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# vicotar® Telecentric Lens - TOB42/11.0-185-V-WN

**Short description:** Bi-Telecentric Lens, C-mount, sensor opt. 2/3", aperture F6 - F22, W/NIR

**Order number:** 2-05-600

**EAN:** 4251692621356

## 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 | 0.26 |
| Spectral range | 465 nm - 950 nm |
| Working distance | 185.0 mm |
| WD adjust @ 850 nm | + 1.3 mm |
| WD adjust @ 940 nm | + 2.0 mm |
| WD adjust @ 1050 nm | + 3.1 mm |
| WD adjust @ 1500 nm | + 8.3 mm |
| Camera distance (object-camera flange) | 417 mm |
| Object field diagonal (max.) | 42 mm |
| Sensor format (opt.) | 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 | M52 x 0.75 |
| Filter thread, camera-side | M20.5 x 0.5 |
| Weight | 437 g |
| Usable object field with: | |
| • 2/3" sensor (8.8 x 6.6 mm²) | 33.8 mm x 25.4 mm |
| • 1/1.8" sensor (7.1 x 5.4 mm²) | 27.3 mm x 20.8 mm |
| • 1/2" sensor (6.4 x 4.8 mm²) | 24.6 mm x 18.5 mm |
| • 1/3" sensor (4.8 x 3.6 mm²) | 18.5 mm x 13.8 mm |

## Notices

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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 |
|---|---|---|
| ***TZB51-UDC-a Serie*** | | |
| 1-10-941 | TZB51-B470/UDC/-a | telecentric light, blue, lf diameter: 49 mm, flashable by flash controller |
| 1-10-942 | TZB51-W5K7/UDC/-a | telecentric light, white, lf diameter: 49 mm, flashable by flash controller |
| 1-10-943 | TZB51-IR880/UDC/-a | telecentric light, IR850, lf diameter: 49 mm, flashable by flash controller |
| 1-10-940 | TZB51-R625/UDC/-a | telecentric light, red, lf diameter: 49 mm, flashable by flash controller |
| 1-10-944 | TZB51-G525/UDC/-a | telecentric light, green, lf diameter: 49 mm, flashable by flash controller |
| ***TZB51 series*** | | |
| 1-10-201 | TZB51-B470-24V | telecentric light, blue, lf diameter: 49 mm, static, cable open-ended |
| 1-10-198 | TZB51-W5K7-24V | telecentric light, white, lf diameter: 49 mm, static, cable open-ended |
| 1-10-202 | TZB51-IR880-24V | telecentric light, IR850, lf diameter: 49 mm, static, cable open-ended |
| 1-10-200 | TZB51-R625-24V | telecentric light, red, lf diameter: 49 mm, static, cable open-ended |
| 1-10-215 | TZB51-G525-24V | telecentric light, green, lf diameter: 49 mm, static, cable open-ended |
| ***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*** | | |

| Order number | Title | Description |
|---|---|---|
| 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 - TOB42/11.0-185-V-WN

| 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*** | | |
| 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 |

| Order number | Title | Description |
|---|---|---|
| ***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 |
| ***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 |

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| Order number | Title | Description |
|---|---|---|
| ***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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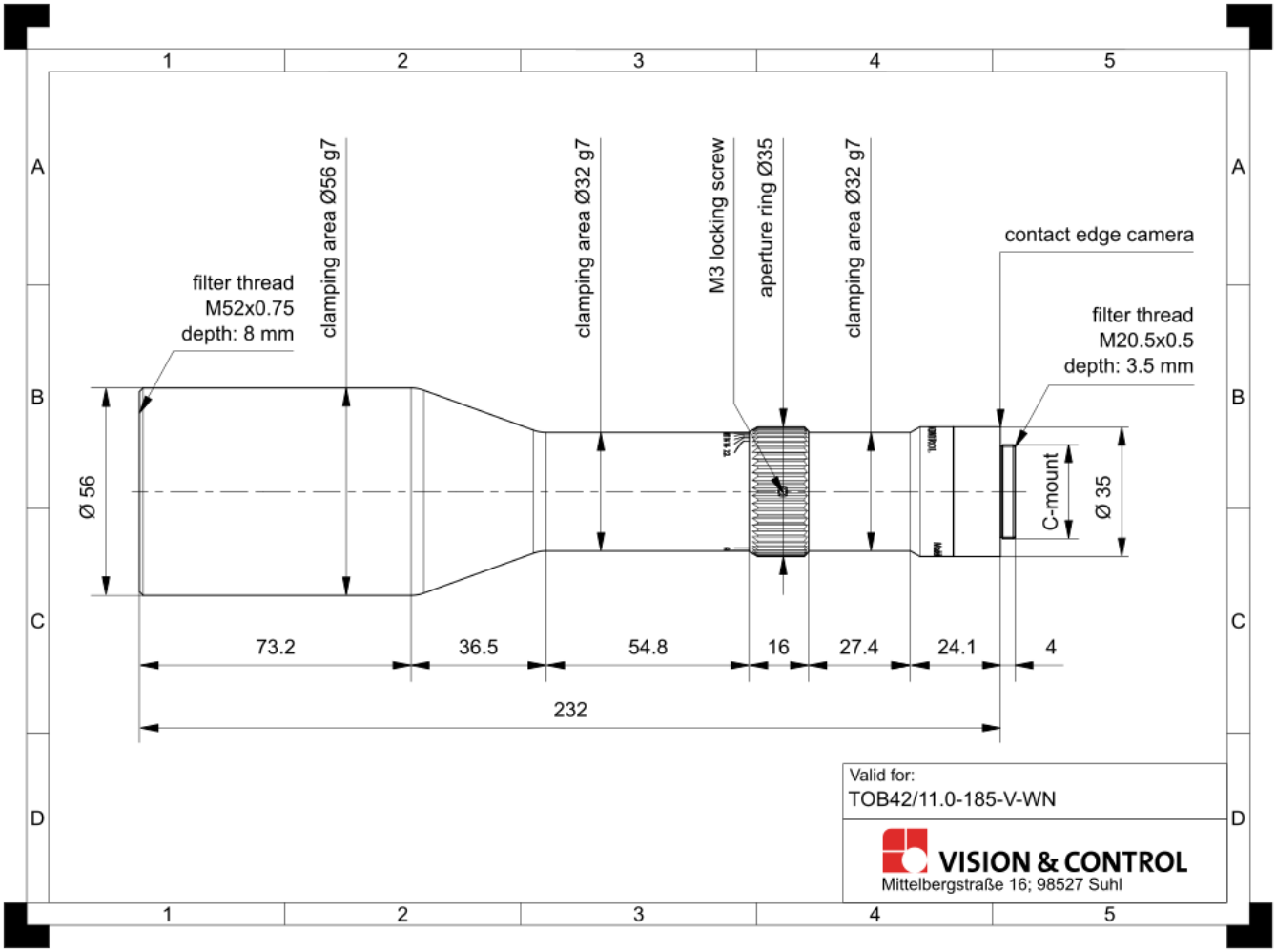
## Drawings




Dimensional drawing in mm