

High-Resolution Telecentric Lenses SE-65-M/SE-110-M Series

Compatible with 5-megapixel cameras*¹

Ideal for the combination with megapixel cameras*²

*¹ 2/3" L (5.98 mm height, 11.26 mm width) and 3.45 μm/pixel, Applicable models: SE-110VT03-5M and SE-110ST03-5M

*² Approx. 4.65 μm/pixel min.

Total of **28** Models

SE-65-M series (WD 65 mm)

Coaxial type, 0.5x to 6.0x



Straight type, 0.5x to 6.0x



SE-110-M series (WD 110 mm)

Coaxial type 0.3x to 4.0x



Straight type 0.3x to 4.0x



Specifications (SE-65-M Series)

Model name (Coaxial type)	SE-65VT05-M	SE-65VT08-M	SE-65VT10-M	SE-65VT20-M	SE-65VT40-M	SE-65VT60-M
Model name (Straight type)	SE-65ST05-M	SE-65ST08-M	SE-65ST10-M	SE-65ST20-M	SE-65ST40-M	SE-65ST60-M
Optical magnification	0.5x±5%	0.8x±5%	1.0x±5%	2.0x±5%	4.0x±5%	6.0x±5%
WD	65.1±2 mm	65.4±2 mm	65.1±2 mm	65.2±2 mm	65.3±2 mm	64±2 mm
Depth of field ^{1,2}	2.87 mm	1.18 mm	0.79 mm	0.26 mm	0.08 mm	0.06 mm
Resolution ^{2,3}	12.0 μm	8.0 μm	6.7 μm	4.4 μm	2.9 μm	2.9 μm
NA ²	0.028	0.042	0.05	0.076	0.118	0.118
Actual F-number (F _e) ²	9.0	9.4	9.8	12.9	16.9	25.5
TV distortion ²	-0.001%	+0.006%	-0.023%	+0.021%	-0.003%	-0.026%
Weight (Coaxial)	80 g	62 g	54 g	55 g	85 g	100 g
Weight (Straight)	77 g	57 g	49 g	49 g	83 g	98 g
Mount	C mount					
Maximum applicable image size	2/3 inch (Ø11.00 mm)			2/3 inch L (Ø12.75 mm) ⁴		
Physical distance (O/I) ²	171.1 mm	171.5 mm	161 mm	160.9 mm	184.5 mm	216.7 mm

*¹ The depth of field is a value calculated using 40 μm as the permissible circle of confusion.

*² These are calculated values.

*³ The resolution is a value calculated using a 550 nm wavelength.

*⁴ 2/3 inch L (Length: 5.98 mm, Width: 11.26 mm) The specifications above are values based on the optical design. Differences between individual devices may occur due to assembly accuracy, etc.

Field of Vision Chart (SE-65-M Series)

These values are for reference.

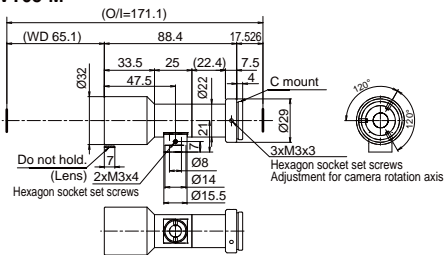
Model name (Coaxial type)	SE-65VT05-M	SE-65VT08-M	SE-65VT10-M	SE-65VT20-M	SE-65VT40-M	SE-65VT60-M
Model name (Straight type)	SE-65ST05-M	SE-65ST08-M	SE-65ST10-M	SE-65ST20-M	SE-65ST40-M	SE-65ST60-M
Optical magnification	0.5x	0.8x	1.0x	2.0x	4.0x	6.0x
Sensor size	2/3 inch			2/3 inch L		
Length	13.20 mm	8.25 mm	6.60 mm	2.99 mm	1.50 mm	1.00 mm
Width	17.60 mm	11.0 mm	8.80 mm	5.63 mm	2.82 mm	1.88 mm
Diagonal	22.00 mm	13.75 mm	11.00 mm	6.38 mm	3.19 mm	2.13 mm

For other fields of vision, refer to the field of vision chart in the Technical Guide. ▶ P.332

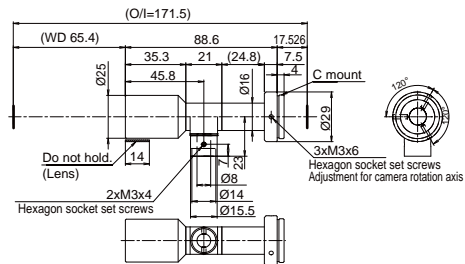
Dimensions (SE-65-M Series, mm)

