

NIR ZOOM 70XL

7:1 OPTICAL SYSTEM

630 - 2000nm
250,000 Cycles Guaranteed

QIOPTIQ
Optics with Intelligence



OPTICALLY DESIGNED FOR NEAR-INFRARED PRECISION

The Optem™ NIR Zoom 70XL Optical System is specifically designed to meet the machine vision, inspection and R&D needs of specialized near-infrared imaging applications.

Chromatically corrected for optimal performance across the 630 – 2000nm spectral band, the NIR Zoom 70XL incorporates a revolutionary anti-reflection coating for increased transmission and exceptional image quality and contrast. The advanced optical design maintains parfocality and delivers 0.024 – 0.80 nominal NA across the entire zoom range.

From semiconductors to telecommunications... from forensics to pharmaceuticals... the NIR Zoom 70XL delivers superior optical performance to OEMs and researchers for specialized applications including: laser diode inspection; fiber alignment; backside viewing through silicon thin sections; and even counterfeit and forgery detection... to name a few.

MECHANICALLY DESIGNED TO GO THE DISTANCE

Backed by superior engineering and quality materials, the NIR Zoom 70XL Optical System represents the pinnacle in heavy-duty cycling reliability. Qioptiq Imaging Solutions guarantees a minimum of 250,000 cycles without mechanical failure! Extreme durability makes the NIR Zoom 70XL ideal for automated applications.



With a 7:1 zoom ratio, and a magnification range of 0.75X – 5.25X, the NIR Zoom 70XL provides dependable, high-quality optics at an affordable price.

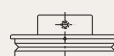
Flexibility and modularity are standard features. Mix and match the Upper Zoom Modules with the Lower Function Modules for the combination that best fits your needs. The NIR Zoom 70XL line offers a series of Non-Modular Models that are fully motorized (DC or Stepper) and are completely assembled for more streamlined integration.

Tube Clamps

30-25-83-000
83mm O.D.
TV Tube Adapter



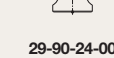
30-25-82-000
82mm O.D.
TV Tube Adapter
(Unitron)



29-50-10-000
Universal Clamp
(top view)



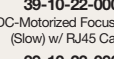
29-90-13-000
Cover



29-90-24-000
Stepping-Motor Drive
(Custom Controller Required)



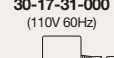
39-10-21-000
DC-Motorized Zoom Drive
w/ RJ45 Cable



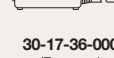
39-10-22-000
DC-Motorized Focus Drive
(Slow) w/ RJ45 Cable



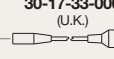
39-10-23-000
DC-Motorized Focus Drive
Mitutoyo w/ RJ45 Cable



30-17-31-000
(110V 60Hz)



30-17-32-000
(230V 50Hz)



30-17-36-000
(European)



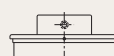
30-17-33-000
(J.K.)



30-25-76-000
76mm O.D.
TV Tube Adapter
(Olympus, Nikon, Leica)



30-25-84-000
84mm O.D.
TV Tube Adapter
(Meiji)

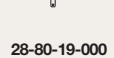


39-15-34-000
Flat Mount
(top view)



for use with
motorized versions only

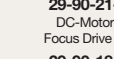
28-80-18-000
(110V)



28-80-19-000
(220V)



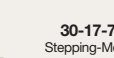
29-90-20-000
DC-Motorized Zoom Drive



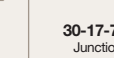
29-90-21-000
DC-Motorized Focus Drive (Slow)



29-90-18-000
DC-Motor Drive
Mitutoyo



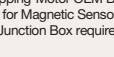
30-17-70-000
Stepping-Motor Driver
for Magnetic Sensor
(Junction Box required)



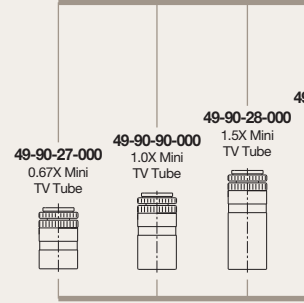
30-17-74-000
Junction Box
for Magnetic Sensor



30-17-75-000
Stepping-Motor OEM Board
for Magnetic Sensor
(Junction Box required)

