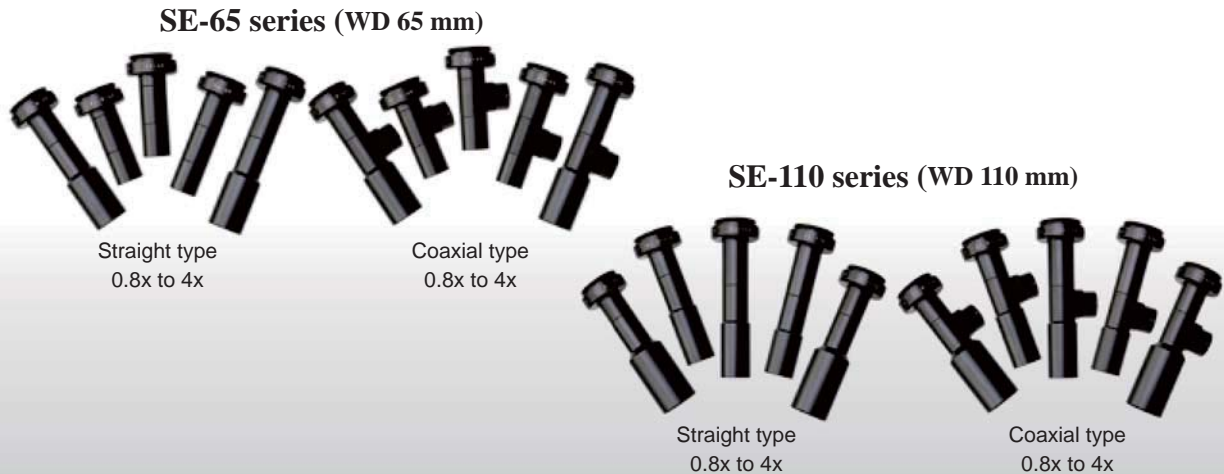


Telecentric Lenses

SE-65/SE-110 Series

Object-side telecentric lenses supporting a wide variety of applications beyond just dimension measuring



SE-65/SE-110 Series Specifications

Coaxial type

Model name	SE-65VT08	SE-65VT10	SE-65VT15	SE-65VT20	SE-65VT40	SE-110VT08	SE-110VT10	SE-110VT15	SE-110VT20	SE-110VT40
Optical magnification	0.8x±5%	1.0x±5%	1.5x±5%	2.0x±5%	4.0x±5%	0.8x±5%	1.0x±5%	1.5x±5%	2.0x±5%	4.0x±5%
WD	67.7±2 mm	65.2±2 mm	65.0±2 mm	65.1±2 mm	65.1±2 mm	110.4±3.3 mm	110.0±3.3 mm	114.1±3.4 mm	110.0±3.3 mm	110.0±3.3 mm
Depth of field ^{1,2}	1.85 mm	1.33 mm	0.59 mm	0.33 mm	0.13 mm	2 mm	1.6 mm	0.86 mm	0.65 mm	0.2 mm
Resolution ^{2,3}	12.4 μm	11.2 μm	7.5 μm	5.6 μm	4.3 μm	13.4 μm	13.4 μm	10.8 μm	10.8 μm	6.6 μm
NA ²	0.027	0.030	0.045	0.060	0.078	0.025	0.025	0.031	0.031	0.051
Actual F-number (Fe) ²	14.9	16.8	16.7	16.7	25.4	16.0	19.9	24.0	32.0	39.5
TV distortion ²	-0.027%	-0.010%	-0.017%	-0.013%	+0.006%	-0.05%	-0.05%	+0.01%	-0.01%	+0.01%
Weight	50 g	54 g	37 g	38 g	40 g	54 g	56 g	48 g	50 g	50 g
Mount	C mount					C mount				
Maximum applicable image size	1/1.8 inch					1/1.8 inch				
Physical distance (O _I) ²	164.6 mm	172.1 mm	133.3 mm	135.8 mm	147 mm	211 mm	213.9 mm	208 mm	216.1 mm	212.5 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. The specifications above are values based on the optical design. Differences between individual devices may occur due to assembly accuracy, etc.

