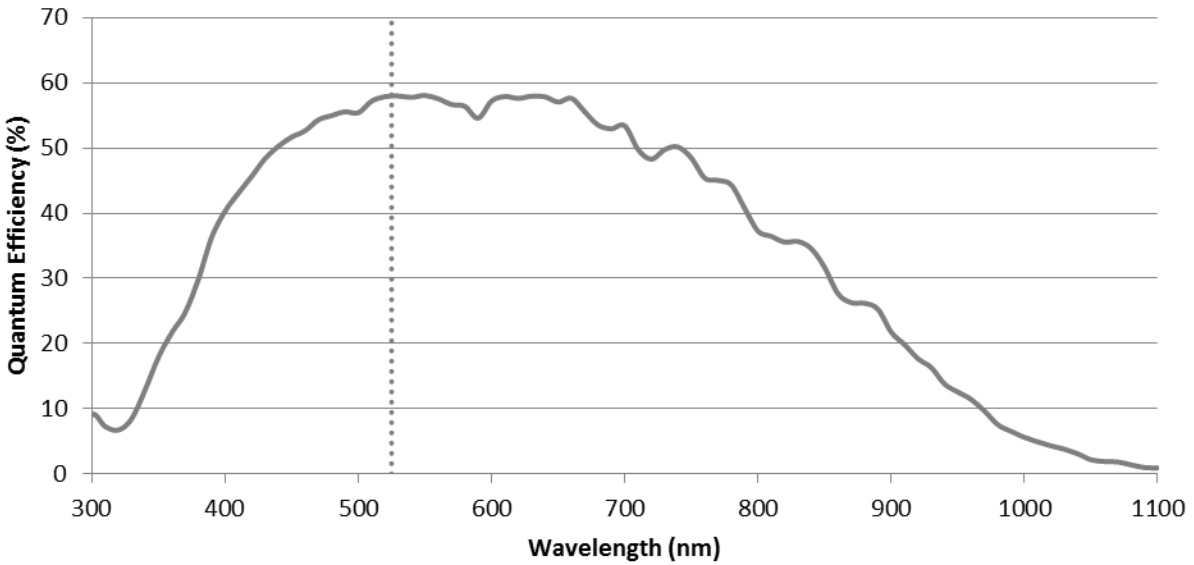
GS3-U3-41C6C



16 GS3-U3-41C6NIR Imaging Performance

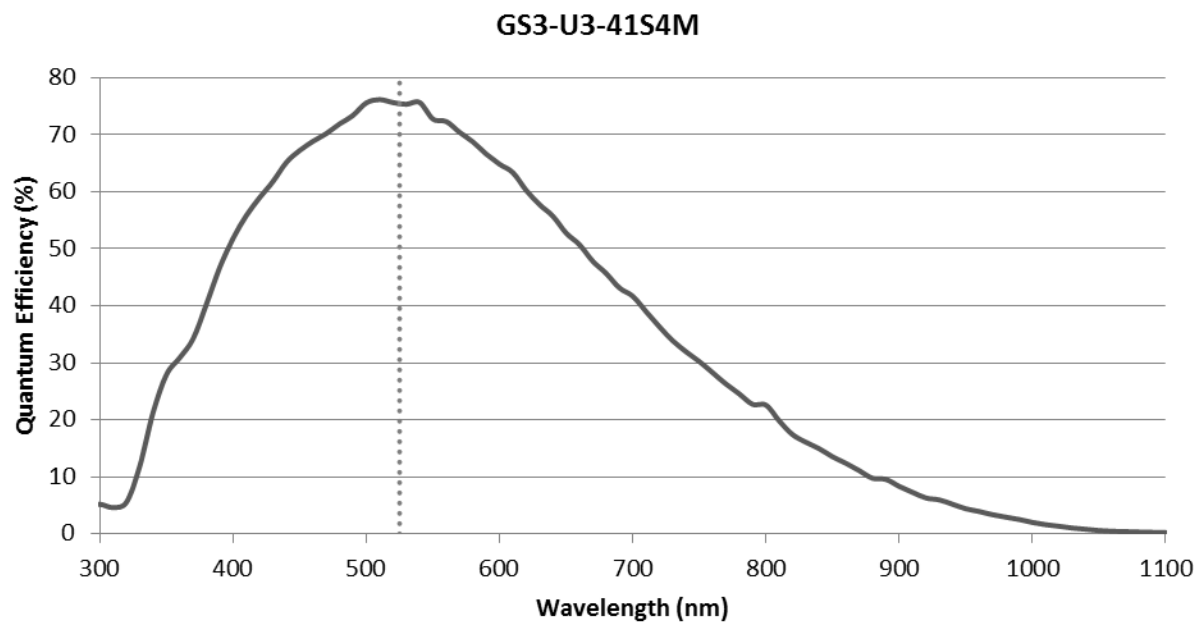
Measurement	Video Mode 0
Pixel Clock (MHz)	384
ADC (Bits)	10-bit
Quantum Efficiency (% at 525 nm)	57
Temporal Dark Noise (Read Noise) (e-)	17.99
Signal to Noise Ratio Maximum (dB)	39.59
Signal to Noise Ratio Maximum (Bits)	6.58
Absolute Sensitivity Threshold (γ)	32.01
Saturation Capacity (Well Depth) (e-)	9094
Dynamic Range (dB)	53.84
Dynamic Range (Bits)	8.94
Gain (e-/ADU)	0.15

GS3-U3-41C6NIR



17 GS3-U3-41S4M-C Imaging Performance

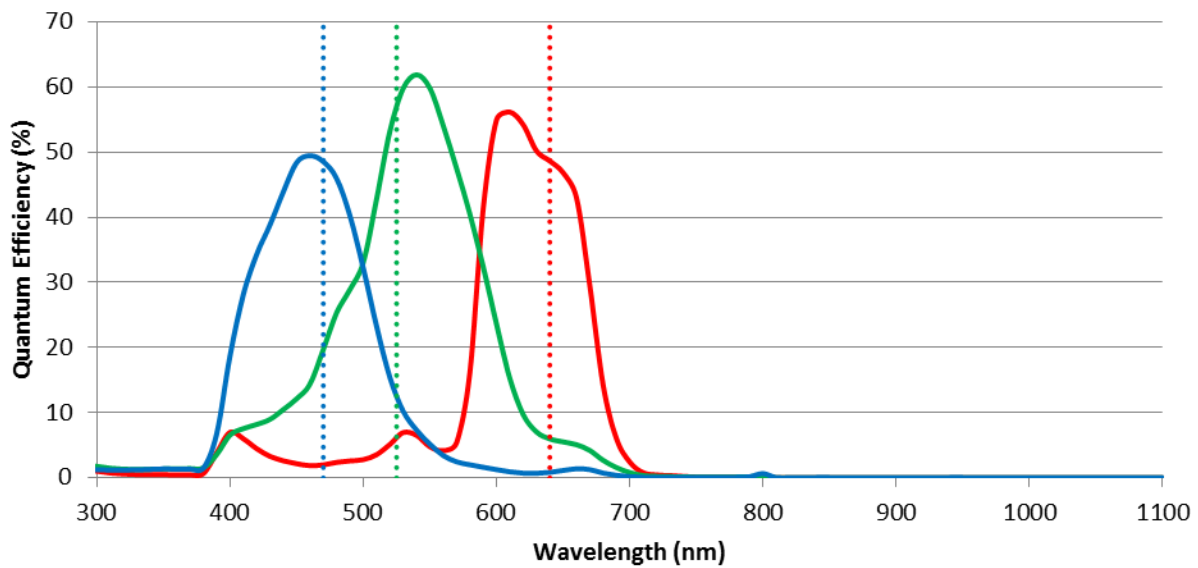
Measurement	Video Mode 0	Video Mode 7
Pixel Clock (MHz)	54	54
ADC (Bits)	14-bit	14-bit
Quantum Efficiency (% at 525 nm)	75	72
Temporal Dark Noise (Read Noise) (e-)	9.29	8.64
Signal to Noise Ratio Maximum (dB)	38.10	38.11
Signal to Noise Ratio Maximum (Bits)	6.33	6.33
Absolute Sensitivity Threshold (γ)	13.32	12.66
Saturation Capacity (Well Depth) (e-)	6459	6478
Dynamic Range (dB)	56.39	57.01
Dynamic Range (Bits)	9.37	9.47
Gain (e-/ADU)	0.10	0.10



