

Telecentric measurement lenses with adjustable aperture

vicotar®

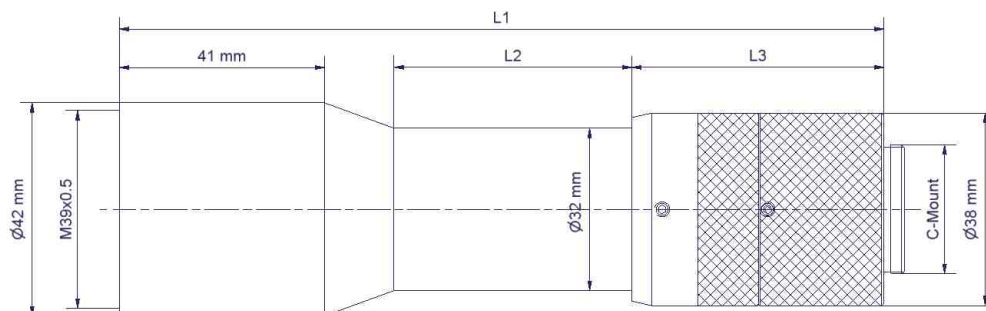
T107 series

Product features

- Object side telecentric light path
- Application for matrix and line cameras up to sensor diagonal/length 11 mm
- Maximum object field diameter 34.4 mm
- Manual operated iris aperture with fixing
- Robust industrial design: dust-proof, shock-proof
- C-mount (thread connection)



Drawing



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Manual



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CAD-File



Up to
1.34"
imager

Properties

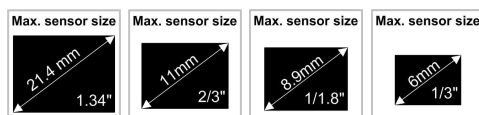
Optical properties

Spectral range 380...900nm / colour-corrected / fast lenses

Mechanical properties

Flange focal distance 17.53mm / max. diameter of lenses 42mm / focal filter thread M39 x 0.75 /
environmental temperature -10°C ... 50°C

Options



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Optical data

Name	Order no.	Lateral magnification	Object side depth of field [mm]*	Field of view for 1,34" sensor [mm ²]	Field of view for 1" sensor [mm ²]	Field of view for ¾" sensor [mm ²]	Field of view for 1/1,8" sensor [mm ²]	Field of view for ½" sensor [mm ²]	Field of view for ¼" sensor [mm ²]
T107/0.83	2-05-287	-1 : 1.2	1.3 (0.3)	18.2 × 18.2	15.4 × 11.6	10.6 × 7.9	8.5 × 6.5	7.7 × 5.8	5.8 × 4.3
T107/0.39	2-05-296	-1 : 2.56	3.6 (0.9)	--	--	22.5 × 16.9	18.2 × 13.8	16.4 × 12.3	12.3 × 9.2
T107/0.36	2-05-297	-1 : 2.75	3.9 (1.0)	--	--	24.2 × 18.2	19.5 × 14.9	17.6 × 13.2	13.2 × 9.9
T107/0.33	2-05-290	-1 : 3.12	4.3 (1.1)	--	--	27.5 × 20.6	22.2 × 16.9	20.0 × 15.0	15.0 × 11.2
T107/0.25L	2-05-295	-1 : 3.72	8.0 (2.0)	--	--	--	26.4 × 20.1	23.8 × 17.9	17.9 × 13.4
T107/0.25	2-05-291	-1 : 4.05	8.7 (2.2)	--	--	--	28.8 × 21.9	26.0 × 19.5	19.5 × 14.6
T107/0.2	2-05-292	-1 : 5.02	10.6 (2.7)	--	--	--	--	--	24.1 × 18.1
T107/0.2A	2-05-293	-1 : 5.11	11.0 (2.8)	--	--	--	--	--	24.5 × 18.4

*Object side depth of field at a circle of confusion 40 (10) μm and a middle aperture setting.

We provide technical information to the distortion or the telecentric error of a certain lens by our technical support upon request.

