Vision & Control GmbH
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www.vision-control.com

vicotar® Telecentric Lens - TO44/7.5-287-V-LD

Short description: Telecentric lens, c-mount, sensor opt. 1/2", variable aperture, VIS/NIR, LD

Order number: 2-05-391

Characteristics

- telecentric measurement objective with object-sided telecentric beam path
- long working distance
- usable for the visible spectral range and near infrared
- Optimum results with monochromatic applications
- adjustable aperture, arrestable
- robust industrial design

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Technical data

Image scale	0.17
Spectral range	400 nm - 950 nm
Working distance	287 mm
Camera distance (object-camera flange)	464 mm
Object field diagonal (max.)	44 mm
Sensor format (opt.)	1/2"
Image field diagonal (max.)	7.5 mm
Suitable for camera resolution	4.9 MPixel
Recommended pixel size	2.5 µm
Aperture	verstellbar (F6 - F16)
Depth of focus	7 mm (F10, 470 nm, MTF = 20 % @ 50 LP/mm)
Lens mount	C-Mount
Filter thread, object-side	M52 x 0.75
Filter thread, camera-side	M20.5 x 0.5
Weight	326 g
Usable object field with:	
• 1/2" sensor (6.4 x 4.8 mm²)	33.8 mm x 25.4 mm
• 1/3" sensor (4.8 x 3.6 mm²)	28.2 mm x 21.2 mm
• 1/4" sensor (3.4 x 2.2 mm²)	20 mm x 12.9 mm

Notices

The lightings combination products shown are a selection. Depending on the application, other colors and light source types can also be used.

Can be combined with

Order number	Title	Description
R-CLR-69-SL series		
1-33-007	R-CLR-69x41-B470-SL	ring light, blue, coaxial, lf diameter: 41/69 mm, smart light technology
RK2036-24V series		
1-29-602	RK2036-B470-24V/C	ring light, blue, coaxial, lf diameter: 41/69 mm, controlled, pot.: 0-10V,
R-CLR-100-SL series		
1-33-012	R-CLR-100x73-B470-SL	ring light, blue, coaxial, lf diameter: 73/100 mm, smart light technology
RK3652-24V series		
1-29-702	RK3652-B470-24V/C	ring light, blue, coaxial, lf diameter: 73/100 mm, controlled, pot.: 0-10V,
R-CLR-132-SL series		
1-33-017	R-CLR-132x104-B470-SL	ring light, blue, coaxial, lf diameter: 104/132 mm, smart light technology
RK5268-24V series		
1-29-802	RK5268-B470-24V/C	ring light, blue, coaxial, lf diameter: 104/132 mm, controlled, pot.: 0-10V,

Accessories for Telecentric Lenses - TO44/7.5-287-V-LD

Order number	Title	Description
Adjustment Aids		
5-10-112	Adjustment aid 10	for easy adjustment to 10 mm depth of field, for image scale 0.5 - 0.2
Lens mount		
2-90-122	Lens Holder d32	Holder for telecentric lenses and lightings with d = 32 mm
Extension tubes		

Order number	Title	Description
2-90-415	Extension ring 0.5 mm	26 x 31 x 0.5 reduces the minimum object distance (MOD)
2-90-416	Extension ring 1.0 mm	26 x 31 x 1.0 reduces the minimum object distance (MOD)
2-90-419	Extension ring 0.1 mm	25.5 x 29 x 0.1 reduces the minimum object distance (MOD)
2-90-420	Extension ring 0.2 mm	25.5 x 29 x 0.2 reduces the minimum object distance (MOD)
Thread adapter c-mount		
5-00-011	Thread adapter C-Mount-M42	Adapter for mounting of lenses with C-mount on cameras with M42x1 mount
2-90-414	CS to C-mount adapter 5.0 mm	for connecting C-mount lenses with CS-mount cameras, length: 5 mm
Neutral density filter		
2-91-174	ND filter 3.0 M52x0.75	optical density 3.0 - 0.1% transmission, f-stop reduction 10, filter thread M52x0.75
2-91-164	ND filter 1.2 M52x0.75	optical density 1.2 - 6.3% transmission, f-stop reduction 4, filter thread M52x0.75
2-91-154	ND filter 0.6 M52x0.75	optical density 0.6 - 25% transmission, f-stop reduction 2, filter thread M52x0.75
Daylight blocking filter		
2-91-131	IR filter M20.5x0.5	long-pass filter from 830 nm, daylight absorbing filter, filter thread M20.5x0.5
2-91-134	IR filter M52x0.75	long-pass filter from 830 nm, daylight absorbing filter, filter thread M52x0.75
Polarising filters		
2-91-144	Pole filter M52x0.75	linear polarizing filter, range 420 nm - 780 nm, filter thread M52x0.75
Colour filter blue		
2-91-290	Colour filter blue M52x0.75	band-pass filter, range 350 nm - 600 nm, filter thread M52x0.75
UV Cut-Off Filter		
2-91-124	UV blocking filter M52x0.75	long-pass filter from 350 nm, usable as protective glass, filter thread M52x0.75

