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## vicotar® Telecentric Lens - TO66/16.0-160-V-BW

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<b>Short description:</b>	Telecentric Lens, C-Mount, Sensor opt. 1", aperture F6 - F22, blue
<b>Order number:</b>	2-05-685
<b>EAN:</b>	4251692621585
<b>Actual Notice:</b>	<b>Also available with fixed aperture on request.</b> (F-numbers in the range as for adjustable aperture)



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### 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	0.242
Spectral range	380 nm - 900 nm
Working distance	160 mm
Camera distance (object-camera flange)	362.2 mm
Object field diagonal (max.)	66 mm
Sensor format (opt.)	1"
Image field diagonal (max.)	16 mm
Suitable for camera resolution	39.2 MPixel
Recommended pixel size	1.77 $\mu\text{m}$
Aperture	variable (F8 - F22)
Lens mount	C-Mount
Filter thread, object-side	M77 x 0.75
Filter thread, camera-side	M20.5 x 0.5
Weight	660 g
Usable object field with:	
• 1" sensor (12.8 x 9.6 mm <sup>2</sup> )	52.9 mm x 39.7 mm
• 2/3" sensor (8.8 x 6.6 mm <sup>2</sup> )	36.4 mm x 27.3 mm
• 1/1.8" sensor (7.1 x 5.4 mm <sup>2</sup> )	29.3 mm x 22.3 mm
• 1/2" sensor (6.4 x 4.8 mm <sup>2</sup> )	26.4 mm x 19.8 mm

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## Notices

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

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## Can be combined with

Order number	Title	Description
<b><i>TZB95-UDC-a Serie</i></b>		
1-10-951	TZB95-B470/UDC/-a	telecentric light, blue, If diameter: 95 mm, flashable by flash controller
1-10-952	TZB95-W5K7/UDC/-a	telecentric light, white, If diameter: 95 mm, flashable by flash controller
1-10-953	TZB95-IR880/UDC/-a	telecentric light, IR850, If diameter: 95 mm, flashable by flash controller
1-10-950	TZB95-R625/UDC/-a	telecentric light, red, If diameter: 95 mm, flashable by flash controller
1-10-954	TZB95-G525/UDC/-a	telecentric light, green, If diameter: 95 mm, flashable by flash controller
<b><i>TZB95 series</i></b>		
1-10-383	TZB95-B470-24V	telecentric light, blue, If diameter: 95 mm, static, cable open-ended
1-10-382	TZB95-W5K7-24V	telecentric light, white, If diameter: 95 mm, static, cable open-ended
1-10-381	TZB95-IR880-24V	telecentric light, IR850, If diameter: 95 mm, static, cable open-ended
1-10-380	TZB95-R625-24V	telecentric light, red, If diameter: 95 mm, static, cable open-ended
1-10-384	TZB95-G525-24V	telecentric light, green, If diameter: 95 mm, static, cable open-ended
<b><i>R-CLR-100-SL series</i></b>		
1-33-012	R-CLR-100x73-B470-SL	ring light, blue, coaxial, If diameter: 73/100 mm, smart light technology
<b><i>RK3652-24V series</i></b>		
1-29-702	RK3652-B470-24V/C	ring light, blue, coaxial, If diameter: 73/100 mm, controlled, pot.: 0-10V,
<b><i>R-CLR-132-SL series</i></b>		
1-33-017	R-CLR-132x104-B470-SL	ring light, blue, coaxial, If diameter: 104/132 mm, smart light technology
<b><i>RK5268-24V series</i></b>		

Order number	Title	Description
1-29-802	RK5268-B470-24V/C	ring light, blue, coaxial, If diameter: 104/132 mm, controlled, pot.: 0-10V,

## Accessories for Telecentric Lenses - TO66/16.0-160-V-BW

Order number	Title	Description
<b>Adjustment Aids</b>		
5-10-112	Adjustment aid 10	for easy adjustment to 10 mm depth of field, for image scale 0.5 - 0.2
<b>Lens mount</b>		
2-91-331	Mounting angle	Holder for telecentric lenses and lightings with with threaded hole M5
2-91-332	Mounting angle SH	Holder for telecentric lenses and lightings with with slotted hole for M4-M6
2-90-139	Lens Holder d45	Holder for telecentric lenses and lightings with d = 45 mm
2-91-330	Lens Holder d45 wide	Holder for telecentric lenses and lightings with d = 45 mm, width = 32 mm
<b>Extension tubes</b>		
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)
<b>Thread adapter c-mount</b>		
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