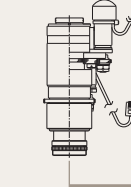


TV Tubes

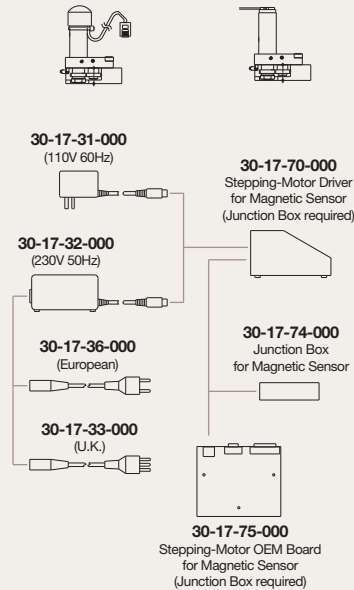


Non-M

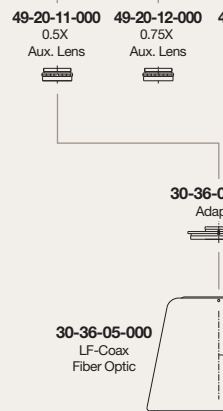
49-26-20-000
NIR Z70XL 12mm Focus
DC Motorized both



Motorization Accessories

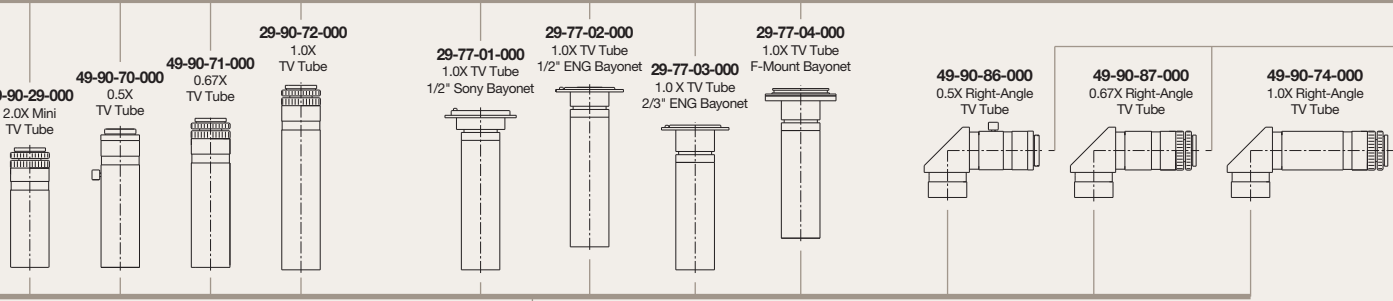


Auxiliary

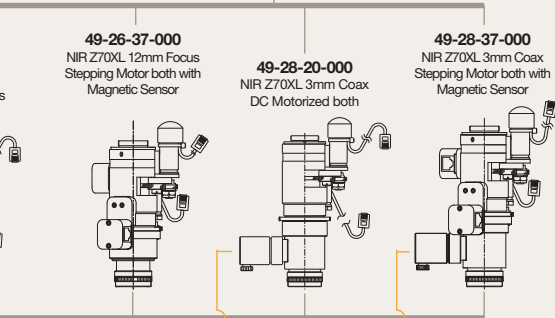


NIR ZOOM 70XL SYSTEM DIAGRAM

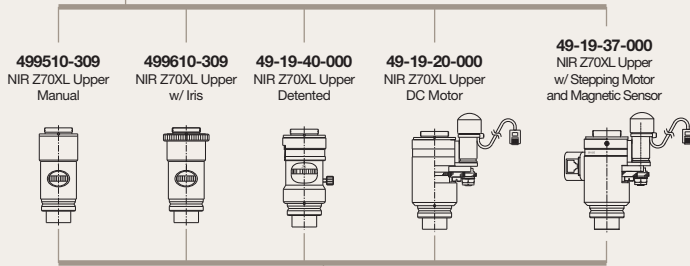
CONNECT CAMERA TO TV TUBE



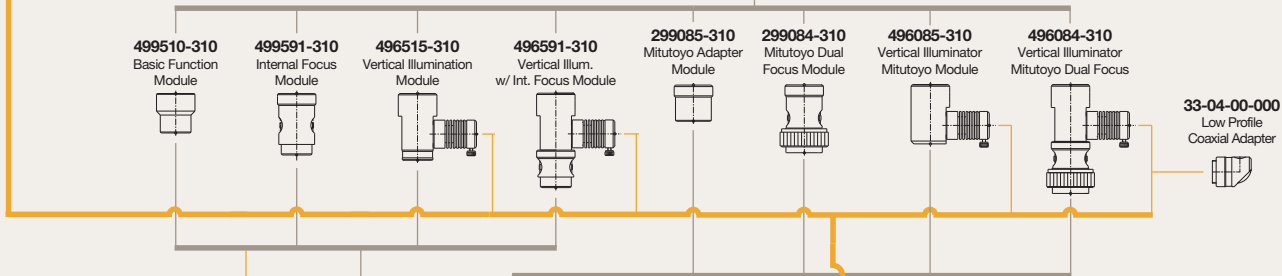
Modular Zooms



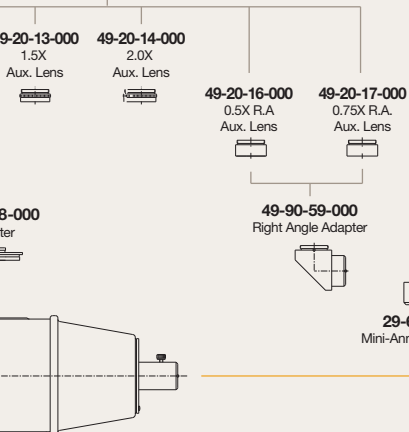
Upper Zoom Modules



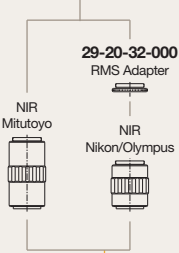
Lower Function Modules



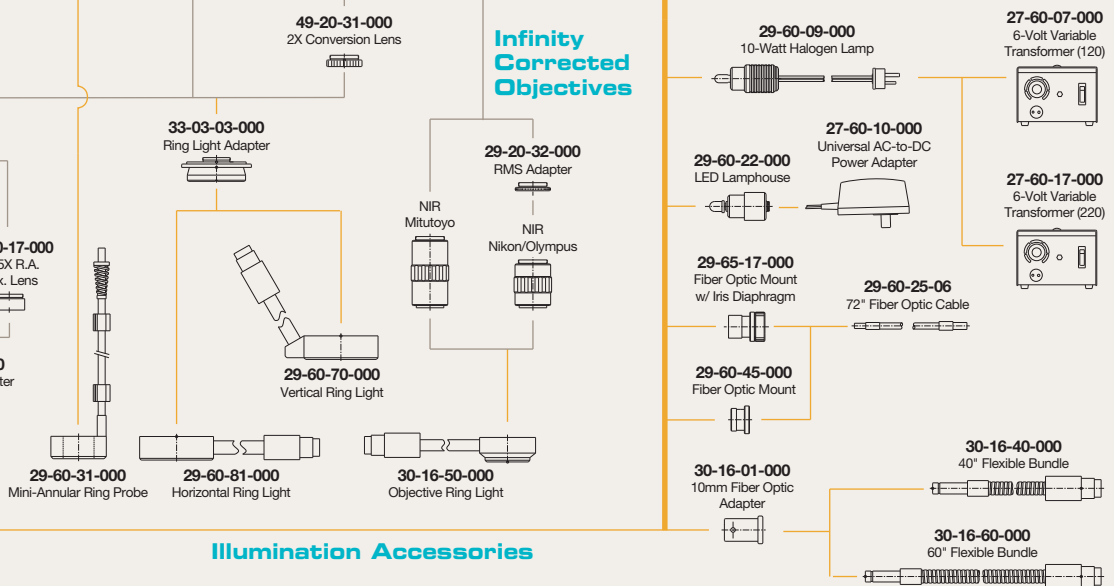
Lenses



Infinity Corrected Objectives



Illumination Accessories



OPTICAL PERFORMANCE

AUXILIARY LENS		0.5X TV TUBE		0.67X TV TUBE		1.0X TV TUBE		1.5X TV TUBE		2.0X TV TUBE		
		Low	High	Low	High	Low	High	Low	High	Low	High	
0.5X 49-20-11	N.A. MAG.	0.012 0.19	0.040 1.3	0.012 0.25	0.040 1.7	0.012 0.38	0.040 2.6	0.012 0.56	0.040 3.9	0.012 0.75	0.040 5.2	
181mm WORKING DISTANCE	F.O.V. (mm) camera format	1/4" 1/3" 1/2" 2/3"	14.5x19.4 19.1x25.5 25.5x34.0 —	2.0x2.7 2.7x3.6 3.6x4.8 —	10.9x14.5 14.3x19.1 19.1x25.5 26.3x35.1	1.5x2.0 2.0x2.7 2.7x3.6 3.7x5.0	7.2x9.7 9.5x12.7 12.7x17.0 17.5x23.4	1.0x1.3 1.3x1.8 1.8x2.4 2.5x3.3	4.8x6.4 6.3x8.5 8.5x11.3 11.7x15.6	0.69x0.92 0.91x1.2 1.2x1.6 1.6x2.2	3.6x4.8 4.7x6.3 6.3x8.5 8.7x11.7	0.52x0.69 0.68x0.91 0.91x1.2 1.2x1.6
