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Find the *Qioptiq Zoom 65* at our website: *Click HERE*

RETROZOOM 65 PERFORMANCE SPECIFICATIONS

Substage/Ringlight Illumination RetroZoom 65 Optical Performance Matrix

			0.375X TV Tube		0.5X TV Tube		0.67X TV Tube		1.0X TV Tube		1.5X TV Tube		2.0X TV Tube	
			Low Mag	High Mag	Low Mag	High Mag	Low Mag	High Mag	Low Mag	High Mag	Low Mag	High Mag	Low Mag	High Mag
0.18X		NA	0.0049	0.013	0.0049	0.013	0.0049	0.013	0.0049	0.013	0.0049	0.013	0.0049	0.013
Aux Lens		Res (lp/mm)	15	40	15	40	15	40	15	40	15	40	15	40
29-20-09-000		Mag	0.047	0.30	0.063	0.41	0.08	0.54	0.13	0.81	0.19	1.22	0.25	1.62
		DOF	24	3.2	24	3.2	24	3.2	24	3.2	24	3.2	24	3.2
WD: 468 mm	FOV Cam Format	1/4"	57.59 x 76.79	9.09 x 12.12	43.19 x 57.59	6.81 x 9.09	32.23 x 42.98	5.09 x 6.78	21.60 x 28.79	3.41 x 4.54	14.40 x 19.20	2.27 x 3.03	10.80 x 14.40	1.70 2.27
		1/3"	75.12 x 100.16	11.85 x 15.80	56.34 x 75.12	8.89 x 11.85	42.04 x 56.06	6.63 x 8.84	28.17 x 37.56	4.44 x 5.93	18.78 x 25.04	2.96 x 3.95	14.08 x 18.78	2.22 2.96
		1/2"	79.01 x 105.35	15.80 x 21.07	75.12 x 100.16	11.85 x 15.80	56.06 x 74.74	8.84 x 11.79	37.56 x 50.08	5.93 x 7.90	25.04 x 33.39	3.95 x 5.27	18.78 x 25.04	2.96 3.95
		2/3"	46.56 x 62.08	21.73 x 28.97	81.48 x 108.64	16.30 x 21.73	77.08 x 102.77	12.16 x 16.22	51.64 x 68.86	8.15 x 10.86	34.43 x 45.91	5.43 x 7.24	25.82 x 34.43	4.07 5.43
		1"	– x –	– x –	– x –	– x –	72.37 x 96.49	17.69 x 23.59	75.12 x 100.16	11.85 x 15.80	50.08 x 66.77	7.90 x 10.53	37.56 x 50.08	5.93 7.90
0.25X		NA	0.0065	0.018	0.0065	0.018	0.0065	0.018	0.0065	0.018	0.0065	0.018	0.0065	0.018
Aux Lens		Res (lp/mm)	20	54	20	54	20	54	20	54	20	54	20	54
29-20-09-000		Mag	0.066	0.42	0.088	0.56	0.12	0.75	0.18	1.13	0.26	1.69	0.35	2.25
		DOF	13	1.8	13	1.8	13	1.8	13	1.8	13	1.8	13	1.8
WD: 310 mm	FOV Cam Format	1/4"	41.46 x 55.29	6.54 x 8.72	31.10 x 41.46	4.91 x 6.54	23.21 x 30.94	3.66 x 4.88	15.55 x 20.73	2.45 x 3.27	10.37 x 13.82	1.64 x 2.18	7.77 x 10.37	1.23 1.64
		1/3"	54.08 x 72.11	8.53 x 11.38	40.56 x 54.08	6.40 x 8.53	30.27 x 40.36	4.78 x 6.37	20.28 x 27.04	3.20 x 4.27	13.52 x 18.03	2.13 x 2.84	10.14 x 13.52	1.60 2.13
		1/2"	56.89 x 75.85	11.38 x 15.17	54.08 x 72.11	8.53 x 11.38	40.36 x 53.82	6.37 x 8.49	27.04 x 36.06	4.27 x 5.69	18.03 x 24.04	2.84 x 3.79	13.52 x 18.03	2.13 2.84
		2/3"	33.52 x 44.70	15.64 x 20.86	58.67 x 78.22	11.73 x 15.64	55.50 x 74.00	8.76 x 11.67	37.18 x 49.58	5.87 x 7.82	24.79 x 33.05	3.91 x 5.21	18.59 x 24.79	2.93 3.91
		1"	– x –	– x –	– x –	– x –	52.10 x 69.47	12.74 x 16.98	54.08 x 72.11	8.53 x 11.38	36.06 x 48.08	5.69 x 7.59	27.04 x 36.06	4.27 5.69
