
vicotar® Telecentric Lens - TOB22/11.0-60-V-WN

Short description:	Bi-Telecentric Lens, C-mount, sensor max. 2/3", aperture F6 - F22, W/NIR
Order number:	2-05-518
EAN:	4251692620748



Characteristics

- telecentric measurement objective with object- and image-sided telecentric beam path
 - high resolution, low lateral chromatic aberration, low distortion, low telecentric error
 - color corrected for the visible spectral range and near infrared
 - adjustable aperture with identification of the aperture numbers, arrestable
 - robust industrial design
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Technical data

Image scale	0.5
Spectral range	465 nm - 950 nm
Working distance	60.0 mm
WD adjust @ 850 nm	+ 1.1 mm
WD adjust @ 940 nm	+ 1.6 mm
WD adjust @ 1050 nm	+ 2.3 mm
WD adjust @ 1500 nm	+ 5.8 mm
Camera distance (object-camera flange)	227.5 mm
Object field diagonal (max)	22 mm
Sensor format (max)	2/3"
Image field diagonal (max)	11 mm
Suitable for camera resolution	9.3 MPixel
Recommended pixel size	2.5 µm
Aperture	variable (F6 - F22)
Lens mount	C-Mount
Filter thread, object-side	M35.5 x 0.5
Filter thread, camera-side	M20.5 x 0.5
Weight	279 g
Usable object field with:	
• 2/3" sensor (8.8 x 6.6 mm ²)	17.6 mm x 13.2 mm
• 1/1.8" sensor (7.1 x 5.4 mm ²)	14.2 mm x 10.8 mm
• 1/2" sensor (6.4 x 4.8 mm ²)	12.8 mm x 9.6 mm
• 1/3" sensor (4.8 x 3.6 mm ²)	9.6 mm x 7.2 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
<i>TZB28-P-SL series</i>		
1-33-230	TZB28-B450-P-SL	telecentric light, blue, If diameter: 28 mm, smart light
1-33-231	TZB28-IR850-P-SL	telecentric light, IR850, If diameter: 28 mm, smart light
<i>TZB28-P-24V series</i>		
1-33-240	TZB28-B450-P-24V	telecentric light, blue, If diameter: 28 mm, 24V, switchable
1-33-284	TZB28-B450-HP-24V	telecentric light, blue, If diameter: 28 mm, 24V, switchable, high power
1-33-241	TZB28-IR850-P-24V	telecentric light, IR850, If diameter: 28 mm, 24V, switchable
1-33-285	TZB28-IR850-HP-24V	telecentric light, IR850, If diameter: 28 mm, 24V, switchable, high power
<i>R-CLR-69-SL series</i>		
1-33-007	R-CLR-69x41-B470-SL	ring light, blue, coaxial, If diameter: 41/69 mm, smart light technology
<i>RK2036-24V series</i>		
1-29-602	RK2036-B470-24V/C	ring light, blue, coaxial, If diameter: 41/69 mm, controlled, pot.: 0-10V,

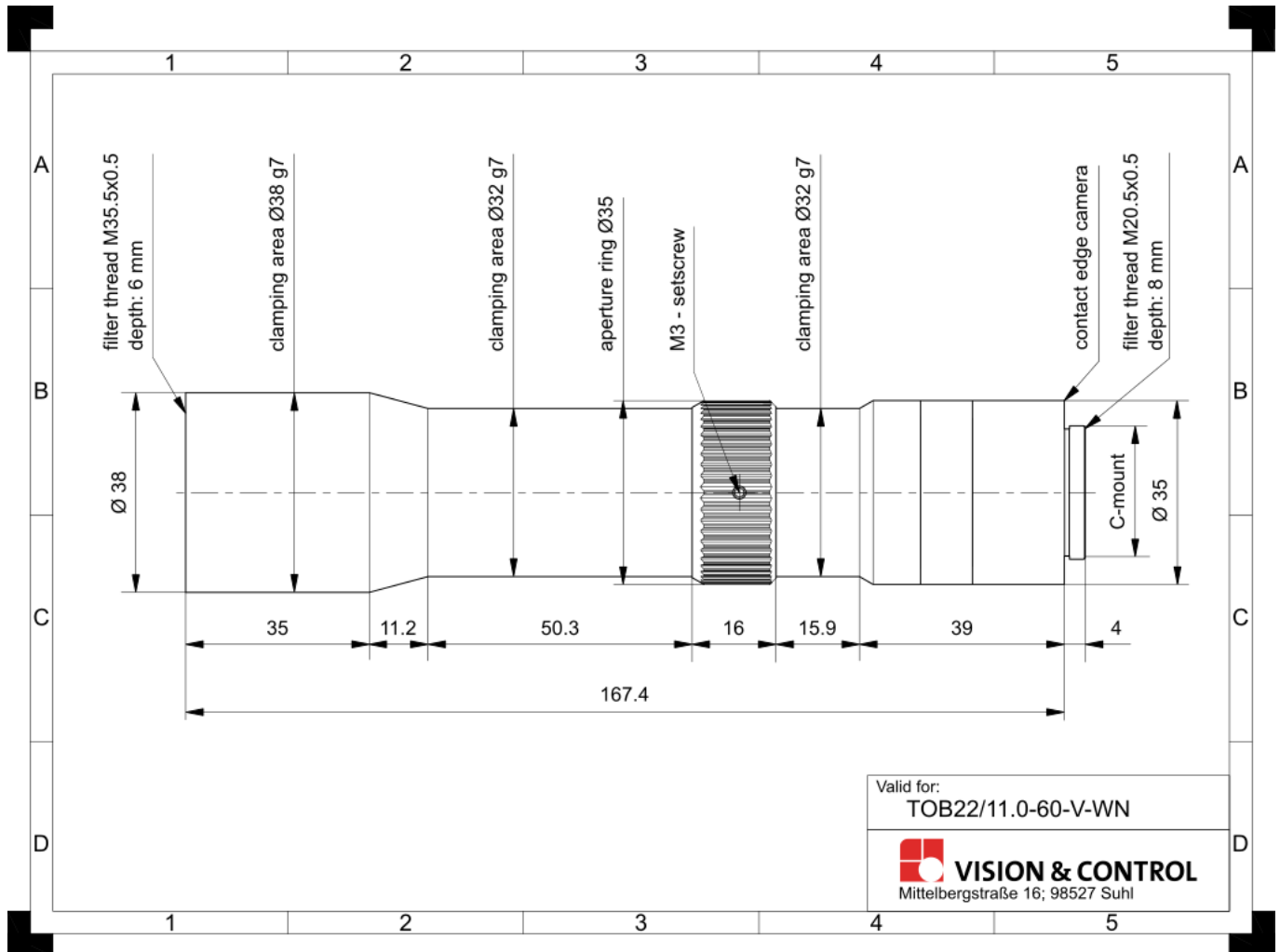
Accessories for Telecentric Lenses - TOB22/11.0-60-V-WN

