

Edmund Optics®

NEW

IMAGING



UC SERIES | Cx SERIES | NEW IMAGING PRODUCTS

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 **Edmund**
optics | worldwide

www.edmundoptics.com/imaging

NEW

TECHSPEC® UC SERIES LENSES

- Ultra-Compact (UC) Form Factor
- Designed for Small Pixels ($\leq 2.2\mu\text{m}$)
- Optimized for $\frac{1}{2.5}$ " Sensors and Supports up to $\frac{1}{1.8}$ "

Our ultra-compact, TECHSPEC® UC Series Fixed Focal Length Lenses are designed to optimize performance, cost, and size without sacrificing quality or feel. Designed for pixels that are $\leq 2.2\mu\text{m}$, these lenses provide high levels of resolution (>200 lp/mm) across the sensor and are compatible with all standard C-Mount cameras. TECHSPEC® UC Series Fixed Focal Length Lenses feature focus and iris adjustments, as well as recessed set screws, and are manufactured for use at typical machine vision working distances. While they are optimized for $\frac{1}{2.5}$ " sensors, many focal lengths will work on sensors up to $\frac{1}{1.8}$ ". The TECHSPEC® UC Series lenses are an outstanding option for use on all smaller format camera sensors, along with both short and long working distance applications, making them ideal for inspection, factory automation, biomedical devices, and a broad range of other applications.

4mm
 $\frac{1}{2}$ " Format6mm
 $\frac{1}{2}$ " Format8mm
 $\frac{1}{2}$ " Format

check website for availability

| Focal Length: | 4mm |
|--|--------------------------------------|
| Maximum Camera Sensor Format | $\frac{1}{2}$ " |
| Optimized Sensor Format | $\frac{1}{2.5}$ " |
| Working Distance | 0mm - ∞ |
| Field of View $\frac{1}{2.5}$ " Sensor | 19.4mm - 71.2° |
| Field of View $\frac{1}{2}$ " Sensor | 22.9mm - 79.5° |
| Aperture (f/#) | f/1.8 - f/11 |
| Numerical Aperture NA, Object Side | 0.089 |
| Number of Elements | 8 (7) |
| Distortion | <17.5% (on $\frac{1}{2.5}$ " Sensor) |
| Outer Diameter (mm) | 40 |
| Length (mm) | 40.6 (max) |
| Mount | C-Mount |
| Stock No. | #33-300 |

| Focal Length: | 6mm |
|--|-------------------------------------|
| Maximum Camera Sensor Format | $\frac{1}{2}$ " |
| Optimized Sensor Format | $\frac{1}{2.5}$ " |
| Working Distance | 50mm - ∞ |
| Field of View $\frac{1}{2.5}$ " Sensor | 62.54mm - 52.78° |
| Field of View $\frac{1}{2}$ " Sensor | 71.38mm - 58.97° |
| Field of View $\frac{1}{1.8}$ " Sensor | 82.14mm - 65.95° |
| Aperture (f/#) | f/1.8 - f/12 |
| Numerical Aperture NA, Object Side | 0.00775 |
| Number of Elements | 9 (8) |
| Distortion | <9.5% (on $\frac{1}{2.5}$ " Sensor) |
| Outer Diameter (mm) | 36 |
| Length (mm) | 40.9 (max) |
| Filter Thread | M34x 0.5 |
| Mount | C-Mount |
| Stock No. | #33-301 (Coming Soon) |

| Focal Length: | 8mm |
|--|-----------------------------------|
| Maximum Camera Sensor Format | $\frac{1}{2}$ " |
| Optimized Sensor Format | $\frac{1}{2.5}$ " |
| Working Distance | 50mm - ∞ |
| Field of View $\frac{1}{2}$ " Sensor | 40mm - 43.6° |
| Field of View $\frac{1}{1.8}$ " Sensor | 45mm - 48.46° |
| Aperture (f/#) | f/1.8 - f/11 |
| Numerical Aperture NA, Object Side | 0.03 |
| Number of Elements | 8 (7) |
| Distortion | <4% (on $\frac{1}{2.5}$ " Sensor) |
| Outer Diameter (mm) | 30 |
| Length (mm) | 34.52 (max) |
| Mount | C-Mount |
| Stock No. | #33-302 |

12mm
 $\frac{1}{1.8}$ " Format16mm
 $\frac{1}{1.8}$ " Format25mm
 $\frac{1}{1.8}$ " Format

| Focal Length: | 12mm |
|--|-------------------------------------|
| Maximum Camera Sensor Format | $\frac{1}{1.8}$ " |
| Optimized Sensor Format | $\frac{1}{2.5}$ " |
| Working Distance | 100mm - ∞ |
| Field of View $\frac{1}{2.5}$ " Sensor | 53.2mm - 26° |
| Field of View $\frac{1}{2}$ " Sensor | 60.2mm - 29.2° |
| Field of View $\frac{1}{1.8}$ " Sensor | 68mm - 32.8° |
| Aperture (f/#) | f/1.8 - f/11 |
| Numerical Aperture NA, Object Side | 0.029 |
| Number of Elements | 7 (6) |
| Distortion | <2.5% (on $\frac{1}{2.5}$ " Sensor) |
| Outer Diameter (mm) | 30 |
| Length (mm) | 35.2 (max) |
| Filter Thread | M25.5 x 0.5 |
| Mount | C-Mount |
| Stock No. | #33-303 |