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Order number	Title	Description
Colour filter red		
2-91-259	Colour filter red M20.5x0.5	long-pass filter from 630 nm, red, filter thread M20.5x0.5
2-91-262	Colour filter red M52x0.75	long-pass filter from 630 nm, red, filter thread M52x0.75
Colour filter green		
2-91-303	Colour filter green M52x0.75	band-pass filter, range 430 nm - 620 nm, filter thread M52x0.75
Colour filter yellow		
2-91-277	Colour filter yellow M52x0.75	long-pass filter from 530 nm, yellow, filter thread M52x0.75
Deflection mirrow 90° series		
2-25-115	Deflection mirror 90-56	90° deflection, attachment for telecentric lenses and lightings with d = 56 mm
Adapters for attaching lights to lenses		
1-29-676	Adapter ring d41 - M52x0.75	for R-CLR-69x41 and RK2036, for attachment to lenses with filter thread M52x0.75
1-29-772	Adapter ring d73 - M52x0.75	for R-CLR-100x73 und RK3652, for attachment to lenses with filter thread M52x0.75
1-29-870	Adapter ring d104 - M52x0.75	for R-CLR-132x104 and RK5268, for attachment to lenses with filter thread M52x0.75
Beam splitter STE60x60		
1-20-050	STE60x60-VIS	Beam splitter unit for coaxial light system, optimized for 450-700 nm
1-20-022	Adapter STE60x60 - TZO56	Attachment of the STE60x60 to telecentric lenses and lightings with d = 56mm

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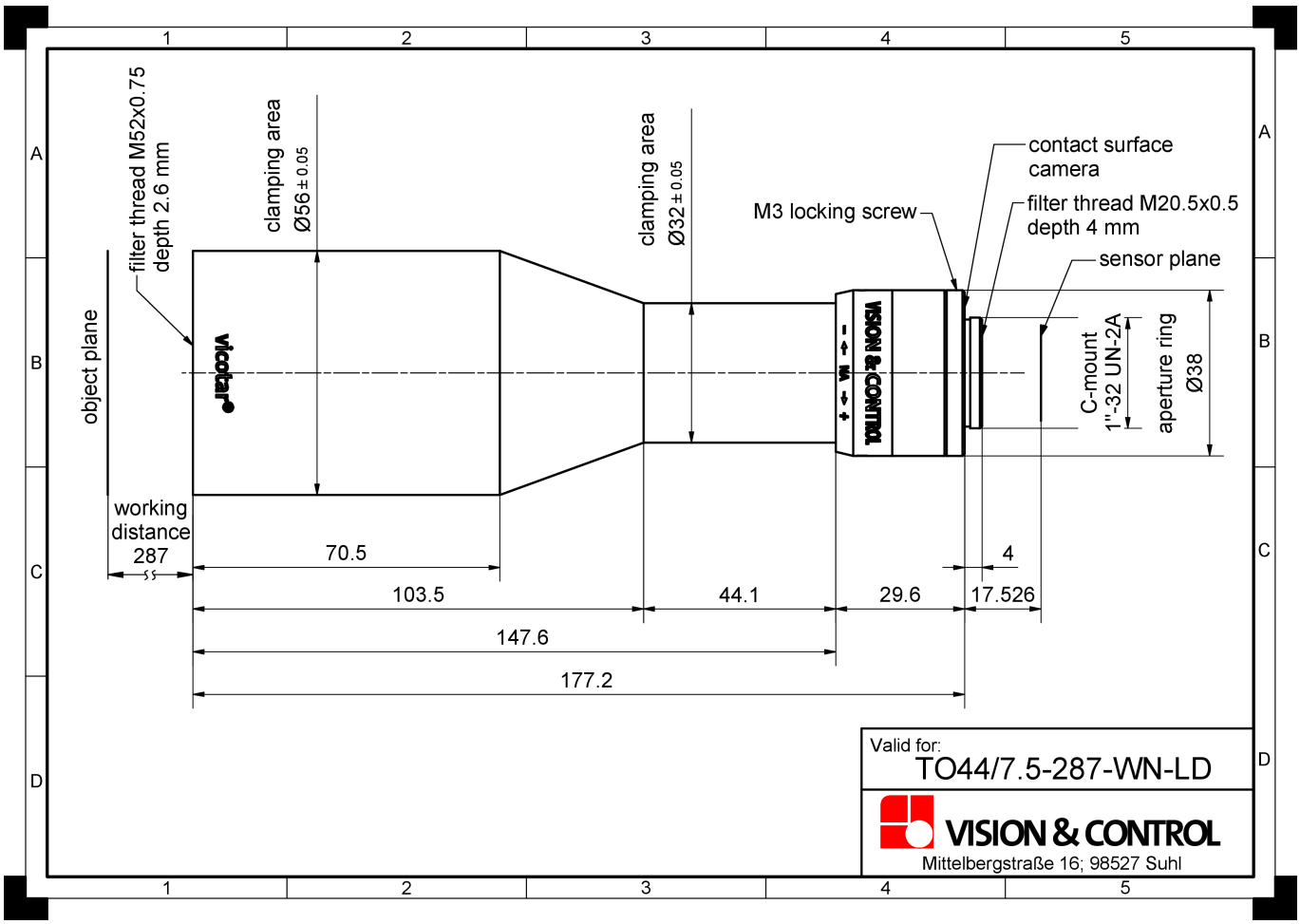
Drawings



Dimensional drawing in mm