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TECHSPEC<sup>®</sup>

0.28X CobaltTL Telecentric Lens



0.28X Magnification



Stock **#62-921** 20+ In Stock

-

1

+

S\$7,275<sup>.00</sup>

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| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1+         | S\$7,275.00 each              |
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Product Downloads

| General                                 |                              |
|-----------------------------------------|------------------------------|
| CobaltTL Series                         | Product Family:              |
| <a href="#">#63-440</a> Sold Separately | Stock No. of Mounting Clamp: |
| Telecentric Lens                        | Type:                        |
| Physical & Mechanical Properties        |                              |

|          |                        |
|----------|------------------------|
| Variable | Iris Option:           |
|          |                        |
| 197.50   | Length (mm):           |
|          |                        |
| 138.6    | Maximum Diameter (mm): |
|          |                        |
| 736      | Weight (g):            |
|          |                        |
| 17.5     | Flange Distance (mm):  |
|          |                        |

Optical Properties

|                                  |                                          |
|----------------------------------|------------------------------------------|
| 50.8mm                           | Horizontal Field of View, 1.1" Sensor:   |
|                                  |                                          |
| 46.18mm                          | Horizontal Field of View, 1" Sensor:     |
|                                  |                                          |
| 31.75mm                          | Horizontal Field of View, 2/3" Sensor:   |
|                                  |                                          |
| 25.98mm                          | Horizontal Field of View, 1/1.8" Sensor: |
|                                  |                                          |
| 23.1mm                           | Horizontal Field of View, 1/2" Sensor:   |
|                                  |                                          |
| 17.60                            | Maximum Image Circle (mm):               |
|                                  |                                          |
| 0.023                            | Numerical Aperture NA, Object Side:      |
|                                  |                                          |
| 10 (7)                           | Number of Elements (Groups):             |
|                                  |                                          |
| <0.113                           | Typical Telecentricity @ 588nm (°):      |
|                                  |                                          |
| <0.008                           | Typical Distortion @ 588nm (%):          |
|                                  |                                          |
| 0.28X                            | Primary Magnification PMAG:              |
|                                  |                                          |
| 0.28                             | Telecentric Lens Magnification:          |
|                                  |                                          |
| 182                              | Working Distance (mm):                   |
|                                  |                                          |
| 50.7 x 37.1                      | FOV @ Max Sensor Format, H x V (mm):     |
|                                  |                                          |
| f/6 - f/22                       | Aperture (f/#):                          |
|                                  |                                          |
| 425 - 675nm BBAR                 | Coating:                                 |
|                                  |                                          |
| ±6.22mm at f/10 (20% @ 20 lp/mm) | Depth of Field (mm):                     |
|                                  |                                          |
| 0.28X                            | Magnification:                           |
|                                  |                                          |
| VIS                              | Lens Wavelength Range:                   |
|                                  |                                          |

Sensor

|      |                        |
|------|------------------------|
| 1.1" | Maximum Sensor Format: |
|      |                        |
| 2.20 | Pixel Size (µm):       |
|      |                        |

Threading & Mounting

|                     |                |
|---------------------|----------------|
| M132 x0.75 (Female) | Filter Thread: |
|                     |                |
| C-Mount             | Mount:         |
|                     |                |

Regulatory Compliance

|                      |                             |
|----------------------|-----------------------------|
| Not Compliant        | RoHS 2015:                  |
|                      |                             |
| <a href="#">View</a> | Certificate of Conformance: |
|                      |                             |

