

## High Resolution Zoom Lens

# ML-Z07545HR Series

To exploit the full potential of high pixel count cameras, this unique high NA, high resolution telecentric zoom lens series has a long working distance and wide zoom ratio as well as adjustable iris & focus. Available with an integrated coaxial illumination system as well as other options, this lens series is versatile and ideal for extremely accurate gauging and inspection applications at various field of views (FOVs).

- Zoom Ratio 6:1 0.75x – 4.5x
- Effective F No 8.4 – Variable iris
- Focus Range +/- 3mm
- NA 0.12 (4.5x)
- Working Distance = 70.9 mm



### Lineup : 2 Models



ML-Z07545HR



ML-Z07545HRD  
Coaxial Illumination Model D

Model	Magnification	O/I	WD	Motor Option	Focus	Zoom Position	Resolution	Depth of Field	NA	Effective Fno	TV Distortion	Largest Compatible Camera	Weight
ML Z07545HR	0.75x ~ 4.5x (Zoom ratio of 6:1)	303.9 mm	70.9 mm	Not Available (Manual Zoom)	±3mm	at 0.75x	7.5µm	1.2mm	0.04	8.4	0.02% or less	1/2"	600g
at 2x						4µm	0.2mm	0.08	12	0.01% or less	1/2"	610g	

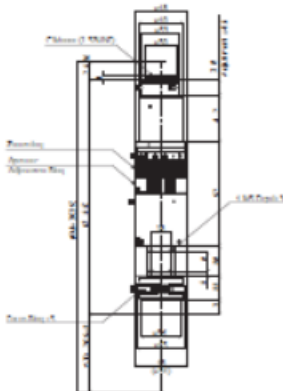
\* Effective F No indicates designed value when iris is open

\* Calculated based on permissible circle of confusion on the image formation side:40µm

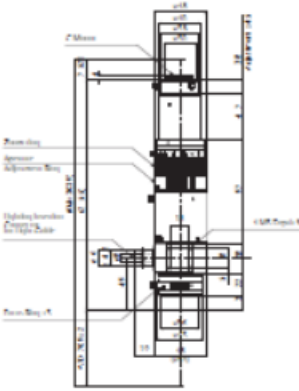


# Pyramid Imaging

ML-Z07545HR



ML-Z07545HRD



## Front Converter Lens (Optional) ML-ZHR Series

Attach to the end of the lens to change magnification and WD.

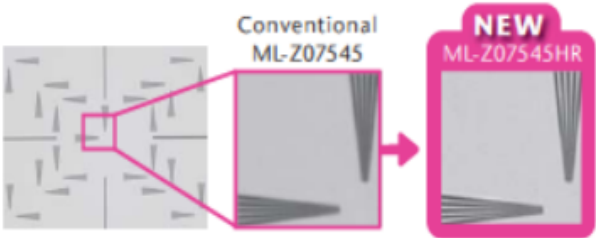


## Magnification and W.D. chart

Model	Focus Position	Magnification Range		WD	Coaxial light Matching Chart
		Low	High		
ML-Z025HR	Near	0.21x	~ 1.30x	201.5mm	▲ Coaxial Illumination Cannot Cover Entire View
	Middle	0.19x	~ 1.14x	243mm	
	Far	0.16x	~ 0.97x	299mm	
ML-Z03HR	Near	0.25x	~ 1.52x	170mm	▲ Coaxial Illumination Cannot Cover Entire View
	Middle	0.23x	~ 1.36x	200mm	
	Far	0.20x	~ 1.21x	237mm	
ML-Z05HR	Near	0.39x	~ 2.38x	107mm	▲ Coaxial Illumination Cannot Cover Entire View
	Middle	0.38x	~ 2.27x	118mm	
	Far	0.36x	~ 2.16x	131mm	
ML-Z075HR	Near	0.57x	~ 3.46x	76.4mm	▲ Coaxial Illumination Cannot Cover Entire View
	Middle	0.56x	~ 3.40x	81.7mm	
	Far	0.55x	~ 3.35x	87.1mm	
ML-Z135HR	Near	1.00x	~ 6.05x	37mm	○
	Middle	1.01x	~ 6.12x	38.6mm	
	Far	1.02x	~ 6.17x	40mm	
ML-Z20HR	Near	1.45x	~ 8.80x	17mm	○
	Middle	1.49x	~ 9.02x	18mm	
	Far	1.53x	~ 9.25x	18.8mm	

\* Indicated values are based on calculation and not guaranteed values.  
 \* When you used ML-Z025HR, ML-Z03HR, ML-Z05HR, ML-Z075HR, coaxial illumination does not cover entire view

## HR Series Improves Resolution



## Motorized Zoom Options Available



Motor type :  
Stepping motor with limit sensors



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