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# TECHSPEC® 4mm, f/5.6 UCi Series Fixed Focal Length Lens


 Stock #33-858 **20+ In Stock**

 - 1 + C\$378<sup>.00</sup>
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4mm UCi Series Fixed Focal Length Lens



Volume Pricing	
Qty 1+	C\$378.00 each
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Product Downloads	
STEP:step	PDF Drawing:pdf
IGES:igs	Zemax
eDrawing:eprt	
EO Spec Sheet	

## General

<b>Product Family:</b>	UCi Series	<b>Type:</b>	Fixed Focal Length Lens
<b>IR Cut Filter:</b>	No		

## Physical & Mechanical Properties

<b>Iris Option:</b>	Fixed	<b>Length (mm):</b>	48.30
<b>Maximum Diameter (mm):</b>	40	<b>Outer Diameter (mm):</b>	40
<b>Weight (g):</b>	44	<b>Maximum Rear Protrusion (mm):</b>	0

## Optical Properties

<b>Horizontal Field of View @ Max Sensor Format:</b>	23.0mm - 84.8°	<b>Field of View at Max Sensor Format:</b>	Horizontal: 22.9mm - 84.8° Vertical: 15.6mm - 65.4° Diagonal: 33.6mm - 101.7°
<b>Horizontal Field of View, 1/2" Sensor:</b>	23.0mm - 84.8°	<b>Horizontal Field of View, 1/2.5" Sensor:</b>	20.0mm - 77.8°
<b>Horizontal Field of View, 1/3" Sensor:</b>	15.6mm - 65.4°	<b>Horizontal Field of View, 1/4" Sensor:</b>	11.2mm - 49.7°
<b>Maximum Image Circle (mm):</b>	8.00	<b>Numerical Aperture NA, Object Side:</b>	0.0288
<b>Number of Elements (Groups):</b>	8 (7)	<b>Focal Length FL (mm):</b>	4.00
<b>Working Distance (mm):</b>	0 - ∞	<b>Aperture (f/#):</b>	f/5.6

<b>Coating:</b>	$\lambda/4$ MgF <sub>2</sub>	<b>Coating Specification:</b>	$\lambda/4$ MgF <sub>2</sub>
<b>Entrance Pupil Position (mm):</b>	12.69	<b>Object Space Principal Plane (mm):</b>	16.04
<b>Image Space Principal Plane (mm):</b>	5.84	<b>Maximum Distortion (%):</b>	-20.44
<b>Exit Pupil Position (mm):</b>	-12.68	<b>Lens Wavelength Range:</b>	VIS
<b>Sensor</b>			
<b>Optimized Sensor Format:</b>	1/2.5"	<b>Maximum Sensor Format:</b>	1/2"
<b>Pixel Size (<math>\mu\text{m}</math>):</b>	1.85		
<b>Threading &amp; Mounting</b>			
<b>Filter Thread:</b>	M62 x 0.75 (Male)	<b>Filter Thread Adapter:</b>	<b>#33-308 (Required)</b>
<b>Mount:</b>	S-Mount (M12 x 0.5)		
<b>Environmental &amp; Durability Factors</b>			
<b>Storage Temperature (<math>^{\circ}\text{C}</math>):</b>	<b>-20 to +60</b>	<b>Type of Ruggedization:</b>	Industrial (Fixed Aperture with Simplified Mechanics)
<b>Regulatory Compliance</b>			
<b>Certificate of Conformance:</b>	<b>View</b>		

## Product Details

- Up to 1/1.8", C-Mount, S-Mount Lens
- Up to 12 MegaPixels, 1.85 $\mu\text{m}$  Pixel Size Sensors
- Instrumentation (UCi) versions of our UC Series Lenses with Streamlined Mechanical Designs and Fixed Apertures
- 4mm to 35mm Focal Length

TECHSPEC® UCi Series Fixed Focal Length Lenses utilize the same optics as the TECHSPEC UC Series Lenses and feature 4K resolution. These lenses are designed for small pixels  $\leq 2.2\mu\text{m}$  and offer a wide range of fixed apertures for a variety of applications. While optimized for 1/2.5" sensors, many focal length options can be used on sensors up to 1/1.8". TECHSPEC® UCi Series Fixed Focal Length Lenses are ideal for OEM applications that require small, robust, and lightweight imaging solutions.