Size of imaging device:

1.34" - 15.16 x 15.16 mm² | 1" - 12.8 x 9.6 mm² | ¾" - 8.8 x 6.6 mm² | 1/1.8(=5/9)" - 7.1 x 5.4 mm² | ½" - 6.4 x 4.8 mm² | ¼" - 4.8 x 3.6 mm²

Mechanical data

Name	Order no.	Max. object field diagonal	Image side aperture (adjustable)	Working distance	Working distance with IR-filter*	Total length L1	Length L2	Length L3	Weight
T107/0.83	2-05-287	25.8 mm	0.06 ... 0.03	100 ± 2 mm	--	194 mm	47 mm	92 mm	332 g
T107/0.39	2-05-296	28.1 mm	0.12 ... 0.027	116 ± 2 mm	118 ± 2 mm	154 mm	47 mm	52 mm	250 g
T107/0.36	2-05-297	30.3 mm	0.13 ... 0.026	93 ± 2 mm	93 ± 6 mm	152 mm	47 mm	50 mm	240 g
T107/0.33	2-05-290	34.4 mm	0.15 ... 0.03	86 ± 2 mm	89 ± 2 mm	145 mm	47 mm	45 mm	250 g
T107/0.25L	2-05-295	29.8 mm	0.11 ... 0.029	105 ± 2 mm	--	141 mm	53 mm	34 mm	194 g
T107/0.25	2-05-291	32.3 mm	0.12 ... 0.03	83 ± 2 mm	--	142 mm	54 mm	34 mm	250 g
T107/0.2	2-05-292	30.1 mm	0.15 ... 0.04	49 ± 3 mm	--	137 mm	29 mm	54 mm	230 g
T107/0.2A	2-05-293	30.7 mm	0.15 ... 0.04	75 ± 3 mm	--	136 mm	29 mm	53 mm	230 g

*A daylight suppression filter IR M20.5 x 0.5 can be screwed-on to the telecentric vicotar® objectives from camera side. Removing the IR suppression filter from camera effects alteration of working distance..

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Important advice

Anxiliary adjusting device

The optical axis must be aligned perpendicularly to object level / plane of measurement to realize exact measurement. This anxiliary adjusting device lower time and effort for setup. Please find further information in the corresponding data sheet.

Protection glass

High-quality front lens of the objective can be protected against impurities and damages by means of protection glass UV M39 x 0.5. You shall be screw-on first lens.

Care instruction

Clean easily dirty lens with an optics brush or cleaned air. Adherent contamination can be removed by using an optical cleaning tissue. Please use only alcohol as a solvent, do not use acetone or other chemicals.

Accessories

Order no.	Name	Description
2-25-114	PSO 90-107	beam-deflection unit (90°) for lens-systems T107-series
2-15-120	ABE+TZB30 Mirror adapter	for T107 objective with TZB30 lighting
2-15-116	ABE 3328-107	beam-splitter unit for lighting together with T107- series
2-90-122	OH 32	lens holder, d = 32 mm
2-91-131	IR M20.5 x 0.5	daylight suppression filter for telecentric lens-systems
2-91-130	IR M39 x 0.5	daylight cutting-filter for telecentric lens-systems
2-91-120	UV M39 x 0,5	protection glass for telecentric lens-systems
5-10-112	JH 10	adjustment-help for 10mm depth of focus

You can find a multiplicity of filters in the chapter accessories. Please order the filters separately.

Intended use for accessories

T107 with 90° beam-deflection



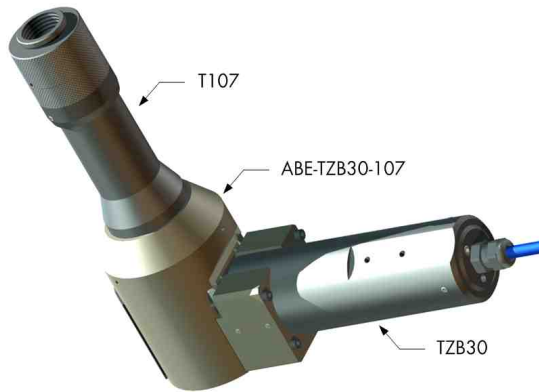
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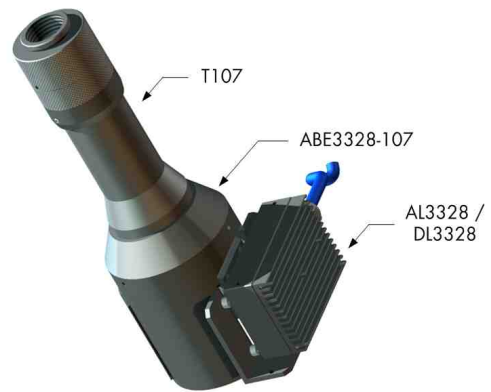
T107 series

Intended use for accessories

T107 with telecentric coaxial incident lighting



T107 with beam-splitter unit for incident lighting



T107 with lens holder OH32



T107 with filter