| Focal Length: | 16mm |
|--|-------------------------------------|
| Maximum Camera Sensor Format | $\frac{1}{1.8}$ " |
| Optimized Sensor Format | $\frac{1}{2.5}$ " |
| Working Distance | 200mm - ∞ |
| Field of View $\frac{1}{2.5}$ " Sensor | 71.3mm - 20.21° |
| Field of View $\frac{1}{2}$ " Sensor | 80mm - 22.62° |
| Field of View $\frac{1}{1.8}$ " Sensor | 90mm - 25.36° |
| Aperture (f/#) | f/1.8 - f/11 |
| Numerical Aperture NA, Object Side | 0.021 |
| Number of Elements | 7 (5) |
| Distortion | <0.8% (on $\frac{1}{2.5}$ " Sensor) |
| Outer Diameter (mm) | 30 |
| Length (mm) | 29.13 (max) |
| Filter Thread | M25.5 x 0.5 |
| Mount | C-Mount |
| Stock No. | #33-304 |

| Focal Length: | 25mm |
|--|--------------------------------------|
| Maximum Camera Sensor Format | $\frac{1}{1.8}$ " |
| Optimized Sensor Format | $\frac{1}{2.5}$ " |
| Working Distance | 200mm - ∞ |
| Field of View $\frac{1}{2.5}$ " Sensor | 46.74mm - 12.54° |
| Field of View $\frac{1}{2}$ " Sensor | 52.5mm - 14.08° |
| Field of View $\frac{1}{1.8}$ " Sensor | 59.14mm - 15.87° |
| Aperture (f/#) | f/1.85 - f/16 |
| Numerical Aperture NA, Object Side | 0.0314 |
| Number of Elements | 7 (5) |
| Distortion | <0.58% (on $\frac{1}{2.5}$ " Sensor) |
| Outer Diameter (mm) | 30 |
| Length (mm) | 31.28 (max) |
| Filter Thread | M25.5 x 0.5 |
| Mount | C-Mount |
| Stock No. | #33-305 |

NEW

PRODUCTS

12mm
1" Format



100mm
2/3" Format



0.15X - 0.5X
2/3" Format



HIGH RES. FIXED FOCAL LENGTH LENS

| Focal Length: | 12mm, 1" Format |
|------------------------------------|------------------------------|
| Maximum Camera Sensor Format | 1" |
| Field of View, 1" Sensor | 129.6mm - 52.4° |
| Min. Working Distance (WD) | 100mm to ∞ |
| Aperture (f/#) | f/2.8 - f/16 |
| Numerical Aperture NA, Object Side | 0.01 |
| Resolution, Within Primary WD | 110 lp/mm |
| Distortion | <-4.2% |
| Number of Elements (Groups) | 10 (9) |
| Coating | λ/4 MgF ₂ @ 550nm |
| Lens Mount | C-Mount |
| Weight | 260g |
| Stock Number | #86-570 |

COMPACT FIXED FOCAL LENGTH LENS

| Focal Length: | 100mm |
|------------------------------------|------------------|
| Maximum Camera Sensor Format | 2/3" |
| Field of View, 2/3" Sensor | 52.9mm - 4.0° |
| Field of View, 1/2" Sensor | 40.1mm - 2.9° |
| Field of View, 1/3" Sensor | 30.1mm - 2.2° |
| Working Distance | 750mm - ∞ |
| Aperture (f/#) | f/2.8 - f/22 |
| Numerical Aperture NA, Object Side | 0.014 |
| Number of Elements (Groups) | 7 (6) |
| Coating | 425 - 675nm BBAR |
| Lens Mount | C-Mount |
| Weight | 250g |
| Stock Number | #86-410 |

VARIABLE MAGNIFICATION LENS

| Magnification: | 0.15X - 0.5X Non-Telecentric |
|------------------------------|------------------------------|
| Maximum Camera Sensor Format | 2/3" |
| Field of View, 2/3" Sensor | 58.7 - 17.6mm |
| Working Distance | 179.8 - 50.0mm |
| Resolution | 75 lp/mm @ >20% |
| Aperture (f/#) | f/4 - f/22 |
| Typical Distortion @ 588nm | <0.1% |
| Filter Threading | M25.5 x 0.5 |
| Lens Mount | C-Mount |
| Max. Diameter | 32mm |
| Length | 59.5mm |
| Stock Number | #87-536 |