Straight type

Model name	SE-65ST08	SE-65ST10	SE-65ST15	SE-65ST20	SE-65ST40	SE-110ST08	SE-110ST10	SE-110ST15	SE-110ST20	SE-110ST40
Optical magnification	0.8x±5%	1.0x±5%	1.5x±5%	2.0x±5%	4.0x±5%	0.8x±5%	1.0x±5%	1.5x±5%	2.0x±5%	4.0x±5%
WD	67.7±2 mm	65.2±2 mm	65.0±2 mm	65.1±2 mm	65.1±2 mm	110.4±3.3 mm	110.0±3.3 mm	114.1±3.4 mm	110.0±3.3 mm	110.0±3.3 mm
Depth of field ^{1,2}	1.85 mm	1.33 mm	0.59 mm	0.33 mm	0.13 mm	2 mm	1.6 mm	0.86 mm	0.65 mm	0.2 mm
Resolution ^{2,3}	12.4 μm	11.2 μm	7.5 μm	5.6 μm	4.3 μm	13.4 μm	13.4 μm	10.8 μm	10.8 μm	6.6 μm
NA ²	0.027	0.030	0.045	0.060	0.078	0.025	0.025	0.031	0.031	0.051
Actual F-number (Fe) ²	14.9	16.8	16.7	16.7	25.4	16.0	19.9	24.0	32.0	39.5
TV distortion ²	-0.027%	-0.010%	-0.017%	-0.013%	+0.006%	-0.05%	-0.05%	+0.01%	-0.01%	+0.01%
Weight	45 g	49 g	32 g	33 g	35 g	49 g	51 g	43 g	45 g	45 g
Mount	C mount					C mount				
Maximum applicable image size	1/1.8 inch					1/1.8 inch				
Physical distance (O _I) ²	164.6 mm	172.1 mm	133.3 mm	135.8 mm	147 mm	211 mm	213.9 mm	208 mm	216.1 mm	212.5 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. The specifications above are values based on the optical design. Differences between individual devices may occur due to assembly accuracy, etc.

Various technical documents available.

- [PDF Drawings](#)
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- [Product Brochures](#)
- [Instruction Guides](#)
- [3D CAD](#)
- [Data Sheets](#)
- [Imaging Examples](#)
- [Digital Catalogs](#)

Field of Vision Chart

These values are for reference.

Coaxial type

Model name	Optical magnification	Sensor size: 1/1.8 inch		
		Length	Width	Diagonal
SE-65VT08	0.8x	6.65	8.98	11.16
SE-65VT10	1.0x	5.32	7.18	8.93
SE-65VT15	1.5x	3.55	4.78	5.95
SE-65VT20	2.0x	2.66	3.59	4.47
SE-65VT40	4.0x	1.33	1.80	2.23

Model name	Optical magnification	Sensor size: 1/1.8 inch		
		Length	Width	Diagonal
SE-110VT08	0.8x	6.65	8.97	11.17
SE-110VT10	1.0x	5.32	7.18	8.93
SE-110VT15	1.5x	3.55	4.78	5.95
SE-110VT20	2.0x	2.66	3.59	4.47
SE-110VT40	4.0x	1.33	1.79	2.23

(Unit: mm)

Straight type

Model name	Optical magnification	Sensor size: 1/1.8 inch		
		Length	Width	Diagonal
SE-65ST08	0.8x	6.65	8.98	11.16
SE-65ST10	1.0x	5.32	7.18	8.93
SE-65ST15	1.5x	3.55	4.78	5.95
SE-65ST20	2.0x	2.66	3.59	4.47
SE-65ST40	4.0x	1.33	1.80	2.23

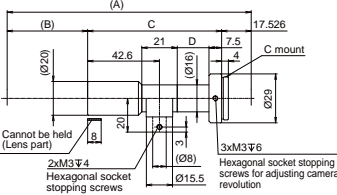
Model name	Optical magnification	Sensor size: 1/1.8 inch		
		Length	Width	Diagonal
SE-110ST08	0.8x	6.65	8.97	11.17
SE-110ST10	1.0x	5.32	7.18	8.93
SE-110ST15	1.5x	3.55	4.78	5.95
SE-110ST20	2.0x	2.66	3.59	4.47
SE-110ST40	4.0x	1.33	1.79	2.23

(Unit: mm)

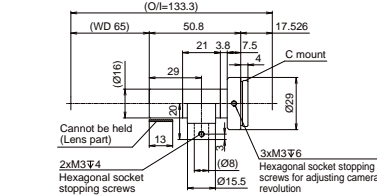
For other fields of vision, refer to the field of vision chart in the Technical Guide. ▶ P.332

Dimensions (mm)

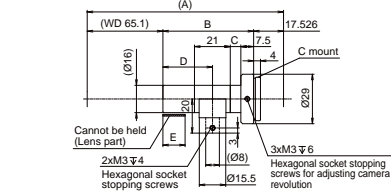
SE-65VT08/SE-65VT10 (Coaxial)



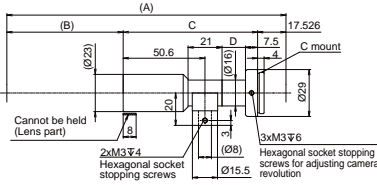
SE-65VT15 (Coaxial)