0.5X		NA	0.013	0.035	0.013	0.035	0.013	0.035	0.013	0.035	0.013	0.035	0.013	0.035
Aux Lens		Res (lp/mm)	39	105	39	105	39	105	39	105	39	105	39	105
29-20-38-000		Mag	0.13	0.84	0.18	1.1	0.23	1.5	0.35	2.3	0.53	3.4	0.70	4.5
		DOF	3.4	0.46	3.4	0.46	3.4	0.46	3.4	0.46	3.4	0.46	3.4	0.46
WD: 178 mm	FOV Cam Format	1/4"	20.73 x 27.64	3.27 x 4.36	15.55 x 20.73	2.45 x 3.27	11.60 x 15.47	1.83 x 2.44	7.77 x 10.37	1.23 x 1.64	5.18 x 6.91	0.82 x 1.09	3.89 x 5.18	0.61 0.82
		1/3"	27.04 x 36.06	4.27 x 5.69	20.28 x 27.04	3.20 x 4.27	15.14 x 20.18	2.39 x 3.18	10.14 x 13.52	1.60 x 2.13	6.76 x 9.01	1.07 x 1.42	5.07 x 6.76	0.80 1.07
		1/2"	28.44 x 37.93	5.69 x 7.59	27.04 x 36.06	4.27 x 5.69	20.18 x 26.91	3.18 x 4.25	13.52 x 18.03	2.13 x 2.84	9.01 x 12.02	1.42 x 1.90	6.76 x 9.01	1.07 1.42
		2/3"	16.76 x 22.35	7.82 x 10.43	29.33 x 39.11	5.87 x 7.82	27.75 x 37.00	4.38 x 5.84	18.59 x 24.79	2.93 x 3.91	12.39 x 16.53	1.96 x 2.61	9.30 x 12.39	1.47 1.96
		1"	– x –	– x –	– x –	– x –	26.05 x 34.74	6.37 x 8.49	27.04 x 36.06	4.27 x 5.69	18.03 x 24.04	2.84 x 3.79	13.52 x 18.03	2.13 2.84
0.75X		NA	0.019	0.052	0.019	0.052	0.019	0.052	0.019	0.052	0.019	0.052	0.019	0.052
Aux Lens		Res (lp/mm)	57	156	57	156	57	156	57	156	57	156	57	156
29-20-39-000		Mag	0.20	1.3	0.26	1.7	0.35	2.3	0.53	3.4	0.79	5.1	1.1	6.8
		DOF	1.57	0.21	1.57	0.21	1.57	0.21	1.57	0.21	1.57	0.21	1.57	0.21
WD: 114 mm	FOV Cam Format	1/4"	13.82 x 18.43	2.18 x 2.91	10.37 x 13.82	1.64 x 2.18	7.74 x 10.31	1.22 x 1.63	5.18 x 6.91	0.82 x 1.09	3.46 x 4.61	0.55 x 0.73	2.59 x 3.46	0.41 0.55
		1/3"	18.03 x 24.04	2.84 x 3.79	13.52 x 18.03	2.13 x 2.84	10.09 x 13.45	1.59 x 2.12	6.76 x 9.01	1.07 x 1.42	4.51 x 6.01	0.71 x 0.95	3.38 x 4.51	0.53 0.71
		1/2"	18.96 x 25.28	3.79 x 5.06	18.03 x 24.04	2.84 x 3.79	13.45 x 17.94	2.12 x 2.83	9.01 x 12.02	1.42 x 1.90	6.01 x 8.01	0.95 x 1.26	4.51 x 6.01	0.71 0.95
		2/3"	11.17 x 14.90	5.21 x 6.95	19.56 x 26.07	3.91 x 5.21	18.50 x 24.67	2.92 x 3.89	12.39 x 16.53	1.96 x 2.61	8.26 x 11.02	1.30 x 1.74	6.20 x 8.26	0.98 1.30
		1"	– x –	– x –	– x –	– x –	17.37 x 23.16	4.25 x 5.66	18.03 x 24.04	2.84 x 3.79	12.02 x 16.03	1.90 x 2.53	9.01 x 12.02	1.42 1.90
1.0X		NA	0.026	0.070	0.026	0.070	0.026	0.070	0.026	0.070	0.026	0.070	0.026	0.070
configuration		Res (lp/mm)	78	210	78	210	78	210	78	210	78	210	78	210
NO LENS REQ'D		Mag	0.26	1.7	0.35	2.3	0.47	3.0	0.70	4.5	1.1	6.8	1.4	9
		DOF	0.84	0.12	0.84	0.12	0.84	0.12	0.84	0.12	0.84	0.12	0.84	0.12
WD: 89 mm	FOV Cam Format	1/4"	10.37 x 13.82	1.64 x 2.18	7.77 x 10.37	1.23 x 1.64	5.80 x 7.74	0.92 x 1.22	3.89 x 5.18	0.61 x 0.82	2.59 x 3.46	0.41 x 0.55	1.94 x 2.59	0.31 0.41