1X
220mm WD



1X
300mm WD



2X
300mm WD



COMPACT TELECENTRIC LENSES

| Primary Magnification: | 1X |
|------------------------------------|------------------------------|
| Working Distance (±1mm) | 220mm |
| Maximum Camera Sensor Format | 2/3" |
| Field of View, 2/3" Sensor | 8.8mm |
| Field of View, 1/2" Sensor | 6.4mm |
| Field of View, 1/3" Sensor | 4.8mm |
| Depth of Field (20% @ 20 lp/mm) | ±0.6mm |
| Aperture (f/#) | f/11 |
| Numerical Aperture NA, Object Side | 0.044 |
| Typical Telecentricity @ 588nm | <0.03° |
| Typical Distortion @ 588nm | <0.03% |
| Number of Elements (Groups) | 5 (4) |
| Coating | λ/4 MgF ₂ @ 550nm |
| Lens Mount | C-Mount |
| Weight (Standard Model) | 135g |
| Standard Stock No. | #33-096 |
| In-Line Stock No. | #33-110 |

COMPACT TELECENTRIC LENSES

| Primary Magnification: | 1X |
|------------------------------------|------------------------------|
| Working Distance (±1mm) | 300mm |
| Maximum Camera Sensor Format | 2/3" |
| Field of View, 2/3" Sensor | 8.8mm |
| Field of View, 1/2" Sensor | 6.4mm |
| Field of View, 1/3" Sensor | 4.8mm |
| Depth of Field (20% @ 20 lp/mm) | ±0.75mm |
| Aperture (f/#) | f/14.3 |
| Numerical Aperture NA, Object Side | 0.035 |
| Typical Telecentricity @ 588nm | <0.07° |
| Typical Distortion @ 588nm | <0.02% |
| Number of Elements (Groups) | 5 (4) |
| Coating | λ/4 MgF ₂ @ 550nm |
| Lens Mount | C-Mount |
| Weight (Standard Model) | 140g |
| Standard Stock No. | #33-100 |
| In-Line Stock No. | #33-114 |

COMPACT TELECENTRIC LENSES

| Primary Magnification: | 2X |
|------------------------------------|------------------------------|
| Working Distance (±1mm) | 300mm |
| Maximum Camera Sensor Format | 2/3" |
| Field of View, 2/3" Sensor | 4.4mm |
| Field of View, 1/2" Sensor | 3.2mm |
| Field of View, 1/3" Sensor | 2.4mm |
| Depth of Field (20% @ 20 lp/mm) | ±1.4mm |
| Aperture (f/#) | f/28.5 |
| Numerical Aperture NA, Object Side | 0.035 |
| Typical Telecentricity @ 588nm | <0.06° |
| Typical Distortion @ 588nm | <0.03% |
| Number of Elements (Groups) | 5 (4) |
| Coating | λ/4 MgF ₂ @ 550nm |
| Lens Mount | C-Mount |
| Weight (Standard Model) | 120g |
| Standard Stock No. | #33-101 |
| In-Line Stock No. | #33-115 |

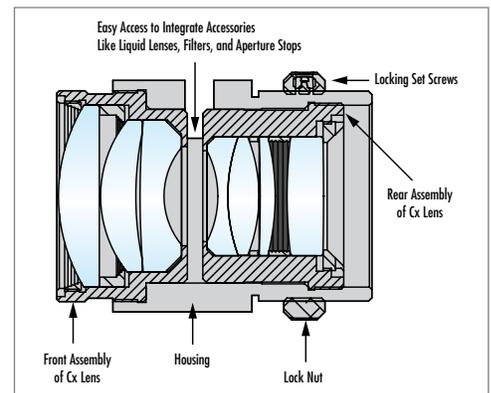
NEW**TECHSPEC®****Cx SERIES FIXED FOCAL LENGTH LENSES**

- Compact Flexible (Cx) Housing Design
- Modular 3 Piece Design to Fit Your Application Needs
- Accommodates Interchangeable Accessories such as Liquid Lenses



Our TECHSPEC® Cx Series Fixed Focal Length Lenses are designed with versatility and simplicity to easily meet your application needs. The modular 3-piece design allows the flexibility to integrate precision fixed apertures, internal filter holders, and liquid lenses into the assembly with ease. These lenses feature a simplified focus mechanism with easy to use lock nut and recessed set screws to lock focus position into place. The Cx Series lenses are ideal for applications such as Research and Development.

| Focal Length: | 35mm |
|------------------------------------|-----------------------|
| Maximum Camera Sensor Format | 2/3" |
| Field of View, 2/3" Sensor | 39.3mm - 14.3° |
| Field of View, 1/2" Sensor | 28.5mm - 10.4° |
| Field of View, 1/3" Sensor | 21.4mm - 7.8° |
| Working Distance | 165mm - ∞ |
| Aperture (f/#) | Accessory Dependent |
| Numerical Aperture NA, Object Side | 0.021 |
| Number of Elements (Groups) | 7 (6) |
| Coating | 425 - 675nm BBAR |
| Lens Mount | C-Mount |
| Stock Number | #33-565 (Coming Soon) |

**NEW****TECHSPEC®****Cx SERIES FIXED FOCAL LENGTH LENSES**

Proud Recipient of the

Vision
Systems
DESIGN
**2016 Innovators
Awards**
SILVER



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