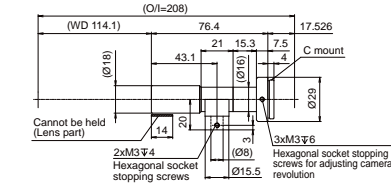
SE-65VT20/SE-65VT40 (Coaxial)



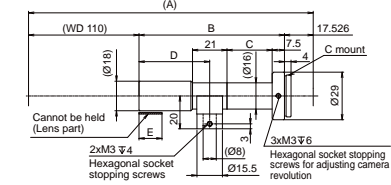
SE-110VT08/SE-110VT10 (Coaxial)



SE-110VT15 (Coaxial)

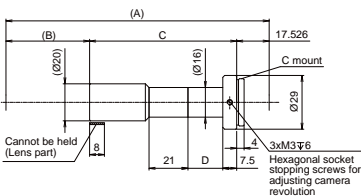


SE-110VT20/SE-110VT40 (Coaxial)

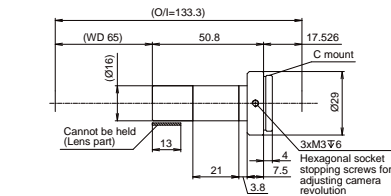


Dimensions chart	SE-65VT08		SE-65VT10		SE-65VT15		SE-65VT20		SE-65VT40		SE-110VT08		SE-110VT10		SE-110VT15		SE-110VT20		SE-110VT40	
	A	O/I=164.6	O/I=172.1	O/I=135.8	O/I=147	O/I=211	O/I=213.9	O/I=216.1	O/I=212.5	B	WD 67.7	WD 65.2	53.2	64.4	WD 110.4	WD 110	88.6	27.5	30.4	84.9
C	79.4	89.4	13	11	13	11	13	11	13	D	18.8	28.8	6.2	18.5	17.7	17.7	14	14	14	36.5
E	-	-	-	-	-	-	-	-	-	O/I	-	-	13	11	-	-	14	11	-	-

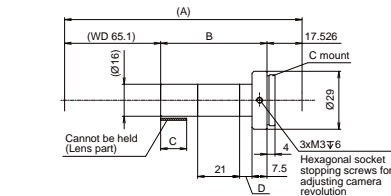
SE-65ST08/SE-65ST10 (Straight)



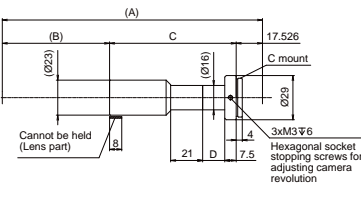
SE-65ST15 (Straight)



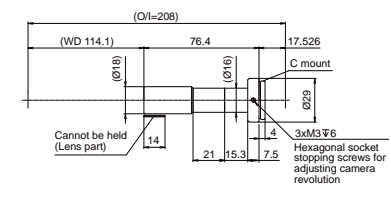
SE-65ST20/SE-65ST40 (Straight)



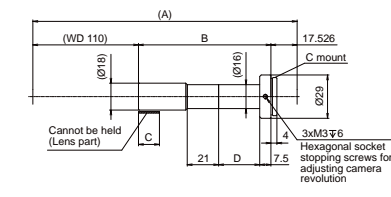
SE-110ST08/SE-110ST10 (Straight)



SE-110ST15 (Straight)



SE-110ST20/SE-110ST40 (Straight)



Dimensions chart	SE-65ST08		SE-65ST10		SE-65ST15		SE-65ST20		SE-65ST40		SE-110ST08		SE-110ST10		SE-110ST15		SE-110ST20		SE-110ST40	
	A	O/I=164.6	O/I=172.1	O/I=135.8	O/I=147	O/I=211	O/I=213.9	O/I=216.1	O/I=212.5	B	WD 67.7	WD 65.2	53.2	64.4	WD 110.4	WD 110	88.6	27.5	30.4	84.9
C	79.4	89.4	13	11	13	11	13	11	13	D	18.8	28.8	6.2	18.5	17.7	17.7	14	14	14	36.5
D	18.8	28.8	6.2	18.5	14.5	14.5	17.7	17.7	14	O/I	-	-	13	11	-	-	14	11	-	-

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 - SQR-TP
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 - LFR
 - LKR
 - FPR
 - FPQ2
 - LDL2
 - LDLB
 - HLDL2
 - HL
 - TH2 (5 types)
 - TH
 - LFL
 - HPD2
 - LDM2
 - LAV
 - PDM
 - LFX3
 - LFX3-PT
 - LFV3
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 - MSU
 - MFU
- Strobe Lighting
 - PF
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 - HLDR-IP/
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 - HLV2
 - LV
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 - HFS/HFR
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 - 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
 - HLND
 - LT
 - LN
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