18 GS3-U3-41S4C-C Imaging Performance

Measurement	Video Mode 0	Video Mode 7
Pixel Clock (MHz)	54	54
ADC (Bits)	14-bit	14-bit
Quantum Efficiency Blue (% at 470 nm)	48	42
Quantum Efficiency Green (% at 525 nm)	56	54
Quantum Efficiency Red (% at 640 nm)	48	49
Temporal Dark Noise (Read Noise) (e-)	8.56	8.24
Signal to Noise Ratio Maximum (dB)	37.84	38.04
Signal to Noise Ratio Maximum (Bits)	6.29	6.32
Absolute Sensitivity Threshold (γ)	16.72	16.06
Saturation Capacity (Well Depth) (e-)	6088	6367
Dynamic Range (dB)	56.55	57.25
Dynamic Range (Bits)	9.39	9.51
Gain (e-/ADU)	0.10	0.10

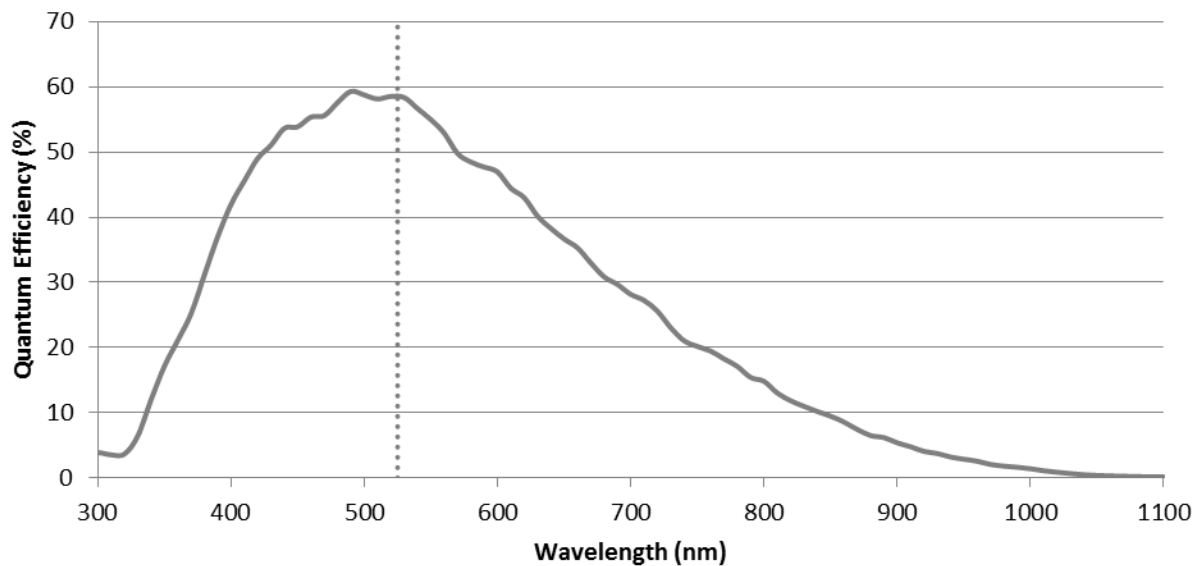
GS3-U3-41S4C



19 GS3-U3-50S5M-C Imaging Performance

Measurement	Video Mode 0
Pixel Clock (MHz)	60
ADC (Bits)	14-bit
Quantum Efficiency (% at 525 nm)	58
Temporal Dark Noise (Read Noise) (e-)	8.73
Signal to Noise Ratio Maximum (dB)	37.90
Signal to Noise Ratio Maximum (Bits)	6.30
Absolute Sensitivity Threshold (γ)	16.30
Saturation Capacity (Well Depth) (e-)	6168
Dynamic Range (dB)	56.50
Dynamic Range (Bits)	9.38
Gain (e-/ADU)	0.10