**Note:** For adjustable aperture options, see our [TECHSPEC® UC Series Fixed Focal Length Lenses](#).

Edmund Optics has created a family of high-performance ultra-compact optical designs (the UC Series family) and developed 3 customized optomechanical solutions targeted for specific applications. These lens sub-families utilize the same optics as the UC Series lenses providing the same optical performance in a variety of optomechanical solutions to meet your application requirements:

**UC Series:** Features locking cam focus and iris adjustment in an ultra-compact design and is the most adjustable version of these optical designs; they are the typical high-quality machine vision lenses.

**UCi Series:** Simplified mechanics featuring fixed apertures with compact housing. **Industrial Ruggedization** for reduced size, cost, and locked focus.

**UCr Series:** All optics glued in place and a locking C-clamp focus ring. **Stabilized Ruggedization** for reduced pixel shift and improved focus stability.

**UCw Series:** Waterproof, designed to meet IEC **Ingress Protection** Code IPX7 to withstand exposure to water up to 1 meter depth for 30 minutes.

## Technical Information

*#33-858, 4mm, f/5.6 UCi Series Fixed Focal Length Lens, Distortion Plot*

*#33-858, 4mm, f/5.6 UCi Series Fixed Focal Length Lens, Relative Illumination Plot*

*#33-858, 4mm, f/5.6 UCi Series Fixed Focal Length Lens, Working Distance versus Field of View Plot*

*#33-858, 4mm, f/5.6 UCi Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 75mm Working Distance, f5.6*

## Accessories

**Note:** Compatible accessories for individual stock numbers may vary. If unsure about which accessories work with your products, please contact us [here](#).

	Title	Compare	Stock Number	Price	Buy
<a href="#">MORE+</a>	C-Mount to M12 Adapter for UCi Lens		#12-879	C\$67.20 <a href="#">Request Quote</a>	20+ In Stock <input type="text" value="1"/>
<a href="#">MORE+</a>	Filter Adapter M62 x 0.75 from M40 x 0.5 (Female)		#33-308	C\$56.70 <a href="#">Request Quote</a>	7 In Stock <input type="text" value="1"/>

## Related Products



#33-300 - 4mm UC Series Fixed Focal Length Lens  
C\$418.60

Qty



#89-346 - 4mm FL f/5.6, Blue Series M12 Lens  
C\$161.00

Qty



#86-900 - 4.5mm C Series Fixed Focal Length Lens  
C\$868.00

Qty



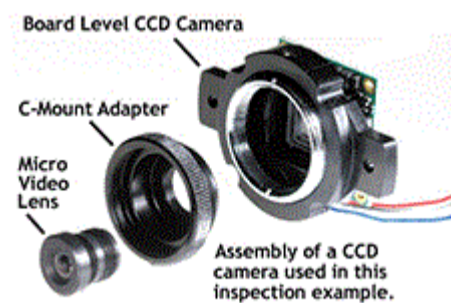
USAF 1951 Glass Slide Resolution Targets

## Frequently Purchased Together



#34-711 - 2.5mm FL, High Resolution, f/2, Micro Video Lens  
C\$134.40

Qty



#53-675 - C-Mount to M12 Lens Adapter  
C\$45.85

Qty



#57-907 - 3.6mm FL, Red Series M12 Lens  
C\$159.60

Qty




























































#58-365 - 4mm - 12mm Focal Length, Varifocal Video Lens  
C\$389.20

























Qty





































## Compatible Cameras















	Title	Type	Compare	Stock Number	Price	Buy
	Allied Vision Alvium 1800 U-	Monochrome Camera		#14-142	C\$418.60 <a href="#">Request</a>	<a href="#">CONTACT US</a> <input type="text" value="1"/>

