

6.5X Motorized Zoom Rail Lens

LZG-63105-A

A precision motorized zoom lens for automated inspection, measurement and machine vision imaging. The rail-guided structure supports fast, stable and repeatable magnification adjustment.



Product Highlights

- ◆ High 6.5X zoom ratio with a 0.7X to 4.5X optical magnification range.
- ◆ Rail-guided mechanism improves zoom stability and service life.
- ◆ High-contrast optical design with centering adjustment to reduce image degradation caused by element decentering.
- ◆ Fast and accurate motorized zooming for automated inspection systems.
- ◆ Constant nominal working distance of 87 +/- 2 mm across the zoom range.

General Specifications

Parameter	Specification	Parameter	Specification
Zoom ratio	6.5X	Optical magnification	0.7X-4.5X
Working distance	87 +/- 2 mm	Maximum sensor	2/3 inch
Camera mount	C-Mount	Zoom method	Motorized

Optical Performance

Magnification	DOF (mm)	NA	F-No.	Resolution (um)	TV Distortion
0.7X	1.90	0.030	11.6	11.18	0.019%
1.0X	0.952	0.042	12.1	7.99	0.035%
1.5X	0.440	0.060	12.5	5.59	0.002%
2.0X	0.290	0.070	14.2	4.79	0.003%
2.5X	0.230	0.070	17.8	4.79	0.004%
3.0X	0.160	0.085	17.6	3.95	0.001%
3.5X	0.130	0.085	20.5	3.95	0.001%
4.0X	0.120	0.085	23.5	3.95	0.002%
4.5X	0.100	0.085	26.5	3.95	0.002%

Field of View (D x H x V)

Magnification	2/3-inch Sensor	1/2-inch Sensor	1/3-inch Sensor
0.7X	15.71 x 12.57 x 9.43	11.43 x 9.14 x 6.86	8.57 x 6.86 x 5.14
1.0X	11.00 x 8.80 x 6.60	8.00 x 6.40 x 4.80	6.00 x 4.80 x 3.60
1.5X	7.33 x 5.87 x 4.40	5.33 x 4.27 x 3.20	4.00 x 3.20 x 2.40
2.0X	5.50 x 4.40 x 3.30	4.00 x 3.20 x 2.40	3.00 x 2.40 x 1.80
2.5X	4.40 x 3.52 x 2.64	3.20 x 2.56 x 1.92	2.40 x 1.92 x 1.44
3.0X	3.67 x 2.93 x 2.20	2.67 x 2.13 x 1.60	2.00 x 1.60 x 1.20
3.5X	3.14 x 2.51 x 1.89	2.29 x 1.83 x 1.37	1.71 x 1.37 x 1.03
4.0X	2.75 x 2.20 x 1.65	2.00 x 1.60 x 1.20	1.50 x 1.20 x 0.90
4.5X	2.44 x 1.96 x 1.47	1.78 x 1.42 x 1.07	1.33 x 1.07 x 0.80

All field-of-view values are in millimeters.

Compatible Optical Options

Category	Available Options
TV tubes	0.5X, 0.67X, 1X and 2X TV tubes
Mini TV tubes	1X and 2X mini TV tubes
Right-angle TV tubes	90-degree 1X and 90-degree 2X TV tubes
APO system	APO adapters; 2X, 5X, 10X, 20X and 50X APO objectives
Auxiliary lenses	0.25X, 0.3X, 0.5X, 0.75X, 1.5X and 2X
Other accessory	90-degree adapter

Typical Applications

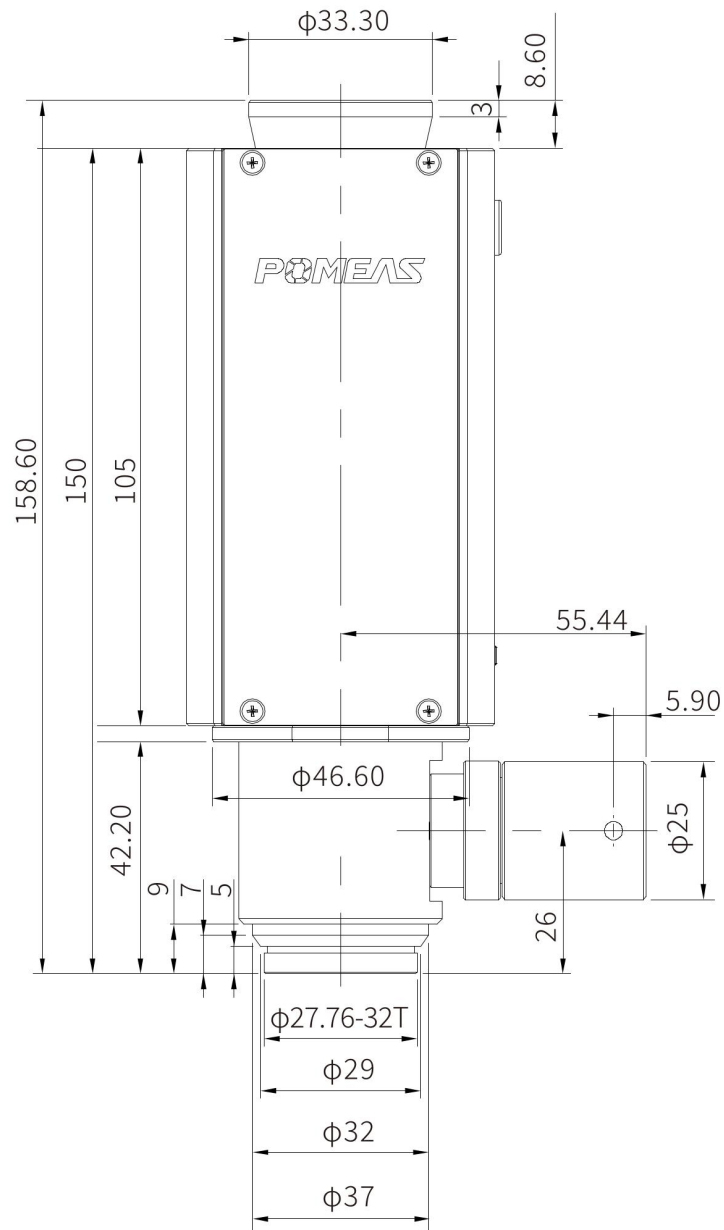
- ◆ PCB and electronic component inspection
- ◆ Surface defect inspection
- ◆ Precision dimensional measurement
- ◆ Assembly alignment and positioning
- ◆ Semiconductor and connector inspection
- ◆ Laboratory imaging and observation

Selection Notes

Select the camera according to the required field of view, pixel size and inspection accuracy. Confirm the controller, cable and electrical interface before ordering. Optional optical components may change the final magnification, field of view and working distance.

Mechanical Dimensions

Unit: mm



Key dimensions: overall length 158.60 mm; main body length 150 mm; upper housing width 33.30 mm; maximum outer diameter 46.60 mm; front thread 27.76-32T.