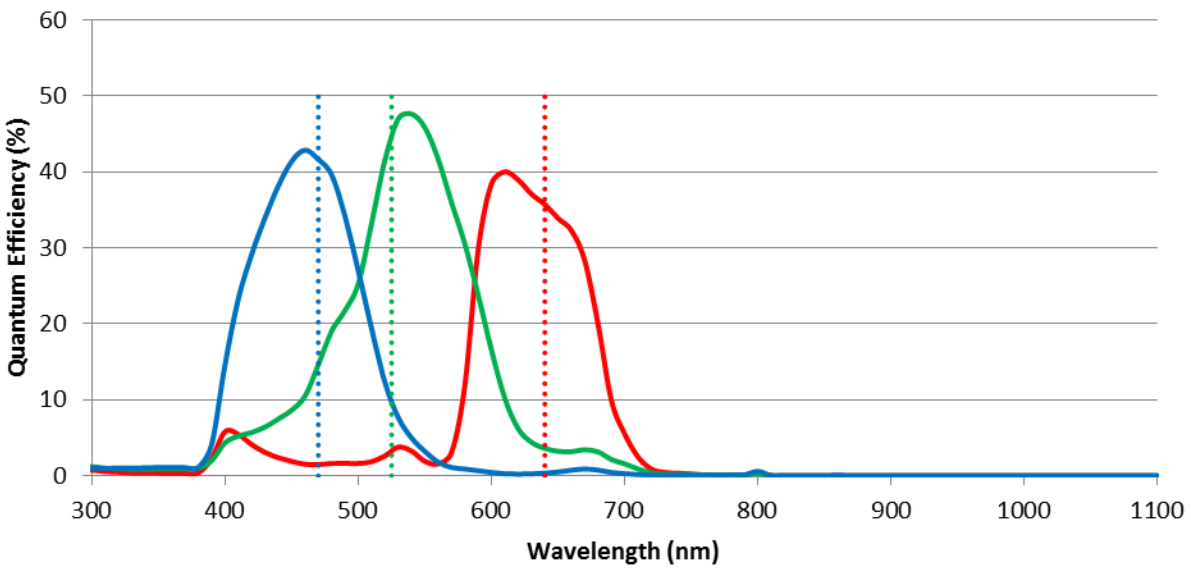
GS3-U3-50S5M



20 GS3-U3-50S5C-C Imaging Performance

Measurement	Video Mode 0
Pixel Clock (MHz)	60
ADC (Bits)	14-bit
Quantum Efficiency Blue (% at 470 nm)	41
Quantum Efficiency Green (% at 525 nm)	44
Quantum Efficiency Red (% at 640 nm)	35
Temporal Dark Noise (Read Noise) (e-)	9.15
Signal to Noise Ratio Maximum (dB)	38.06
Signal to Noise Ratio Maximum (Bits)	6.32
Absolute Sensitivity Threshold (γ)	23.19
Saturation Capacity (Well Depth) (e-)	6402
Dynamic Range (dB)	56.43
Dynamic Range (Bits)	9.37
Gain (e-/ADU)	0.10

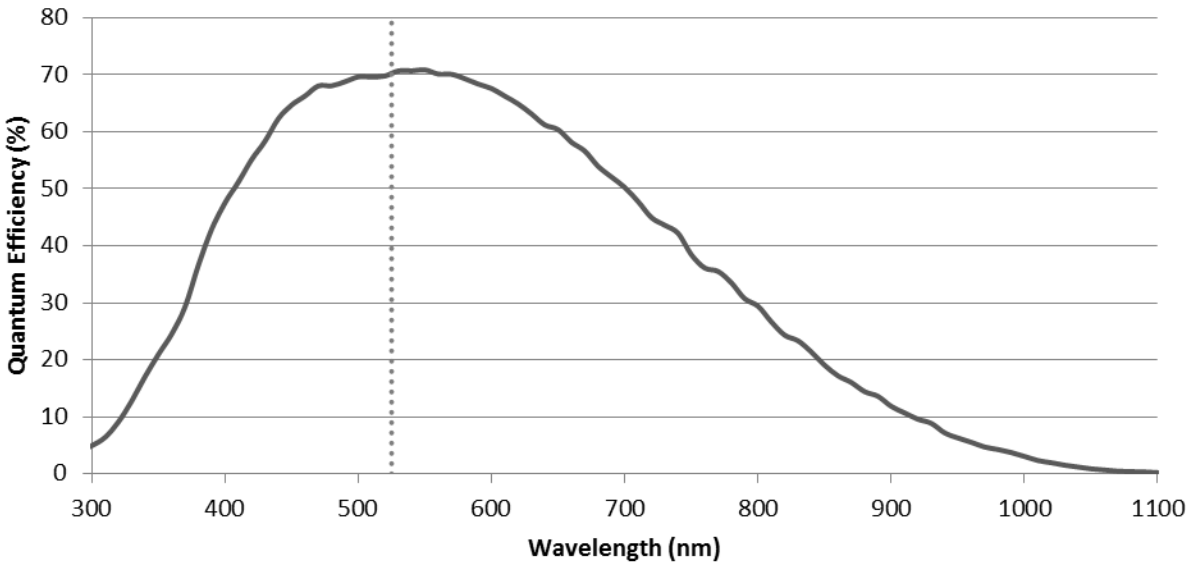
GS3-U3-50S5C



21 GS3-U3-51S5M-C Imaging Performance

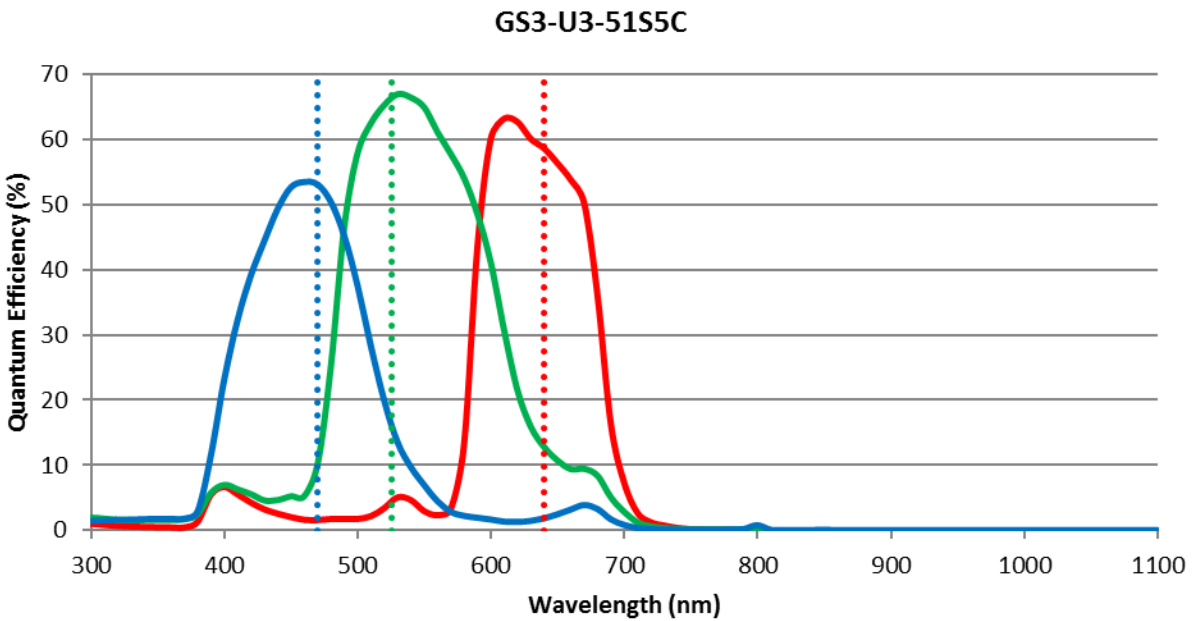
Measurement	Video Mode 0	Video Mode 7
Pixel Clock (MHz)	37.13	37.13
ADC (Bits)	10-bit	12-bit
Quantum Efficiency (% at 525 nm)	70	76
Temporal Dark Noise (Read Noise) (e-)	5.11	2.37
Signal to Noise Ratio Maximum (dB)	40.09	40.15
Signal to Noise Ratio Maximum (Bits)	6.66	6.67
Absolute Sensitivity Threshold (γ)	8.00	4.03
Saturation Capacity (Well Depth) (e-)	10208	10361
Dynamic Range (dB)	65.20	71.15
Dynamic Range (Bits)	10.83	11.82
Gain (e-/ADU)	0.17	0.17