0.75X 49-20-12	N.A. MAG.	0.018 0.28	0.060 2.0	0.018 0.38	0.060 2.6	0.018 0.56	0.060 3.9	0.018 0.84	0.060 5.9	0.018 1.1	0.060 7.9	
110mm WORKING DISTANCE	F.O.V. (mm) camera format	1/4" 1/3" 1/2" 2/3"	9.6x12.9 12.7x17.0 17.0x22.7 —	1.3x1.8 1.8x2.4 2.4x3.2 —	7.2x9.7 9.5x12.7 12.7x17.0 17.5x23.4	1.0x1.3 1.3x1.8 1.8x2.4 2.5x3.3	4.8x6.4 6.3x8.5 8.5x11.3 11.7x15.6	0.69x0.92 0.91x1.2 1.2x1.6 1.6x2.2	3.2x4.3 4.2x5.6 5.6x7.5 7.8x10.4	0.46x0.61 0.61x0.81 0.81x1.0 1.1x1.4	2.4x3.2 3.1x4.2 4.2x5.6 5.6x7.8	0.34x0.46 0.45x0.61 0.61x0.81 0.84x1.1
1.0X no aux. lens	N.A. MAG.	0.024 0.38	0.080 2.6	0.024 0.50	0.080 3.5	0.024 0.75	0.080 5.2	0.024 1.1	0.080 7.9	0.024 1.5	0.080 10.5	
89mm WORKING DISTANCE	F.O.V. (mm) camera format	1/4" 1/3" 1/2" 2/3"	7.2x9.7 9.5x12.7 12.7x17.0 —	1.0x1.3 1.3x1.8 1.8x2.4 —	5.4x7.2 7.1x9.5 9.5x12.7 13.1x17.5	0.78x1.0 1.0x1.3 1.3x1.8 1.8x2.5	3.6x4.8 4.7x6.3 6.3x8.5 8.7x11.7	0.52x0.69 0.68x0.91 0.91x1.2 1.2x1.6	2.4x3.2 3.1x4.2 4.2x5.6 5.8x7.8	0.34x0.46 0.45x0.61 0.61x0.81 0.84x1.1	1.8x2.4 2.3x3.1 3.1x4.2 4.3x5.8	0.26x0.34 0.34x0.45 0.45x0.61 0.63x0.84