		1/3"	13.52 x 18.03	2.13 x 2.84	10.14 x 13.52	1.60 x 2.13	7.57 x 10.09	1.19 x 1.59	5.07 x 6.76	0.80 x 1.07	3.38 x 4.51	0.53 x 0.71	2.54 x 3.38	0.40 0.53
		1/2"	14.22 x 18.96	2.84 x 3.79	13.52 x 18.03	2.13 x 2.84	10.09 x 13.45	1.59 x 2.12	6.76 x 9.01	1.07 x 1.42	4.51 x 6.01	0.71 x 0.95	3.38 x 4.51	0.53 0.71
		2/3"	8.38 x 11.17	3.91 x 5.21	14.67 x 19.56	2.93 x 3.91	13.87 x 18.50	2.19 x 2.92	9.30 x 12.39	1.47 x 1.96	6.20 x 8.26	0.98 x 1.30	4.65 x 6.20	0.73 0.98
		1"	– x –	– x –	– x –	– x –	13.03 x 17.37	3.18 x 4.25	13.52 x 18.03	2.13 x 2.84	9.01 x 12.02	1.42 x 1.90	6.76 x 9.01	1.07 1.42
1.5X		NA	0.040	0.11	0.040	0.11	0.040	0.11	0.040	0.11	0.040	0.11	0.040	0.11
Aux Lens		Res (lp/mm)	120	330	120	330	120	330	120	330	120	330	120	330
29-20-40-000		Mag	0.39	2.5	0.53	3.4	0.70	4.5	1.1	6.8	1.6	10	2.1	14
		DOF	0.35	0.047	0.35	0.047	0.35	0.047	0.35	0.047	0.35	0.047	0.35	0.047
WD: 52 mm	FOV Cam Format	1/4"	6.91 x 9.21	1.09 x 1.45	5.18 x 6.91	0.82 x 1.09	3.87 x 5.16	0.61 x 0.81	2.59 x 3.46	0.41 x 0.55	1.73 x 2.30	0.27 x 0.36	1.30 x 1.73	0.20 0.27
		1/3"	9.01 x 12.02	1.42 x 1.90	6.76 x 9.01	1.07 x 1.42	5.05 x 6.73	0.80 x 1.06	3.38 x 4.51	0.53 x 0.71	2.25 x 3.00	0.36 x 0.47	1.69 x 2.25	0.27 0.36
		1/2"	9.48 x 12.64	1.90 x 2.53	9.01 x 12.02	1.42 x 1.90	6.73 x 8.97	1.06 x 1.42	4.51 x 6.01	0.71 x 0.95	3.00 x 4.01	0.47 x 0.63	2.25 x 3.00	0.36 0.47
		2/3"	5.59 x 7.45	2.61 x 3.48	9.78 x 13.04	1.96 x 2.61	9.25 x 12.33	1.46 x 1.95	6.20 x 8.26	0.98 x 1.30	4.13 x 5.51	0.65 x 0.87	3.10 x 4.13	0.49 0.65
		1"	– x –	– x –	– x –	– x –	8.68 x 11.58	2.12 x 2.83	9.01 x 12.02	1.42 x 1.90	6.01 x 8.01	0.95 x 1.26	4.51 x 6.01	0.71 0.95
2.0X		NA	0.055	0.15	0.055	0.15	0.055	0.15	0.055	0.15	0.055	0.15	0.055	0.15
Aux Lens		Res (lp/mm)	165	450	165	450	165	450	165	450	165	450	165	450
29-20-41-000		Mag	0.53	3.4	0.70	4.5	0.9	6.0	1.4	9.0	2.1	14	2.8	18
		DOF	0.19	0.025	0.19	0.025	0.19	0.025	0.19	0.025	0.19	0.025	0.19	0.025
WD: 32 mm	FOV Cam Format	1/4"	5.18 x 6.91	0.82 x 1.09	3.89 x 5.18	0.61 x 0.82	2.90 x 3.87	0.46 x 0.61	1.94 x 2.59	0.31 x 0.41	1.30 x 1.73	0.20 x 0.27	0.97 x 1.30	0.15 0.20
		1/3"	6.76 x 9.01	1.07 x 1.42	5.07 x 6.76	0.80 x 1.07	3.78 x 5.05	0.60 x 0.80	2.54 x 3.38	0.40 x 0.53	1.69 x 2.25	0.27 x 0.36	1.27 x 1.69	0.20 0.27
		1/2"	7.11 x 9.48	1.42 x 1.90	6.76 x 9.01	1.07 x 1.42	5.05 x 6.73	0.80 x 1.06	3.38 x 4.51	0.53 x 0.71	2.25 x 3.00	0.36 x 0.47	1.69 x 2.25	0.27 0.36
		2/3"	4.19 x 5.59	1.96 x 2.61	7.33 x 9.78	1.47 x 1.96	6.94 x 9.25	1.09 x 1.46	4.65 x 6.20	0.73 x 0.98	3.10 x 4.13	0.49 x 0.65	2.32 x 3.10	0.37 0.49
		1"	– x –	– x –	– x –	– x –	6.51 x 8.68	1.59 x 2.12	6.76 x 9.01	1.07 x 1.42	4.51 x 6.01	0.71 x 0.95	3.38 x 4.51	0.53 0.71