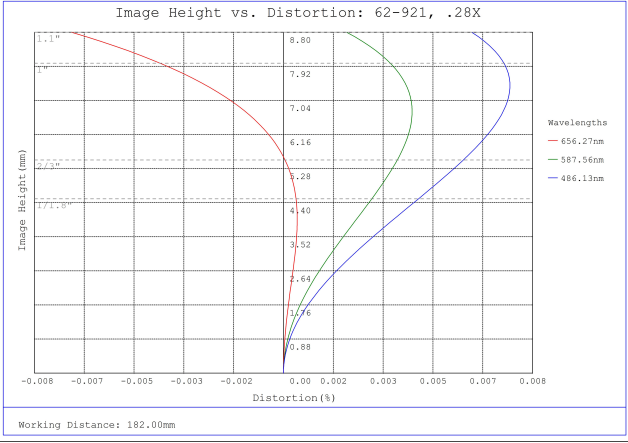
Product Details

- High Resolution Bi-Telecentric Lens with In-Line Illumination Options

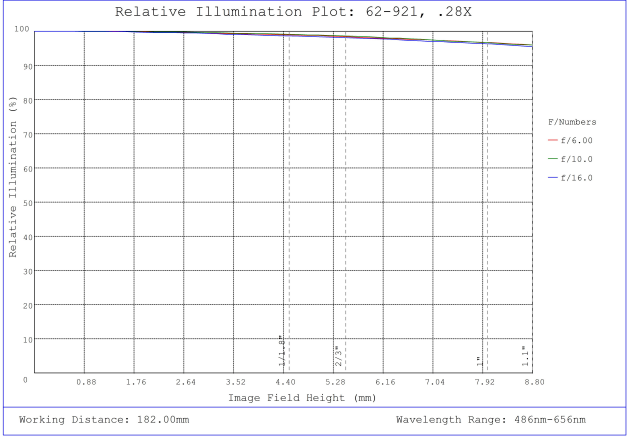
- Up to 20 MegaPixels, 2.2µm Pixel Size
- 1.1", C-Mount Telecentric Lens with f/#s as Low as f/4

TECHSPEC® CobaltTL Telecentric Lenses are designed for semiconductor and electronics inspection, measurement, and gauging applications. These telecentric lenses achieve high light throughput with industry leading low f/#s. Featuring less than 0.015° telecentricity and low 0.013% distortion, these lenses are ideal for image stitching applications. These 17.6mm diagonal sensor format lenses are compatible with the Sony IMX304 1.1" sensors and other similar format sensors such as the Sony IMX183. TECHSPEC® CobaltTL Telecentric Lenses produce unparalleled levels of contrast yielding maximum image quality with the highest degree of measurement accuracy. In-line versions provide the ability to rotate/reposition the inline illumination port to allow for maximum flexibility when machine building. TECHSPEC® CobaltTL Telecentric Lenses are compatible with high vibration environments and feature a removable recessed set screw for securely locking the iris in place.

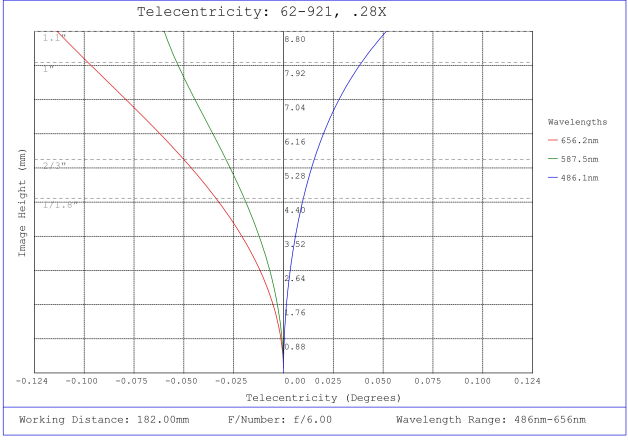
## Technical Information



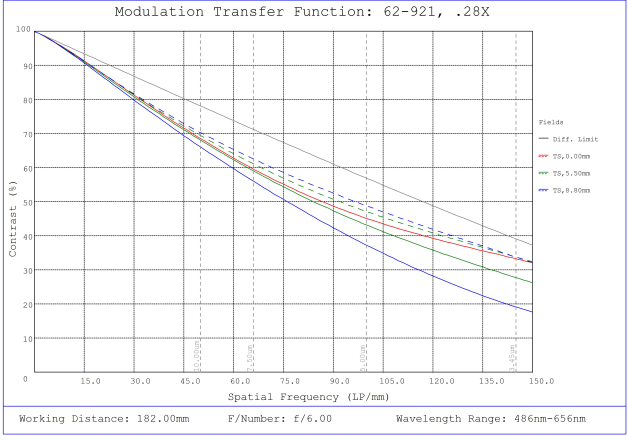
#62-921, 0.28X CobaltTL Telecentric Lens, Distortion Plot