Order number	Title	Description
<i>Adjustment Aids</i>		
5-10-110	Adjustment aid 2.7	for easy adjustment to 2.7 mm depth of field, for image scale 1.2 - 0.7
5-10-111	Adjustment aid 5	for easy adjustment to 5 mm depth of field, for image scale 0.7 - 0.5
5-10-112	Adjustment aid 10	for easy adjustment to 10 mm depth of field, for image scale 0.5 - 0.2
<i>Lens mount</i>		

Order number	Title	Description
2-90-122	Lens Holder d32	Holder for telecentric lenses and lightings with d = 32 mm
Extension tubes		
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)
Lens adapter c-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		
2-91-252	ND filter 3.0 M35.5x0.5	optical density 3.0 - 0.1% transmission, f-stop reduction 10, filter thread M35.5x0.5
2-91-242	ND filter 1.2 M35.5x0.5	optical density 1.2 - 6.3% transmission, f-stop reduction 4, filter thread M35.5x0.5
2-91-232	ND filter 0.6 M35.5x0.5	optical density 0.6 - 25% transmission, f-stop reduction 2, filter thread M35.5x0.5
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
2-91-212	IR filter M35.5x0.5	long-pass filter from 830 nm, daylight absorbing filter, filter thread M35.5x0.5
Polarising filters		
2-91-222	Pole filter M35.5x0.5	linear polarizing filter, range 420 nm - 780 nm, filter thread M35.5x0.5
Colour filter blue		
2-91-286	Colour filter blue M35.5x0.5	band-pass filter, range 350 nm - 600 nm, filter thread M35.5x0.5
UV Cut-Off Filter		

Order number	Title	Description
2-91-202	UV blocking filter M35.5x0.5	long-pass filter from 350 nm, usable as protective glass, filter thread M35.5x0.5
Colour filter red		
2-91-182	Colour filter red M35.5x0.5	long-pass filter from 630 nm, red, filter thread M35.5x0.5
2-91-259	Colour filter red M20.5x0.5	long-pass filter from 630 nm, red, filter thread M20.5x0.5
Colour filter green		
2-91-299	Colour filter green M35.5x0.5	band-pass filter, range 430 nm - 620 nm, filter thread M35.5x0.5
Colour filter yellow		
2-91-273	Colour filter yellow M35.5x0.5	long-pass filter from 530 nm, yellow, filter thread M35.5x0.5
Deflection mirror 90° series		
2-25-127	Deflection mirror 90-38	90° deflection, attachment for telecentric lenses and lightings with d = 38 mm
Adapters for attaching lights to lenses		
1-29-684	Adapter d38 d41	für R-CLR-69x41 und RK2036, zur Befestigung an Objektiven mit Durchmesser 38 mm
Beam splitter STE30x30		
1-18-050	STE30x30-VIS	Beam splitter unit for coaxial light system, optimized for 450-700 nm
1-18-027	Adapter STE30x30 - TZ038	Attachment of the STE30x30 to telecentric lenses and lightings with d = 38 mm

Drawings



Dimensional drawing in mm