Coaxial type

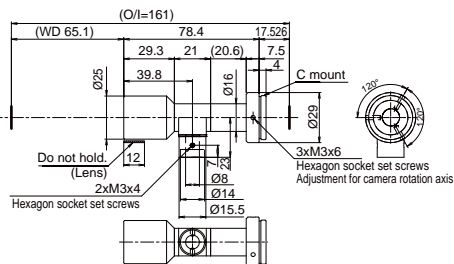
SE-65VT05-M



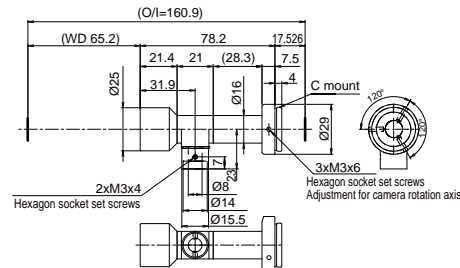
SE-65VT08-M



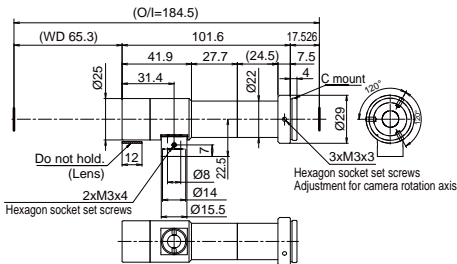
SE-65VT10-M



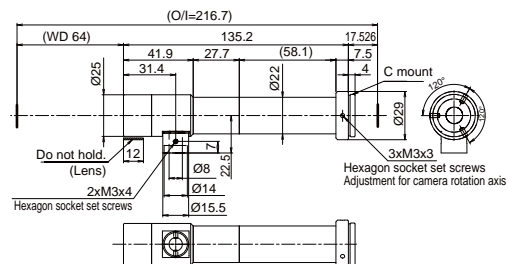
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SE-65VT40-M

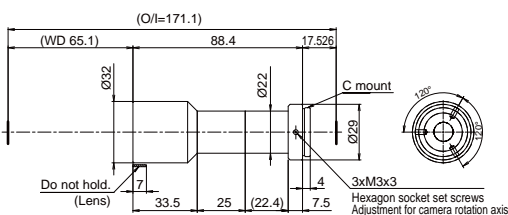


SE-65VT60-M

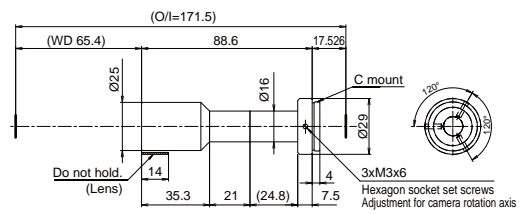


Straight type

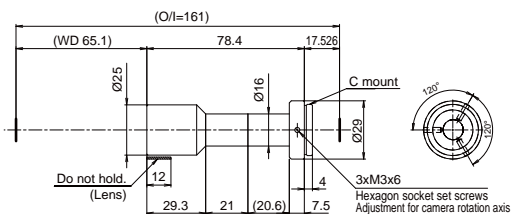
SE-65ST05-M



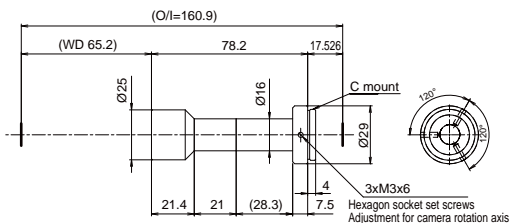
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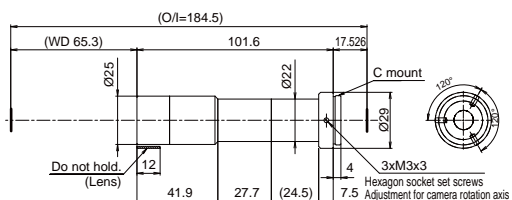
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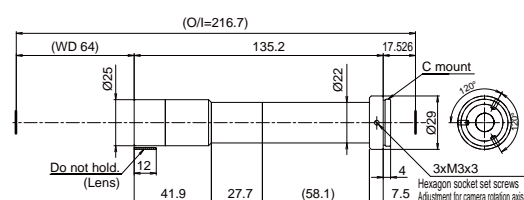
SE-65ST20-M