GS3-U3-51S5M



22 GS3-U3-51S5C-C Imaging Performance

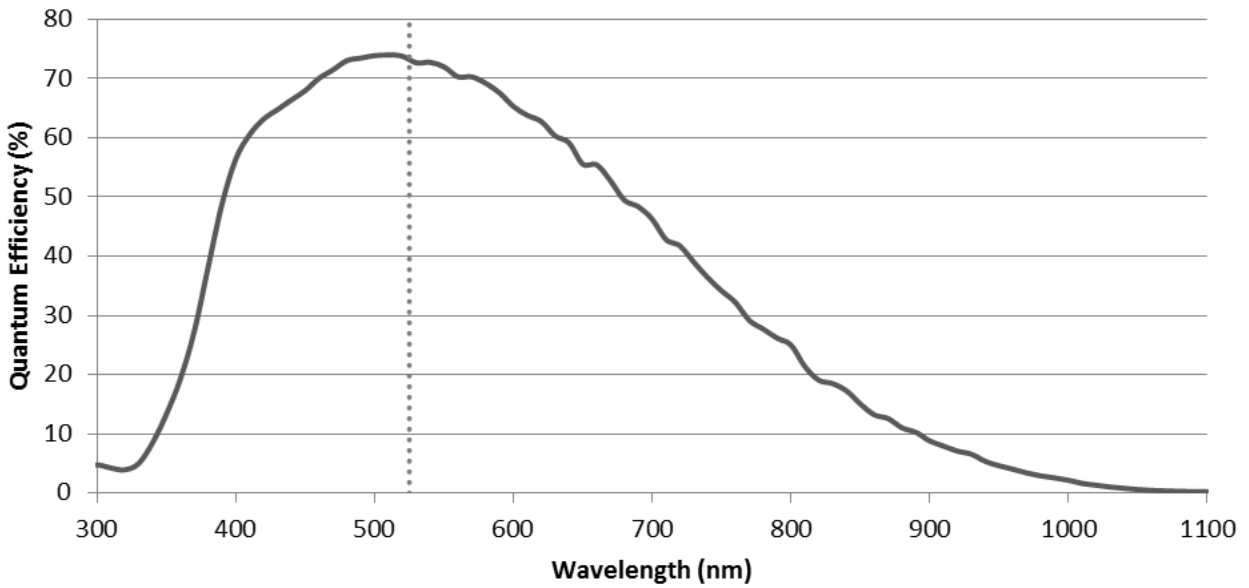
Measurement	Video Mode 0	Video Mode 7
Pixel Clock (MHz)	37.13	37.13
ADC (Bits)	10-bit	12-bit
Quantum Efficiency Blue (% at 470 nm)	53	53
Quantum Efficiency Green (% at 525 nm)	66	67
Quantum Efficiency Red (% at 640 nm)	58	58
Temporal Dark Noise (Read Noise) (e-)	4.97	2.32
Signal to Noise Ratio Maximum (dB)	40.08	40.14
Signal to Noise Ratio Maximum (Bits)	6.66	6.67
Absolute Sensitivity Threshold (γ)	8.56	4.36
Saturation Capacity (Well Depth) (e-)	10196	10330
Dynamic Range (dB)	65.41	71.27
Dynamic Range (Bits)	10.86	11.84
Gain (e-/ADU)	0.17	0.17



23 GS3-U3-60S6M-C Imaging Performance

Measurement	Video Mode 0	Video Mode 7
Pixel Clock (MHz)	54	54
ADC (Bits)	14-bit	14-bit
Quantum Efficiency (% at 525 nm)	73	75
Temporal Dark Noise (Read Noise) (e-)	10.73	10.10
Signal to Noise Ratio Maximum (dB)	41.67	41.82
Signal to Noise Ratio Maximum (Bits)	6.92	6.95
Absolute Sensitivity Threshold (γ)	15.49	14.35
Saturation Capacity (Well Depth) (e-)	14697	15220
Dynamic Range (dB)	62.34	63.14
Dynamic Range (Bits)	10.35	10.49
Gain (e-/ADU)	0.23	0.24