1.5X 49-20-13	N.A. MAG.	0.036 0.56	0.12 3.9	0.036 0.75	0.12 5.2	0.036 1.1	0.12 7.9	0.036 1.7	0.12 11.8	0.036 2.3	0.12 15.7	
53mm WORKING DISTANCE	F.O.V. (mm) camera format	1/4" 1/3" 1/2" 2/3"	4.8x6.4 6.3x8.5 8.5x11.3 —	0.69x0.92 0.91x1.2 1.2x1.6 —	3.6x4.8 4.7x6.3 6.3x8.5 8.7x11.7	0.52x0.69 0.68x0.91 0.91x1.2 1.2x1.6	2.4x3.2 3.1x4.2 4.2x5.6 5.8x7.8	0.34x0.46 0.45x0.61 0.61x0.81 0.84x1.1	1.6x2.1 2.1x2.8 2.8x3.7 3.9x5.2	0.23x0.30 0.30x0.40 0.40x0.54 0.56x0.74	1.2x1.6 1.5x2.1 2.1x2.8 2.9x3.9	0.17x0.23 0.22x0.30 0.30x0.40 0.42x0.56
2.0X 49-20-14	N.A. MAG.	0.048 0.75	0.16 5.2	0.048 1.0	0.16 7.0	0.048 1.5	0.16 10.5	0.048 2.3	0.16 15.7	0.048 3.0	0.16 21.0	
35mm WORKING DISTANCE	F.O.V. (mm) camera format	1/4" 1/3" 1/2" 2/3"	3.6x4.8 4.7x6.3 6.3x8.5 —	0.52x0.69 0.68x0.91 0.91x1.2 —	2.7x3.6 3.5x4.7 4.7x6.3 6.5x8.7	0.39x0.52 0.51x0.68 0.68x0.91 0.94x1.2	1.8x2.4 2.3x3.1 3.1x4.2 4.3x5.8	0.26x0.34 0.34x0.45 0.45x0.61 0.63x0.84	1.2x1.6 1.5x2.1 2.1x2.8 2.9x3.9	0.17x0.23 0.22x0.30 0.30x0.40 0.42x0.56	0.90x1.2 1.1x1.5 1.5x2.1 2.1x2.9	0.13x0.17 0.17x0.22 0.22x0.30 0.31x0.42

N.A. = Numeral Aperture MAG. = Magnification F.O.V. = Field-of-View "—" Indicates limited zoom range due to vignetting

NOMINAL DIMENSIONS