SE-65ST40-M



SE-65ST60-M



Direct Lighting	LDR2 LDR2-LA LDR-LA1 SQR SQR-TP
Diffused Lighting	HPR2 LFR LKR FPR FPQ2
Direct Lighting	LDL2 LDLB HLDL2 HL
Diffused Lighting	TH2 (5 types) TH LFL HPD2 LDM2 LAV PDM LFX3 LFX3-PT LVF3
Collimated Lighting	MSU MFU
Strobe Lighting	PF
Water-proof Lighting	HLDR-IP/ HSL-PCL
Ultraviolet Lighting	UV2 UV LNSP-UV-FN
Intensity Control Lighting	IR2 IU
Spot Lighting, Etc.	HLV3 HLV2 LV LSP HFS/HFR HLV3-NR HLV3-3M-RGB-4 HLV2-NR HLV2-3M-RGB-3W PFBR PFB3 PFB2
Convergent Lighting	LNLP LNSP2 LNSP Coaxial Units LNSP-FN LN/LN-HK
Diffused Lighting	LNSD LND2 LHND LT LNV
Oblique/Angled Lighting	LNDG LNS2 LNS1 LNS1-FN Telecentric Lenses Macro Lenses

SE-65-M/ SE-110-M Series



Specifications (SE-110-M Series)

5 M

Model name (Coaxial type)	SE-110VT03-5M	SE-110VT05-M	SE-110VT08-M	SE-110VT10-M	SE-110VT15-M	SE-110VT20-M	SE-110VT30-M	SE-110VT40-M
Model name (Straight type)	SE-110ST03-5M	SE-110ST05-M	SE-110ST08-M	SE-110ST10-M	SE-110ST15-M	SE-110ST20-M	SE-110ST30-M	SE-110ST40-M
Optical magnification	0.3x±5%	0.5x±5%	0.8x±5%	1.0x±5%	1.5x±5%	2.0x±5%	3.0x±5%	4.0x±5%
WD	110.3±3.3 mm	110.8±3.3 mm	110.1±3.3 mm	110.5±3.3 mm	110.1±3.3 mm	110.6±3.3 mm	111.4±3.3 mm	110.5±3.3 mm
Depth of field ^{1,2}	5.75 mm	3.03 mm	1.31 mm	0.82 mm	0.42 mm	0.27 mm	0.14 mm	0.11 mm
Resolution ^{2,3}	14.5 μm	12.7 μm	8.8 μm	6.9 μm	5.2 μm	4.5 μm	3.6 μm	3.7 μm
NA ²	0.023	0.026	0.038	0.049	0.064	0.075	0.094	0.091
Actual F-number (F _e) ²	6.5	9.4	10.3	10.2	11.7	13.0	16.0	21.9
TV distortion ²	+0.026%	-0.009%	-0.026%	-0.0007%	+0.024%	-0.018%	+0.008%	-0.004%
Weight (Coaxial)	212 g	131 g	106 g	108 g	110 g	115 g	166 g	121 g
Weight (Straight)	211 g	128 g	103 g	105 g	108 g	113 g	160 g	120 g
Mount	C mount							
Maximum applicable image size	2/3 inch L ⁴ (Ø12.75 mm)	2/3 inch (Ø11.00 mm)	2/3 inch L ⁴ (Ø12.75 mm)				2/3 inch (Ø11.00 mm)	
Physical distance (O/I) ²	268.2 mm	259.7 mm	254.2 mm	255.8 mm	256.9 mm	255.8 mm	272.9 mm	256.7 mm

¹ The depth of field is a value calculated using 40 μm as the permissible circle of confusion.

² These are calculated values.

³ The resolution is a value calculated using a 550 nm wavelength.

⁴ 2/3 inch L (Length: 5.98 mm, Width: 11.26 mm) The specifications above are values based on the optical design. Differences between individual devices may occur due to assembly accuracy, etc.

Field of Vision Chart (SE-110-M Series)

These values are for reference.

5 M

Model name (Coaxial type)	SE-110VT03-5M	SE-110VT05-M	SE-110VT08-M	SE-110VT10-M	SE-110VT15-M	SE-110VT20-M	SE-110VT30-M	SE-110VT40-M	
Model name (Straight type)	SE-110ST03-5M	SE-110ST05-M	SE-110ST08-M	SE-110ST10-M	SE-110ST15-M	SE-110ST20-M	SE-110ST30-M	SE-110ST40-M	
Optical magnification	0.3x	0.5x	0.8x	1.0x	1.5x	2.0x	3.0x	4.0x	
Sensor size	2/3 inch L	2/3 inch	2/3 inch L					2/3 inch	
Length	19.95 mm	13.20 mm	7.48 mm	5.98 mm	3.99 mm	2.99 mm	1.99 mm	1.65 mm	
Width	37.55 mm	17.60 mm	14.08 mm	11.26 mm	7.51 mm	5.63 mm	3.75 mm	2.20 mm	
Diagonal	42.52 mm	22.00 mm	15.94 mm	12.75 mm	8.50 mm	6.38 mm	4.25 mm	2.75 mm	