– Limited vignetting at low magnification

– Not a recommended configuration

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OPTEM RetroZoom 65

6.5:1 LENS SYSTEM

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The Optem® RetroZoom 65 Lens System is specifically designed to provide today's machine vision OEM with a plug-and-run replacement for alternative brand 6.5:1 zoom lenses.

Unlike modular Optem Zoom Lenses, The RetroZoom 65 combines zoom, function and illumination options into one compact body. Coupled with parallel performance to competitive lenses, this design assures seamless integration, comparable space requirements and streamlined ordering and inventory.

With a variety of Zoom core options, TV Tubes, and Accessories to choose from, the RetroZoom 65 delivers flexibility and exacting performance, assuring you of seamless changeout and integration.

Proof in the Performance

The RetroZoom 65 delivers parfocal 6.5:1 zoom covering magnifications of 0.7X – 4.5X and resoution of 72 – 240 lp/mm in optimal configuration. Maximum ranges of 3.0X – 21.0X and 144 – 480 lp/mm can be achieved with 2X Dovetail Tube and 2X Auxiliary Lens combinations.

Dependent upon Auxiliary Lens, RetroZoom 65 spans working distances from 35 – 306mm and fields-of-view ranging from 9.4 x 12.6mm to 0.53 x 0.71mm dependent upon camera format.

OPTICAL SYSTEMS

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RetroZoom 65

REQUIRED COMPONENTS



Dovetail Tubes - The critical link between your camera and the zoom core, RetroZoom 65 Dovetail tubes are available in any number of configurations, mount types and magnifications to have further effect on your on screen image.

Zoom & Function Core - RetroZoom 65 cores are available in manual base configuration, or with 3mm or 12mm fine focus. All can be specified with coaxial illumination for use with Infinity-Corrected Objectives or with Auxiliary Lenses.

Auxiliary Lenses - For added magnification and greater fields-of-view, incorporate one of seven magnifying or reducing Auxiliary Lenses below your RetroZoom 65.

ILLUMINATION OPTIONS

The RetroZoom 65 is available with a full compliment of illumination accessories to ensure you of the optimal lighting for your subject and application.



Choose from a Ring Light to mount below your Infinity-Corrected Objective or any number of Coaxial Zoom Cores that accept 8, 10 or 12mm coaxial cables. For maximum illumination control and uniformity, specify the 110V or 220V Optem® VSi Light Sources.

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Achieve significantly higher magnification and resolution. Combine your Zoom 70XL with the expanded line of Optem Long-Working Distance Objectives.