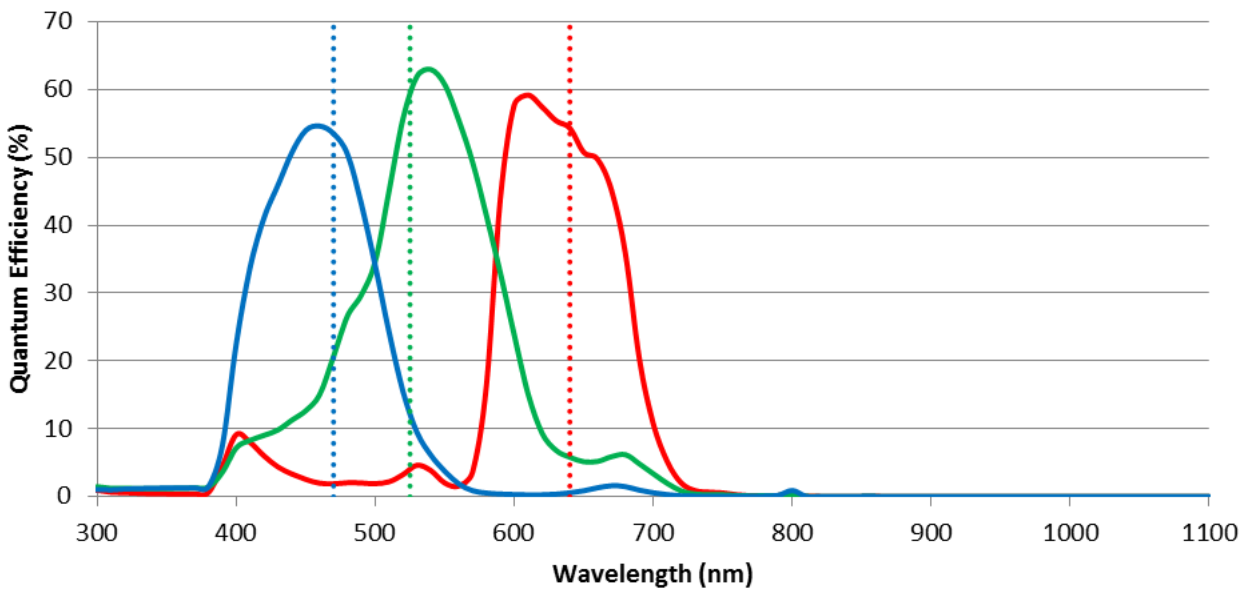
GS3-U3-60S6M



24 GS3-U3-60S6C-C Imaging Performance

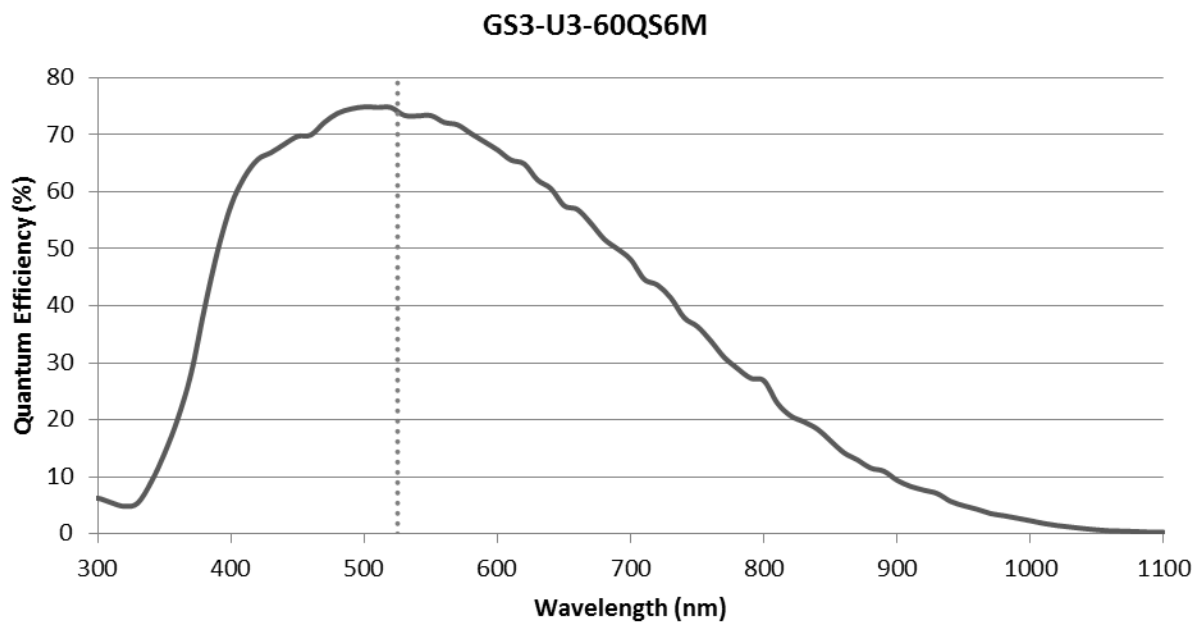
Measurement	Video Mode 0	Video Mode 7
Pixel Clock (MHz)	54	54
ADC (Bits)	14-bit	14-bit
Quantum Efficiency Blue (% at 470 nm)	53	53
Quantum Efficiency Green (% at 525 nm)	58	58
Quantum Efficiency Red (% at 640 nm)	54	54
Temporal Dark Noise (Read Noise) (e-)	10.15	9.57
Signal to Noise Ratio Maximum (dB)	41.65	41.76
Signal to Noise Ratio Maximum (Bits)	6.92	6.94
Absolute Sensitivity Threshold (γ)	19.31	18.42
Saturation Capacity (Well Depth) (e-)	14629	15011
Dynamic Range (dB)	62.76	63.47
Dynamic Range (Bits)	10.42	10.54
Gain (e-/ADU)	0.23	0.24

GS3-U3-60S6C



25 GS3-U3-60QS6M-C Imaging Performance

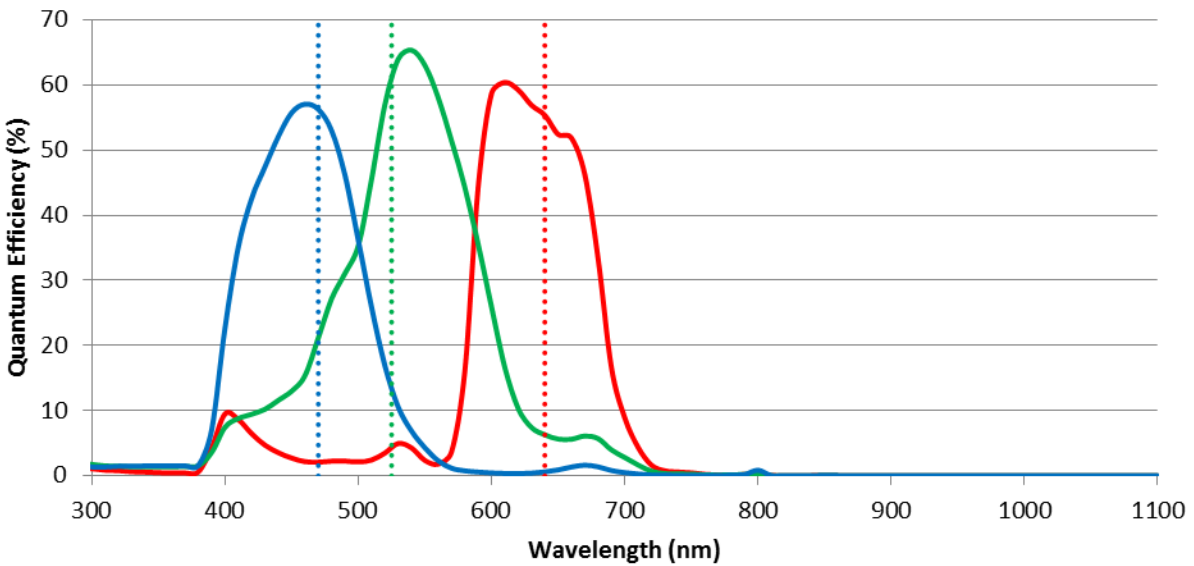
Measurement	Video Mode 0	Video Mode 7
Pixel Clock (MHz)	49	31.25
ADC (Bits)	14-bit	14-bit
Quantum Efficiency (% at 525 nm)	74	73
Temporal Dark Noise (Read Noise) (e-)	10.88	8.97
Signal to Noise Ratio Maximum (dB)	41.53	41.36
Signal to Noise Ratio Maximum (Bits)	6.90	6.87
Absolute Sensitivity Threshold (γ)	15.43	13.05
Saturation Capacity (Well Depth) (e-)	14227	13673
Dynamic Range (dB)	61.94	63.20
Dynamic Range (Bits)	10.29	10.50
Gain (e-/ADU)	0.23	0.22



26 GS3-U3-60QS6C-C Imaging Performance

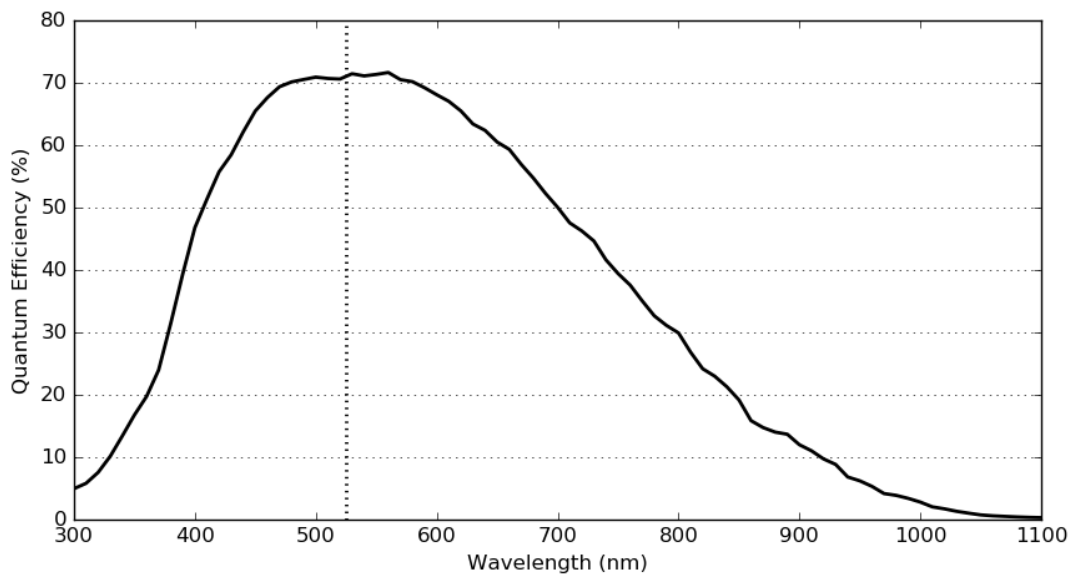
Measurement	Video Mode 0	Video Mode 7
Pixel Clock (MHz)	49	49
ADC (Bits)	14-bit	14-bit
Quantum Efficiency Blue (% at 470 nm)	56	55
Quantum Efficiency Green (% at 525 nm)	60	59
Quantum Efficiency Red (% at 640 nm)	55	55
Temporal Dark Noise (Read Noise) (e-)	10.56	9.12
Signal to Noise Ratio Maximum (dB)	41.49	41.31
Signal to Noise Ratio Maximum (Bits)	6.89	6.86
Absolute Sensitivity Threshold (γ)	19.09	16.82
Saturation Capacity (Well Depth) (e-)	14092	13505
Dynamic Range (dB)	62.11	62.94
Dynamic Range (Bits)	10.32	10.45
Gain (e-/ADU)	0.23	0.22