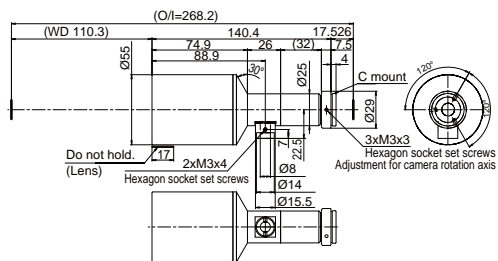
For other fields of vision, refer to the field of vision chart in the Technical Guide. ▶ P.332

Dimensions (SE-110-M Series, mm)

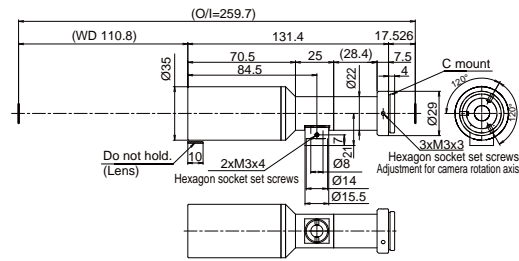
Coaxial type

SE-110VT03-5M

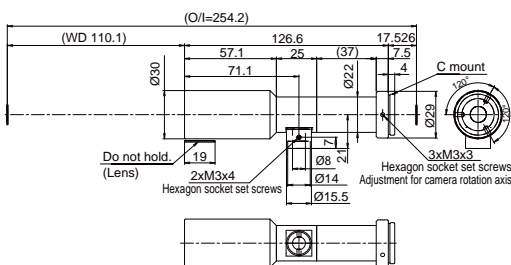
5 M



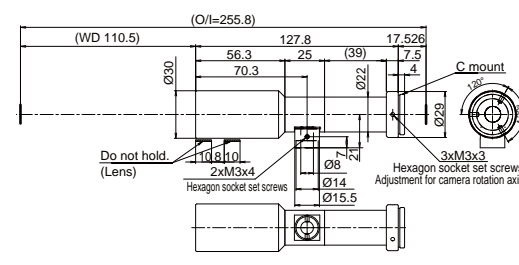
SE-110VT05-M



SE-110VT08-M



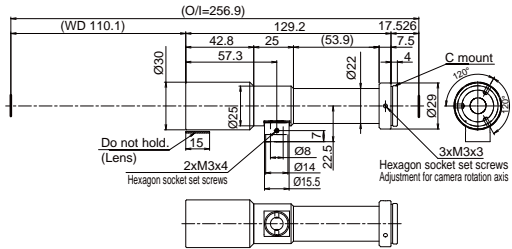
SE-110VT10-M



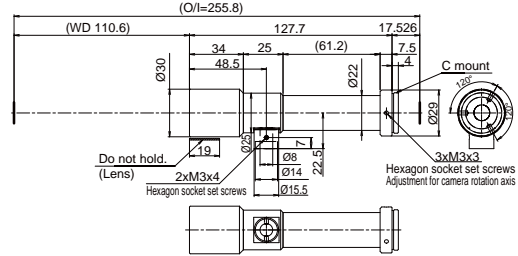
Dimensions (SE-110-M Series, mm, Continued)

Coaxial type (continued)