### Daylight blocking filter

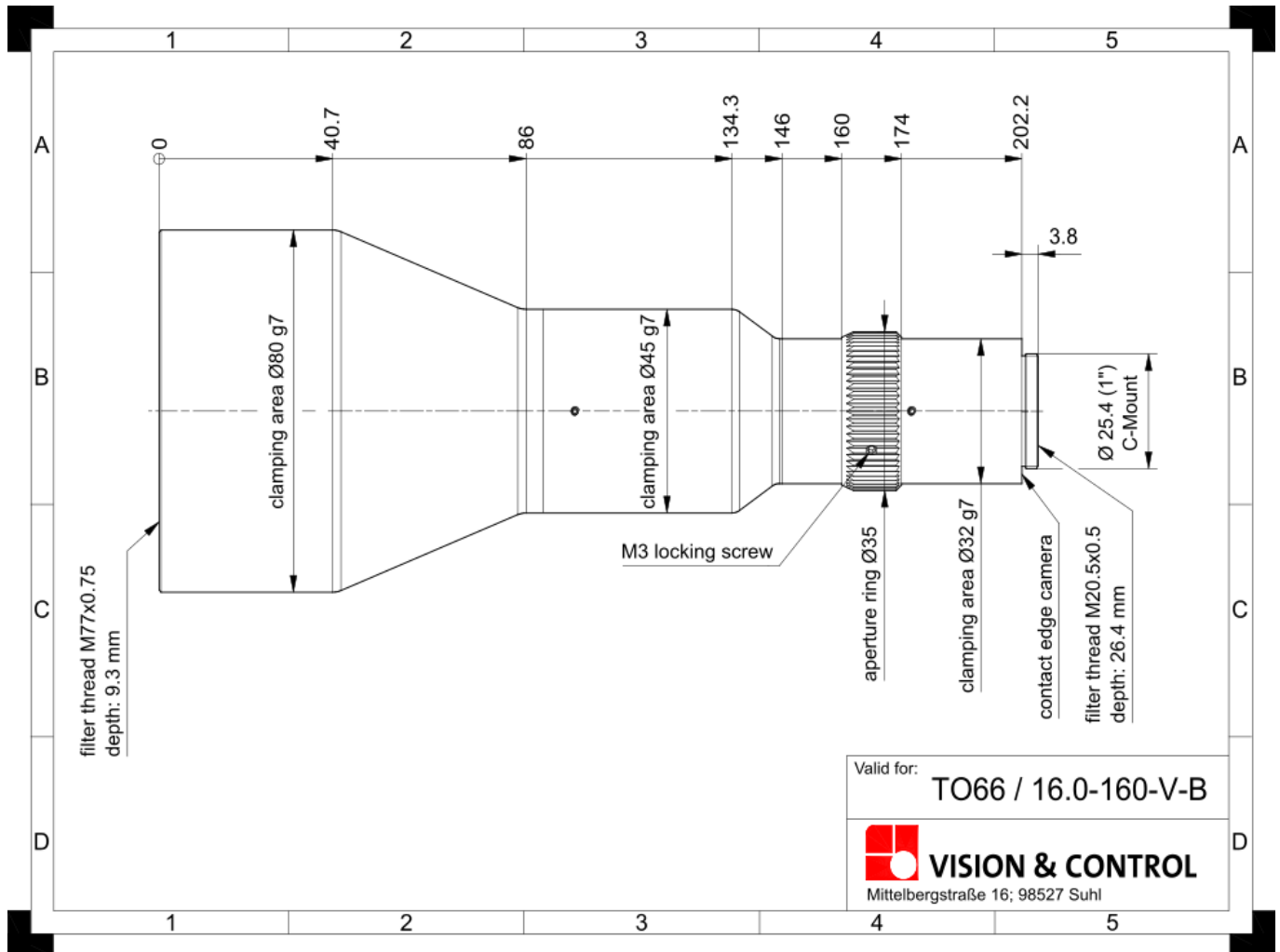
<b>Order number</b>	<b>Title</b>	<b>Description</b>
2-91-131	IR filter M20.5x0.5	long-pass filter from 830 nm, daylight absorbing filter, filter thread M20.5x0.5
2-91-314	IR filter M77x0.75	long-pass filter from 830 nm, daylight absorbing filter, filter thread M77x0.75
<b><i>Polarising filters</i></b>		
2-91-315	Pole filter M67x0.75	linear polarizing filter, range 420 nm - 780 nm, filter thread M77x0.75
<b><i>Colour filter blue</i></b>		
2-91-293	Colour filter blue M77x0.75	band-pass filter, range 350 nm - 600 nm, filter thread M77x0.75
<b><i>UV Cut-Off Filter</i></b>		
2-91-316	UV blocking filter M77x0.75	long-pass filter from 350 nm, usable as protective glass, filter thread M77x0.75
<b><i>Colour filter red</i></b>		
2-91-313	Colour filter red M77x0.75	long-pass filter from 630 nm, red, filter thread M77x0.75
2-91-259	Colour filter red M20.5x0.5	long-pass filter from 630 nm, red, filter thread M20.5x0.5
<b><i>Colour filter green</i></b>		
2-91-306	Colour filter green M77x0.75	band-pass filter, range 430 nm - 620 nm, filter thread M77x0.75
<b><i>Colour filter yellow</i></b>		
2-91-279	Colour filter yellow M77x0.75	long-pass filter from 530 nm, yellow, filter thread M77x0.75
<b><i>Deflection mirror 90° series</i></b>		
2-25-129	Deflection mirror 90-80	90° deflection, attachment for telecentric lenses and lightings with d = 80 mm
<b><i>Adapters for attaching lights to lenses</i></b>		
1-29-778	Adapter ring d73 - M77x0.75	for R-CLR-100x73 und RK3652, for attachment to lenses with filter thread M77x0.75
1-29-875	Adapter ring d104 - M77x0.75	for R-CLR-132x104 and RK5268, for attachment to lenses with filter thread M77x0.75

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Order number	Title	Description
<b>Beam splitter STE60x60</b>		
1-20-050	STE60x60-VIS	Beam splitter unit for coaxial light system, optimized for 450-700 nm
1-20-024	Adapter STE60x60 - TZ080	Attachment of the STE60x60 to telecentric lenses and lightings with d= 80 mm

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## Drawings



Dimensional drawing in mm