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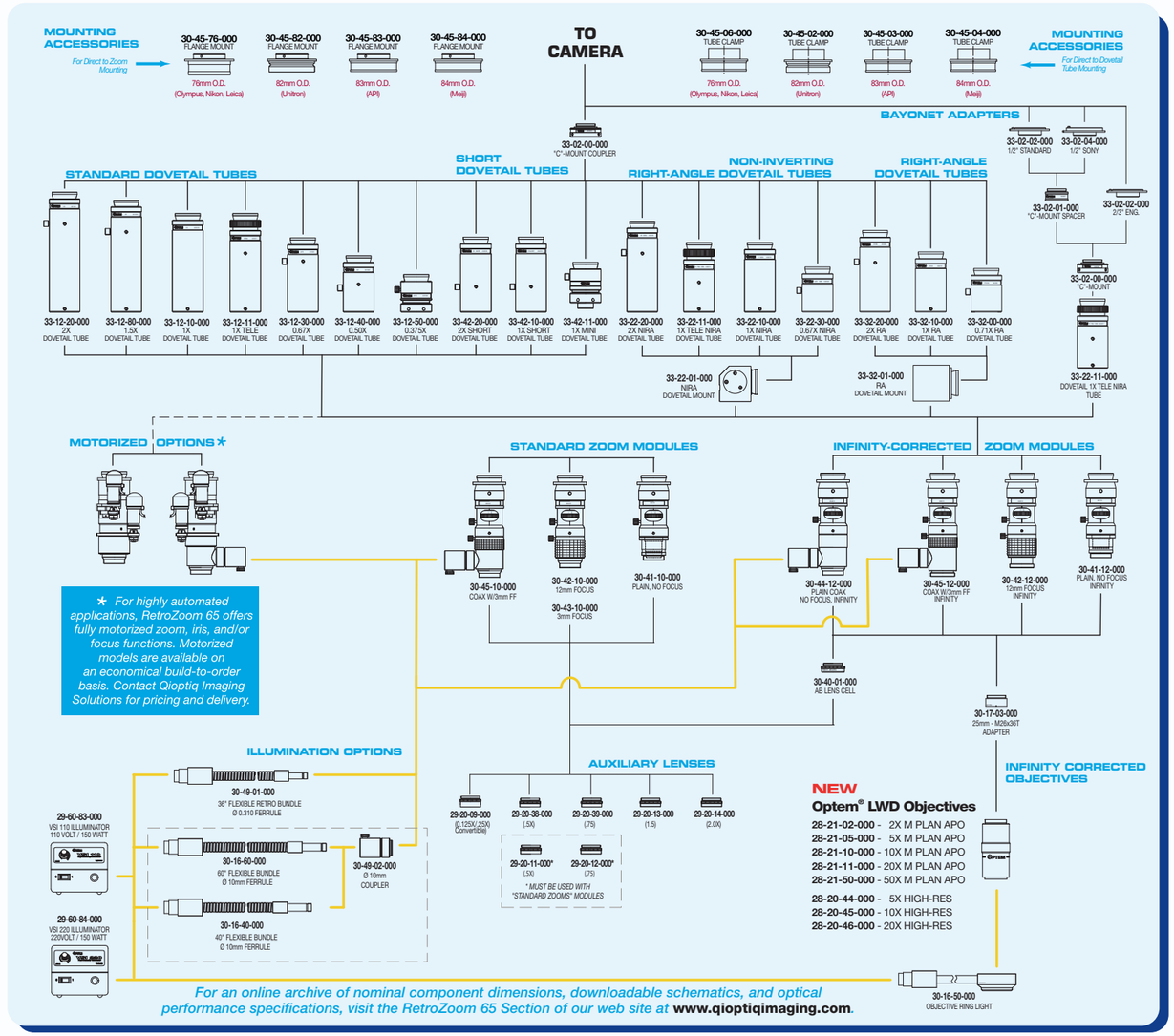
Optem High-Resolution – Specifically designed to capture maximum resolution at the high-end magnifications of Optem Lenses, the 5X, 10X and 20X Optem HR Objectives are ideal for applications where distinguishing every finite detail is critical.

MOTORIZATION OPTIONS

Although not offered as standard delivery items within the RetroZoom 65 line, fully motorized zoom and focus functions can be specified. Choose from DC and stepper motor options depending upon your automation and control needs. Available with MicroMo or Vexta motors, and stepper options with Hall Effect sensors.



www.qioptiqimaging.com



For an online archive of nominal component dimensions, downloadable schematics, and optical performance specifications, visit the RetroZoom 65 Section of our web site at **www.qioptiqimaging.com**.

Contact Qioptiq Imaging Solutions today to specify a reliable and streamlined second source to your current 6.5:1 zoom lens.



RETROZOOM 65

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