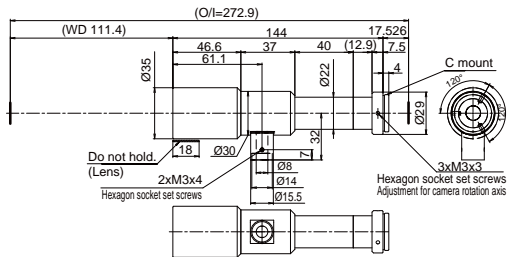
SE-110VT15-M



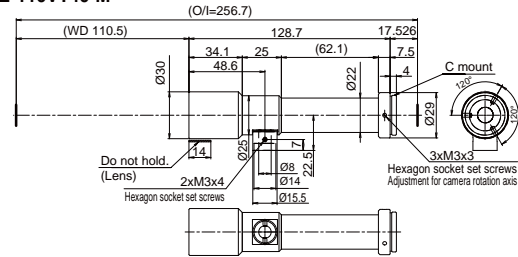
SE-110VT20-M



SE-110VT30-M

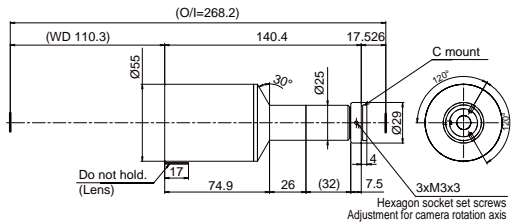


SE-110VT40-M

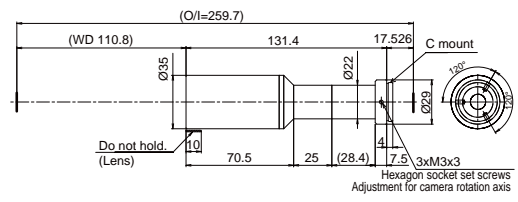


Straight type

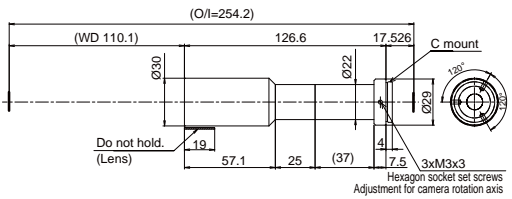
SE-110ST03-5M **5 M**



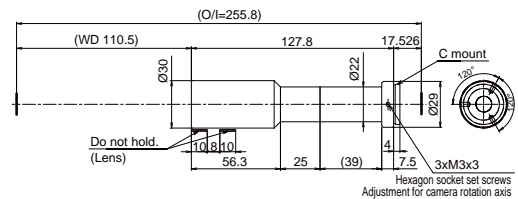
SE-110ST05-M



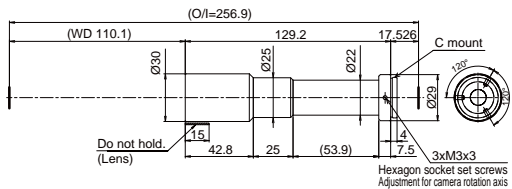
SE-110ST08-M



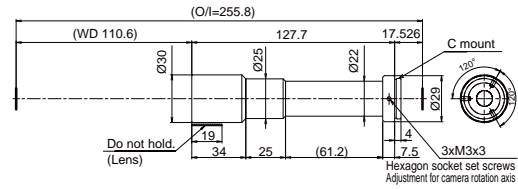
SE-110ST10-M



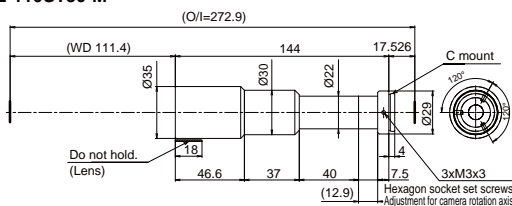
SE-110ST15-M



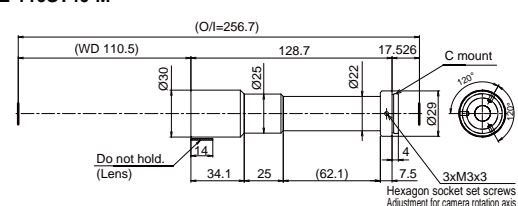
SE-110ST20-M



SE-110ST30-M



SE-110ST40-M



Direct Lighting	LDR2 LDR2-LA LDR-LA1 SQR SQR-TP
Diffused Lighting	HPR2 LFR LKR FPR FPQ2
Direct Lighting	LDL2 LDL6 HLDL2 HL
Diffused Lighting	TH2 (5 types) TH LFL HPD2 LDM2 LAV PDM LFX3 LFX3-PT LFV3
Colimated Lighting	MSU MFU
Strobe Lighting	PF
Water-proof Lighting	HLDR-IP/ HSL-PCL
Ultraviolet Lighting	UV2 UV LNSP-UV-FN
Infrared Control Lighting	IR2 IU
Spot Lighting, Etc.	HLV3 HLV2 LV LSP HFS/HFR HLV3-NR HLV3-3M-RGB-4 HLV2-NR HLV2-3M-RGB-3W PFB3 PFB2
Convergent Lighting	LNLP LNSP2 LNSP Coaxial Units LNSP-FN LN/LN-HK
Diffused Lighting	LNSD LND2 HLND LT LNV
Oblique-Angled Lighting	LNDG LNIS2 LNIS LNIS-FN
Lenses	Telecentric Lenses Macro Lenses