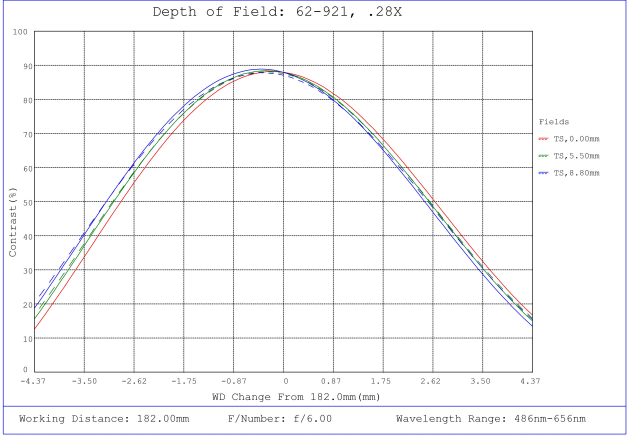
#62-921, 0.28X CobaltTL Telecentric Lens, Relative Illumination Plot



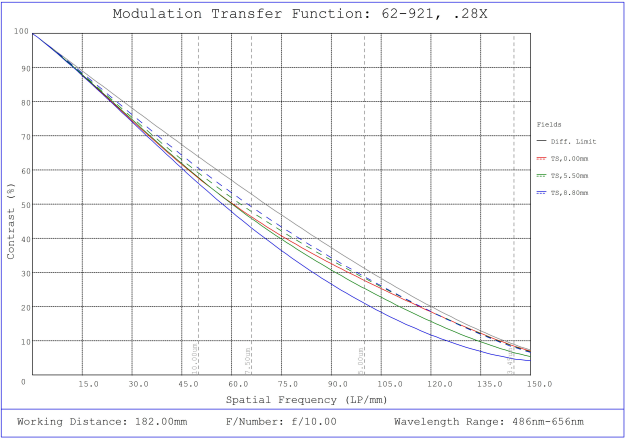
#62-921, 0.28X CobaltTL Telecentric Lens, Telecentricity Plot



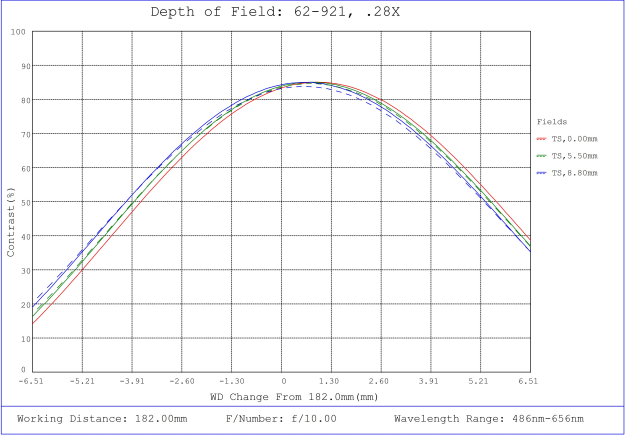
#62-921, 0.28X CobaltTL Telecentric Lens, Modulated Transfer Function (MTF) Plot, 182mm Working Distance, f6



#62-921, 0.28X CobaltTL Telecentric Lens, Depth of Field Plot, 182mm Working Distance, f6



#62-921, 0.28X CobaltTL Telecentric Lens, Modulated Transfer Function (MTF) Plot, 182mm Working Distance, f10



#62-921, 0.28X CobaltTL Telecentric Lens, Depth of Field Plot, 182mm Working Distance, f10

| Description |         | Stock No.                      | Length (A) | Front Diameter (B) | Back Diameter (C) |
|-------------|---------|--------------------------------|------------|--------------------|-------------------|
| 0.28X       | C-Mount | #62-921                        | 197.59mm   | 138.6mm            | 50mm              |
| 0.36X       | C-Mount | #88-602                        | 163.5mm    | 70mm               | 43.5mm            |
| 0.5X        | C-Mount | #62-911                        | 172.9mm    | 90mm               | 50mm              |
| 0.55X       | C-Mount | #88-603                        | 182.5mm    | 62mm               | 43.5mm            |
| 0.69X       | C-Mount | #15-872 / #15-873<br>(In-Line) | 174.96mm   | 55mm               | 46mm              |
| 0.9X        | C-Mount | #62-901                        | 199.8mm    | 65mm               | 53mm              |
|             |         |                                |            |                    |                   |