	Title	Type	Compare	Stock Number	Price	Buy
<a href="#">MORE+</a> 	500m, 1/2.5" 5.0MP S-Mount, USB 3.0 Monochrome Camera (Partial Housing)				<a href="#">Quote</a>	
<a href="#">MORE+</a> 	Allied Vision Alvium 1800 U- 500c, 1/2.5" 5.0MP S-Mount, USB 3.0 Color Camera (Partial Housing)	Color Camera		<a href="#">#14-143</a>	<b>C\$435.40</b> <a href="#">Request Quote</a>	<a href="#">CONTACT US</a> <input type="text" value="1"/> 
<a href="#">MORE+</a> 	Allied Vision Alvium 1800 U- 500m, 1/2.5" 5.0MP S-Mount, Right Angle USB 3.1 Monochrome Camera	Monochrome Camera		<a href="#">#14-132</a>	<b>C\$435.40</b> <a href="#">Request Quote</a>	<a href="#">CONTACT US</a> <input type="text" value="1"/> 
<a href="#">MORE+</a> 	Allied Vision Alvium 1800 U- 501m NIR, 1/2.5" 5MP S- Mount, Right Angle USB 3.1 NIR Camera (Partial Housing)	NIR Camera		<a href="#">#19-558</a>	<b>C\$435.40</b> <a href="#">Request Quote</a>	<a href="#">CONTACT US</a> <input type="text" value="1"/> 
<a href="#">MORE+</a> 	Allied Vision Alvium 1800 U- 501m NIR, 1/2.5" 5.0MP S- Mount, USB 3.0 NIR Camera (Partial Housing)	NIR Camera		<a href="#">#19-557</a>	<b>C\$435.40</b> <a href="#">Request Quote</a>	<a href="#">CONTACT US</a> <input type="text" value="1"/> 
<a href="#">MORE+</a> 	Allied Vision Alvium 1800 U- 501m NIR, 1/2.5" 5MP S- Mount, Right Angle USB 3.1 NIR Camera	NIR Camera		<a href="#">#19-552</a>	<b>C\$450.80</b> <a href="#">Request Quote</a>	<b>3 In Stock</b> <input type="text" value="1"/> 
<a href="#">MORE+</a> 	Allied Vision Alvium 1800 U- 501m NIR, 1/2.5" 5.0MP S- Mount, USB 3.0 NIR Camera	NIR Camera		<a href="#">#19-551</a>	<b>C\$450.80</b> <a href="#">Request Quote</a>	<b>1 In Stock</b> <input type="text" value="1"/> 
<a href="#">MORE+</a> 	Allied Vision Alvium 1800 U- 500c, 1/2.5" 5.0MP S-Mount, Right Angle USB 3.1 Color Camera (Partial Housing)	Color Camera		<a href="#">#14-149</a>	<b>C\$466.20</b> <a href="#">Request Quote</a>	<a href="#">CONTACT US</a> <input type="text" value="1"/> 
<a href="#">MORE+</a> 	Allied Vision Alvium 1800 U- 500m, 1/2.5" 5.0MP S-Mount, Right Angle USB 3.1 Monochrome Camera (Partial Housing)	Monochrome Camera		<a href="#">#14-148</a>	<b>C\$467.60</b> <a href="#">Request Quote</a>	<a href="#">CONTACT US</a> <input type="text" value="1"/> 
<a href="#">MORE+</a> 	LUCID Vision Labs Phoenix™ PHX016S-CS, Sony IMX273, 1.6 MP, Color Camera	Color Camera		<a href="#">#13-654</a>	<b>C\$469.00</b> <a href="#">Request Quote</a>	<b>8 In Stock</b> <input type="text" value="1"/> 
<a href="#">MORE+</a> 	LUCID Vision Labs Phoenix™ PHX016S-CS-IX, Sony IMX273, 1.6 MP, Color Camera	Color Camera		<a href="#">#13-660</a>	<b>C\$469.00</b> <a href="#">Request Quote</a>	<b>2 In Stock</b> <input type="text" value="1"/> 