GS3-U3-60QS6C



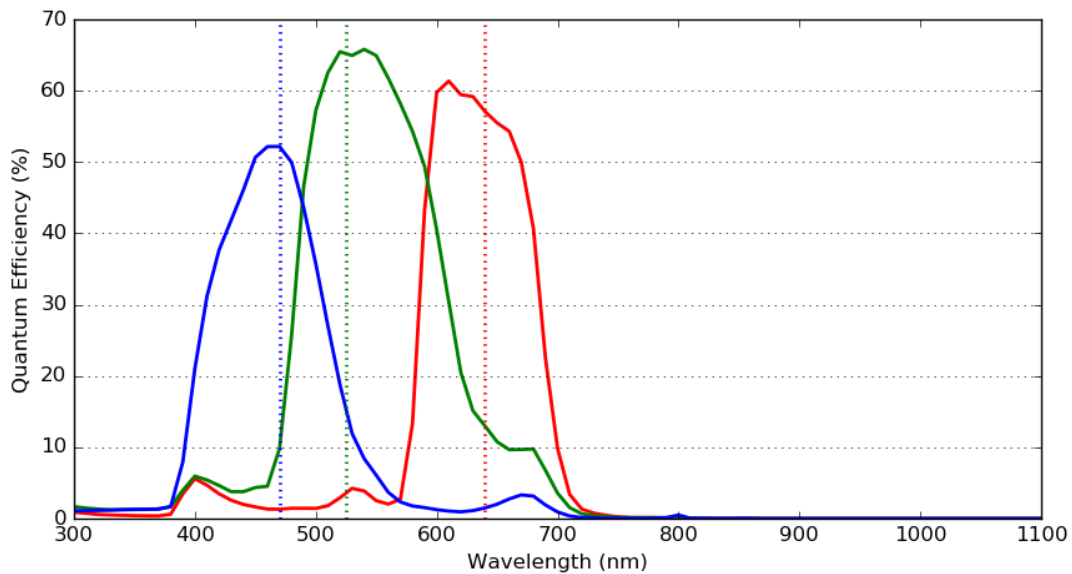
27 GS3-U3-89S6M-C Imaging Performance

Measurement	Video Mode 0	Video Mode 7
ADC (Bits)	10-bit	12-bit
Quantum Efficiency (% at 525 nm)	72	71
Temporal Dark Noise (Read Noise) (e-)	4.70	2.43
Signal to Noise Ratio Maximum (dB)	40.23	40.19
Signal to Noise Ratio Maximum (Bits)	6.68	6.67
Absolute Sensitivity Threshold (γ)	7.24	4.13
Saturation Capacity (Well Depth) (e-)	10555	10435
Dynamic Range (dB)	66.15	71.03
Dynamic Range (Bits)	10.99	11.80
Gain (e-/ADU)	0.17	0.17



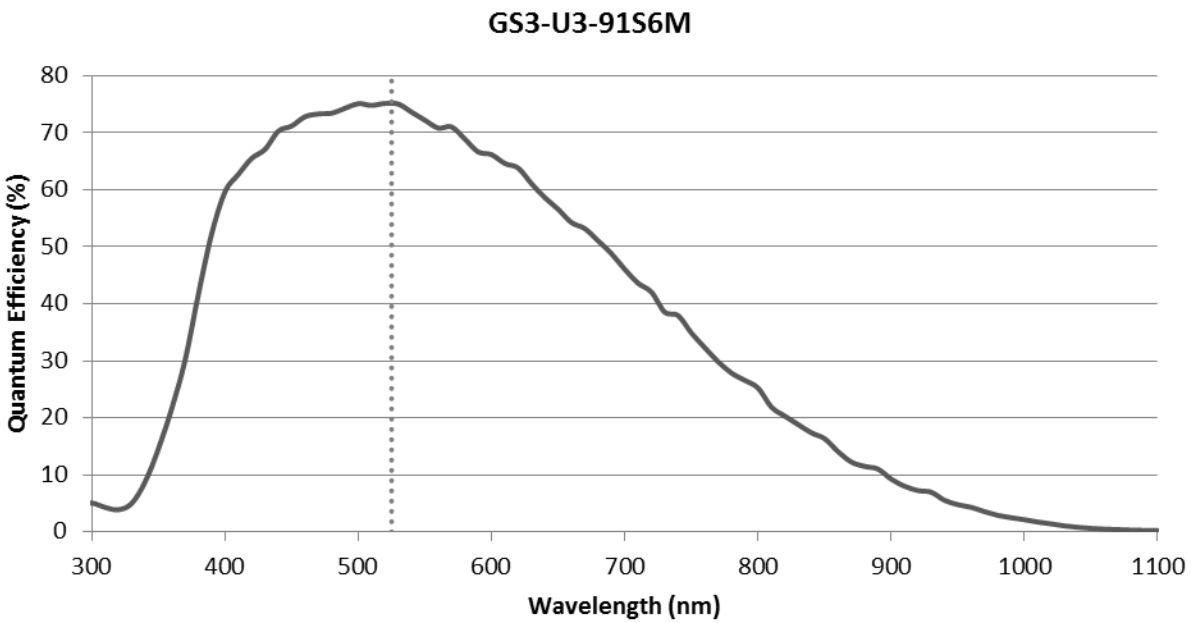
28 GS3-U3-89S6C-C Imaging Performance

Measurement	Video Mode 0	Video Mode 7
ADC (Bits)	10-bit	12-bit
Quantum Efficiency Blue (% at 470 nm)	48	47
Quantum Efficiency Green (% at 525 nm)	64	63
Quantum Efficiency Red (% at 640 nm)	59	59
Temporal Dark Noise (Read Noise) (e-)	4.77	2.43
Signal to Noise Ratio Maximum (dB)	40.29	40.24
Signal to Noise Ratio Maximum (Bits)	6.69	6.68
Absolute Sensitivity Threshold (γ)	8.22	4.64
Saturation Capacity (Well Depth) (e-)	10692	10559
Dynamic Range (dB)	66.15	71.13
Dynamic Range (Bits)	10.99	11.81
Gain (e-/ADU)	0.17	0.17



