

Enlarging telecentric lenses with adjustable aperture

vicotar®

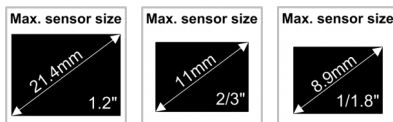
T51 series

Product features

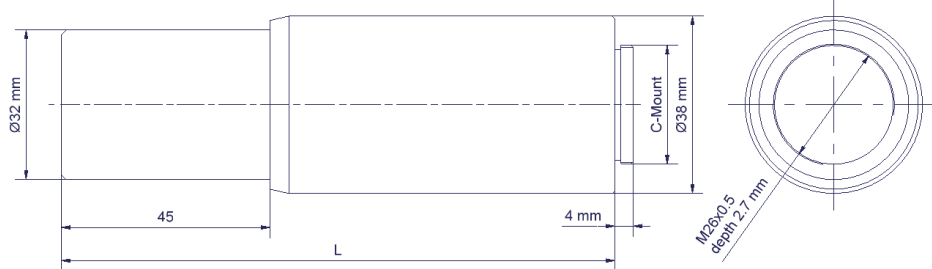
- Object side telecentric light path
- Application for matrix and line cameras up to sensor diagonal/length 11 mm
- Manual operated iris aperture with fixing
- Robust industrial design
- C-mount (thread connection)



Options



Engineering drawing



Download Manual


Download CAD-File
 *.stp
 *.dwf

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Properties

Optical properties

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

Mechanical properties

Flange focal distance 17.53mm / max. diameter of lenses 38mm / focal filter thread M26 x 0.5 / environmental temperature -10°C ... 50°C

Optical data

Name	Order no.	Lateral magnification	Object side depth of field (mm)*	Field of view for 1.2" sensor (mm²)	Field of view for 1" sensor (mm²)	Field of view for ¾" sensor (mm²)	Field of view for 1/1.8" sensor (mm²)	Field of view for ½" sensor (mm²)	Field of view for ⅓" sensor (mm²)
T51/1.7	2-05-272	-1.7 : 1	0.4 (0.1)	8.8 × 8.8	7.4 × 5.6	5.1 × 3.8	4.1 × 3.1	3.7 × 2.8	2.8 × 2.1
T51/1.4	2-05-265	-1.4 : 1	0.52 (0.13)	--	--	6.3 × 4.8	5.1 × 3.9	4.6 × 3.5	3.5 × 2.6
T51/1.2	2-05-266	-1.2 : 1	0.68 (0.17)	--	--	7.3 × 5.5	5.9 × 4.5	5.3 × 4.0	4.0 × 3.0
T51/1.0	2-05-267	-1 : 1	1.68 (0.42)	--	--	--	7.1 × 5.4	6.4 × 4.8	4.8 × 3.6
T51/0.8	2-05-268	-1 : 1.22	1.72 (0.43)	--	--	--	8.7 × 6.6	7.9 × 5.9	5.9 × 4.4
T51/0.7	2-05-269	-1 : 1.47	1.44 (0.36)	--	--	--	10.4 × 7.9	9.4 × 7.1	7.1 × 5.3

*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:

1.2" - 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 | ⅓" - 4.8 x 3.6 mm²

Mechanical data

Name	Order no.	Max. object field diagonal	Object side aperture (adjustable)	Working distance	Working distance with IR-filter*	Total length L	Weight
T51/1.7	2-05-272	12.5 mm	0.06 ... 0.01	49 ± 2 mm	49 ± 2 mm	114 mm	230 g
T51/1.4	2-05-265	7.9 mm	0.05 ... 0.01	28 ± 2 mm	28 ± 2 mm	119 mm	225 g
T51/1.2	2-05-266	9.2 mm	0.06 ... 0.01	34 ± 2 mm	34 ± 2 mm	109 mm	203 g
T51/1.0	2-05-267	8.9 mm	0.07 ... 0.01	42 ± 2 mm	42 ± 2 mm	99 mm	181 g
T51/0.8	2-05-268	11 mm	0.07 ... 0.01	52 ± 2 mm	52 ± 2 mm	90 mm	160 g
T51/0.7	2-05-269	11.8 mm	0.10 ... 0.01	63 ± 2 mm	64 ± 2 mm	84 mm	147 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..

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 M26 x 0.5. You shall be screw-on first lens (object side).

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.

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Accessories

Order no.	Name	Description
1-18-300	DL30x30-R633/M5	area light, red, diffuse, lf-size = 30 mm x 30 mm, static/switchable
2-25-113	PSO 90-100/125	beam-deflection unit (90°) for lens-systems T100 / T125- 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
2-91-121	UV M20,5 x 0,5	protection glass for telecentric lens-systems
2-91-123	UV M26 x 0,5	protection glass for telecentric lens-systems
5-10-110	JH 2,7	adjustment-help for 2,7mm depth of focus

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

Intended use for accessories

Koaxial reflective system with pictor® T,
 STE30x30, DL 30x30 and T51

