Vision & Control GmbH
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www.vision-control.com

vicotar® Telecentric Lens - TO42/16.0-120-V-BW

Short description: Telecentric Lens, C-mount, Sensor opt. 1", aperture F8 - F22, blue

Order number: 2-05-624

EAN: 4251692621523

Actual Notice: **Also available with fixed aperture on request.**
(F-numbers in the range as for adjustable aperture)

Characteristics

- telecentric measurement objective with object-sided telecentric beam path
- color corrected for the visible spectral range and near infrared
- color correction extended deep into the blue spectral range
- very well suited for blue LEDs including "Deep Blue" LEDs
- thus especially suitable for white LEDs, as these have a strong blue light component
- high resolution, low lateral chromatic aberration, low distortion, low telecentric error
- adjustable aperture with identification of the aperture numbers, arrestable
- robust industrial design

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Technical data

Image scale	0.38
Spectral range	400 nm - 950 nm
Working distance	120 mm
WD adjust @ 850 nm	+ 5.6 mm
WD adjust @ 940 nm	+ 7.1 mm
Camera distance (object-camera flange)	308.06 mm
Object field diagonal (max.)	42 mm
Sensor format (opt.)	1"
Image field diagonal (max.)	16 mm
Suitable for camera resolution	39.7 MPixel
Recommended pixel size	1.76 µm
Aperture	variable (F8 - F22)
Lens mount	C-Mount
Filter thread, object-side	M52 x 0.75
Filter thread, camera-side	M20.5 x 0.5
Weight	332 g
Usable object field with:	
• 1" sensor (12.8 x 9.6 mm²)	33.7 mm x 25.3 mm
• 2/3" sensor (8.8 x 6.6 mm²)	23.2 mm x 17.4 mm
• 1/1.8" sensor (7.1 x 5.4 mm²)	18.7 mm x 14.2 mm
• 1/2" sensor (6.4 x 4.8 mm²)	16.8 mm x 12.6 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 - TO42/16.0-120-V-BW

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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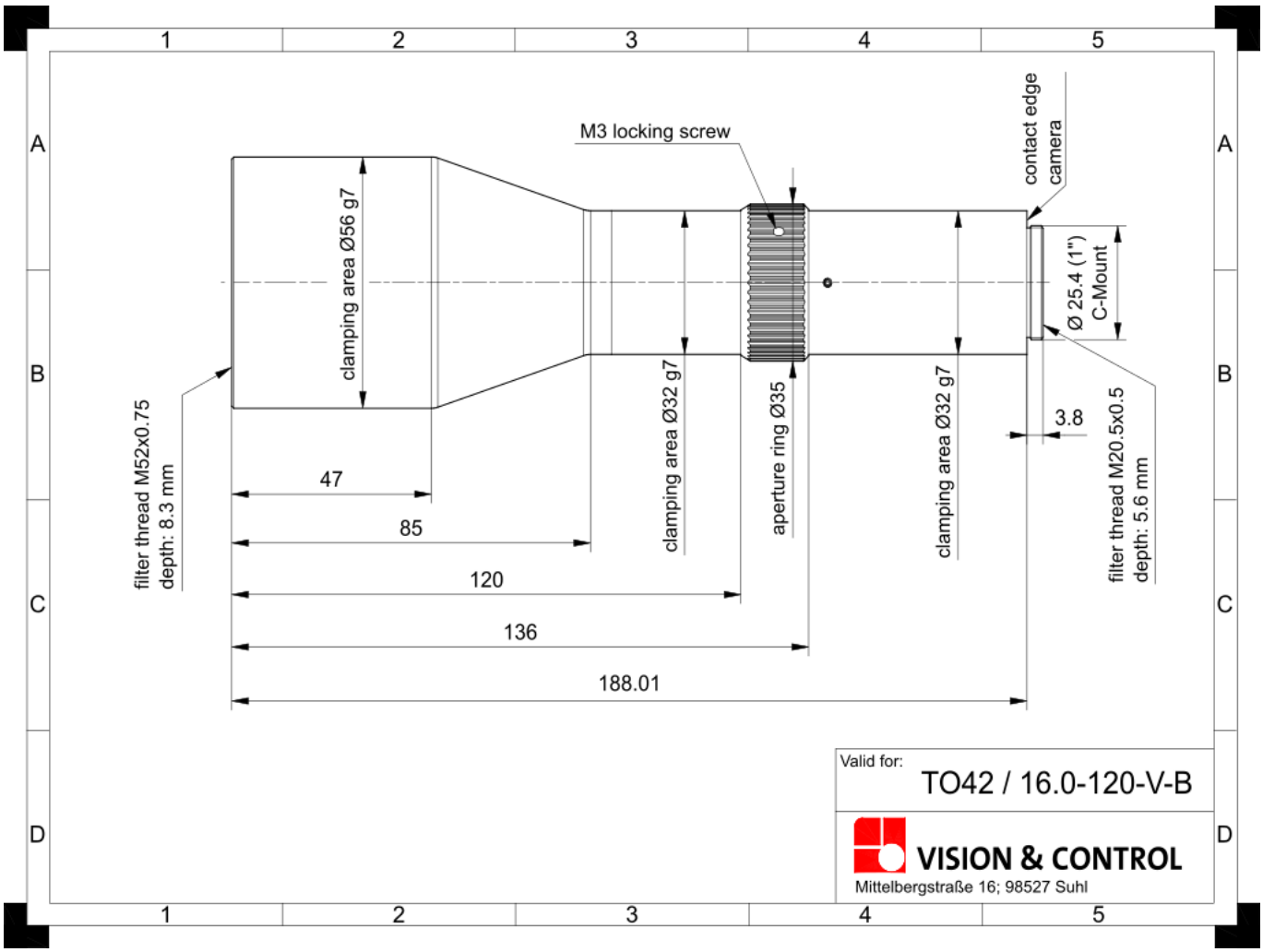
Drawings



Dimensional drawing in mm