29 GS3-U3-91S6M-C Imaging Performance

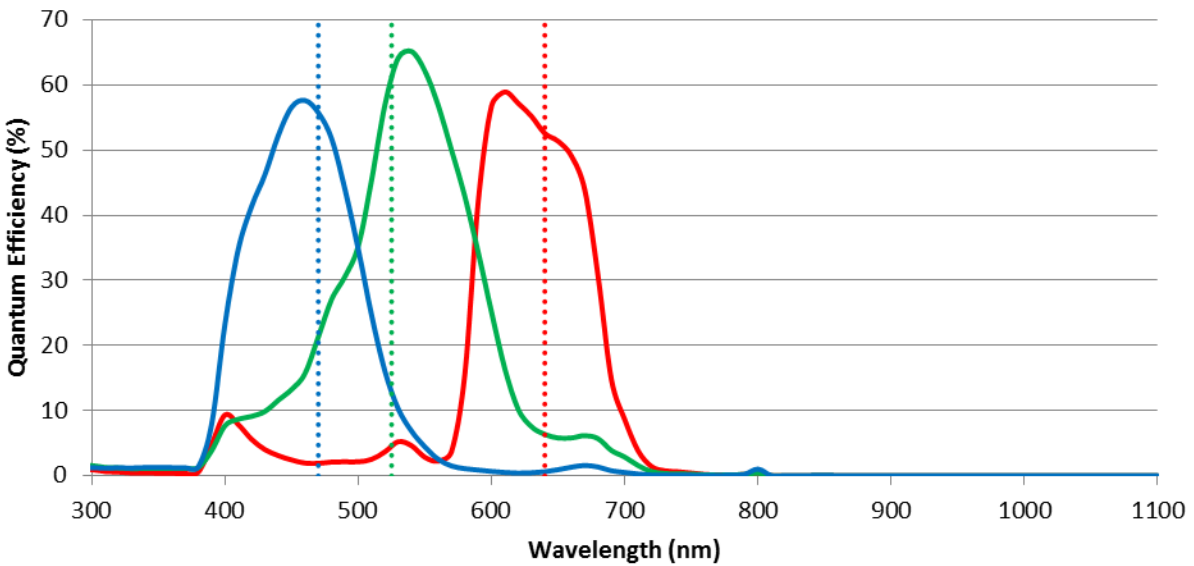
Measurement	Video Mode 0	Video Mode 7
Pixel Clock (MHz)	54	54
ADC (Bits)	14-bit	14-bit
Quantum Efficiency (% at 525 nm)	75	75
Temporal Dark Noise (Read Noise) (e-)	9.43	9.62
Signal to Noise Ratio Maximum (dB)	40.00	40.00
Signal to Noise Ratio Maximum (Bits)	6.64	6.64
Absolute Sensitivity Threshold (γ)	13.53	13.78
Saturation Capacity (Well Depth) (e-)	9996	10007
Dynamic Range (dB)	60.06	59.90
Dynamic Range (Bits)	9.98	9.95
Gain (e-/ADU)	0.16	0.16



30 GS3-U3-91S6C-C Imaging Performance

Measurement	Video Mode 0	Video Mode 7
Pixel Clock (MHz)	54	54
ADC (Bits)	14-bit	14-bit
Quantum Efficiency Blue (% at 470 nm)	55	56
Quantum Efficiency Green (% at 525 nm)	60	60
Quantum Efficiency Red (% at 640 nm)	52	53
Temporal Dark Noise (Read Noise) (e-)	9.27	9.30
Signal to Noise Ratio Maximum (dB)	40.11	40.10
Signal to Noise Ratio Maximum (Bits)	6.66	6.66
Absolute Sensitivity Threshold (γ)	17.27	17.15
Saturation Capacity (Well Depth) (e-)	10262	10227
Dynamic Range (dB)	60.43	60.37
Dynamic Range (Bits)	10.04	10.03
Gain (e-/ADU)	0.16	0.16

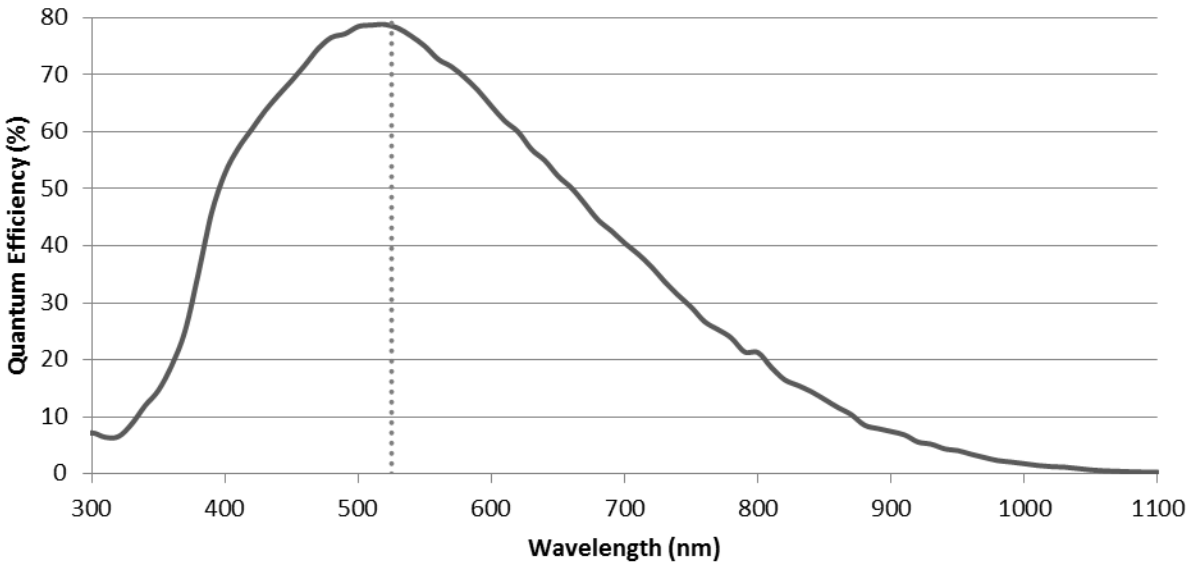
GS3-U3-91S6C



31 GS3-U3-120S6M-C Imaging Performance

Measurement	Video Mode 0	Video Mode 7
Pixel Clock (MHz)	54	54
ADC (Bits)	14-bit	14-bit
Quantum Efficiency (% at 525 nm)	78	78
Temporal Dark Noise (Read Noise) (e-)	10.87	11.18
Signal to Noise Ratio Maximum (dB)	37.87	37.84
Signal to Noise Ratio Maximum (Bits)	6.29	6.29
Absolute Sensitivity Threshold (γ)	14.82	15.18
Saturation Capacity (Well Depth) (e-)	6125	6085
Dynamic Range (dB)	54.63	54.34
Dynamic Range (Bits)	9.07	9.03
Gain (e-/ADU)	0.10	0.10

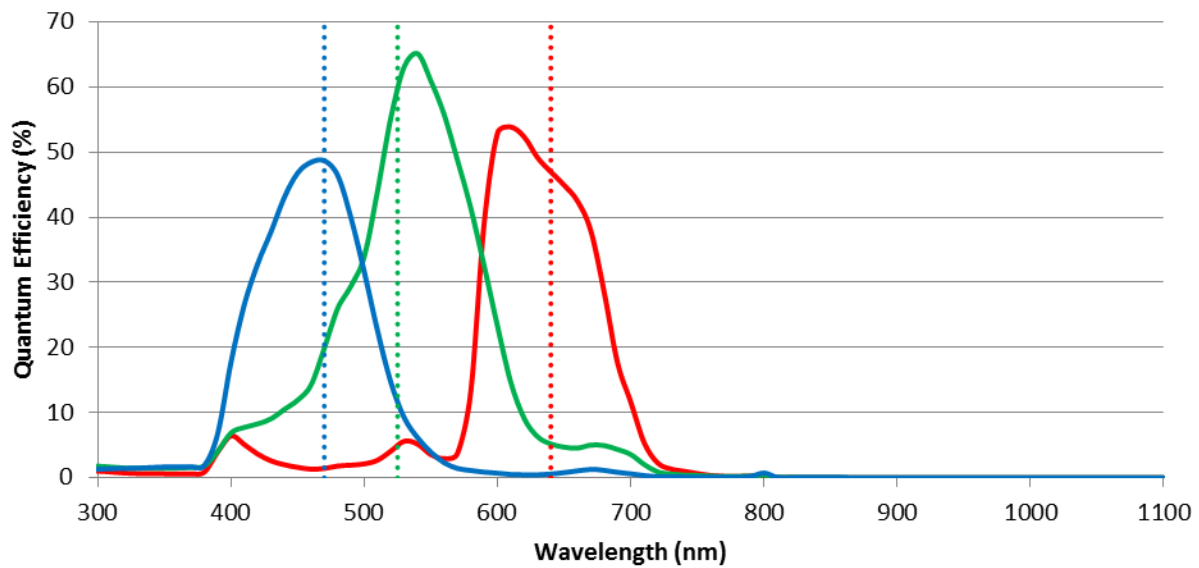
GS3-U3-120S6M



32 GS3-U3-120S6C-C Imaging Performance

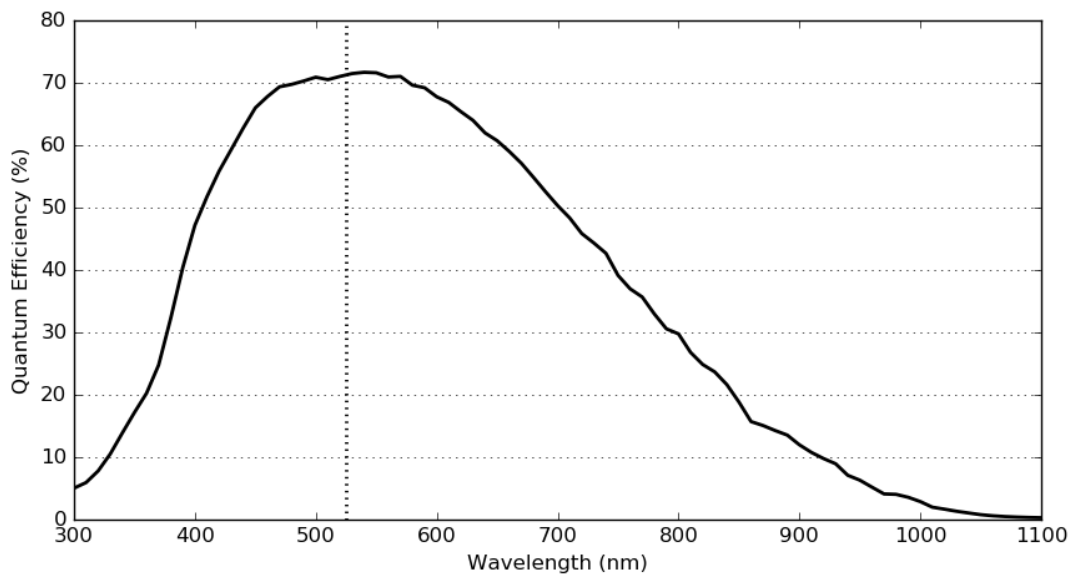
Measurement	Video Mode 0	Video Mode 7
Pixel Clock (MHz)	54	54
ADC (Bits)	14-bit	14-bit
Quantum Efficiency Blue (% at 470 nm)	48	48
Quantum Efficiency Green (% at 525 nm)	59	58
Quantum Efficiency Red (% at 640 nm)	46	48
Temporal Dark Noise (Read Noise) (e-)	10.82	11.55
Signal to Noise Ratio Maximum (dB)	37.79	37.97
Signal to Noise Ratio Maximum (Bits)	6.28	6.31
Absolute Sensitivity Threshold (γ)	20.02	21.39
Saturation Capacity (Well Depth) (e-)	6010	6263
Dynamic Range (dB)	54.50	54.32
Dynamic Range (Bits)	9.05	9.02
Gain (e-/ADU)	0.10	0.10

GS3-U3-120S6C



33 GS3-U3-123S6M-C Imaging Performance

Measurement	Video Mode 0	Video Mode 7
ADC (Bits)	10-bit	12-bit
Quantum Efficiency (% at 525 nm)	72	71
Temporal Dark Noise (Read Noise) (e ⁻)	4.74	2.43
Signal to Noise Ratio Maximum (dB)	40.24	40.19
Signal to Noise Ratio Maximum (Bits)	6.68	6.68
Absolute Sensitivity Threshold (γ)	7.28	4.12
Saturation Capacity (Well Depth) (e ⁻)	10563	10451
Dynamic Range (dB)	66.09	71.04
Dynamic Range (Bits)	10.98	11.80
Gain (e ⁻ /ADU)	0.17	0.17



34 GS3-U3-123S6C-C Imaging Performance

Measurement	Video Mode 0	Video Mode 7
ADC (Bits)	10-bit	12-bit
Quantum Efficiency Blue (% at 470 nm)	48	47
Quantum Efficiency Green (% at 525 nm)	65	64
Quantum Efficiency Red (% at 640 nm)	59	59
Temporal Dark Noise (Read Noise) (e-)	4.74	2.43
Signal to Noise Ratio Maximum (dB)	40.27	40.21
Signal to Noise Ratio Maximum (Bits)	6.69	6.68
Absolute Sensitivity Threshold (γ)	8.13	4.61
Saturation Capacity (Well Depth) (e-)	10645	10504
Dynamic Range (dB)	66.15	71.08
Dynamic Range (Bits)	10.99	11.81
Gain (e-/ADU)	0.17	0.17