	Title	Type	Compare	Stock Number	Price	Buy
 	LUCID Vision Labs Phoenix™ PHX016S-MS, Sony IMX273, 1.6 MP, Monochrome Camera	Monochrome Camera		#13-653	C\$469.00 Request Quote	CONTACT US 1 
 	LUCID Vision Labs Phoenix™ PHX016S-MS-IX, Sony IMX273, 1.6 MP, Monochrome Camera	Monochrome Camera		#13-659	C\$469.00 Request Quote	CONTACT US 1 
 	Allied Vision Alvium 1800 U-500m, 1/2.5" 5.0MP S-Mount, USB 3.0 Monochrome Camera	Monochrome Camera		#14-128	C\$483.00 Request Quote	CONTACT US 1 
 	Allied Vision Alvium 1800 U-500c, 1/2.5" 5.0MP S-Mount, USB 3.0 Color Camera	Color Camera		#14-129	C\$499.80 Request Quote	2 In Stock 1 
 	Allied Vision Alvium 1800 U-500c, 1/2.5" 5.0MP S-Mount, Right Angle USB 3.1 Color Camera	Color Camera		#14-133	C\$499.80 Request Quote	1 In Stock 1 
 	LUCID Vision Labs Phoenix™ PHX023S-CS, Sony IMX392, 2.3MP, Color Camera	Color Camera		#13-666	C\$519.40 Request Quote	CONTACT US 1 
 	LUCID Vision Labs Phoenix™ PHX023S-CS-IX, Sony IMX392, 2.3MP, Color Camera	Color Camera		#13-672	C\$519.40 Request Quote	CONTACT US 1 
 	LUCID Vision Labs Phoenix™ PHX023S-MS, Sony IMX392, 2.3MP, Monochrome Camera	Monochrome Camera		#13-665	C\$519.40 Request Quote	CONTACT US 1 
 	LUCID Vision Labs Phoenix™ PHX023S-MS-IX, Sony IMX392, 2.3MP, Monochrome Camera	Monochrome Camera		#13-671	C\$519.40 Request Quote	CONTACT US 1 
 	IDS U3-3041LE-C-HQ, USB 3.0, 1/2.9" Color Camera	Color Camera		#24-085	C\$525.00 Request Quote	2 In Stock 1 
 	IDS U3-3041LE-M-GL, USB 3.0, 1/2.9" Monochrome Camera	Monochrome Camera		#24-087	C\$525.00 Request Quote	1 In Stock 1 
 	Allied Vision Alvium 1800 U-158c, 1/2.9" 1.6MP S-Mount, USB 3.0 Color	Color Camera		#14-870	C\$532.00 Request Quote	CONTACT US 1 

	Title	Type	Compare	Stock Number	Price	Buy
	Camera (Partial Housing)					
<a href="#">MORE+</a> 	IDS Imaging U3-3046LE-C-HQ 1/2.9" Color USB3 Camera	Color Camera		#24-105	C\$560.00 <a href="#">Request Quote</a>	1 In Stock <input type="text" value="1"/> 
<a href="#">MORE+</a> 	Allied Vision Alvium 1800 U-120m, 1/3" 1.2MP S-Mount, USB 3.0 Monochrome Camera	Monochrome Camera		#14-861	C\$564.20 <a href="#">Request Quote</a>	<a href="#">CONTACT US</a> <input type="text" value="1"/> 
<a href="#">MORE+</a> 	Allied Vision Alvium 1800 U-120m, 1/3" 1.2MP S-Mount, Right Angle USB 3.1 Monochrome Camera	Monochrome Camera		#14-863	C\$564.20 <a href="#">Request Quote</a>	<a href="#">CONTACT US</a> <input type="text" value="1"/> 
<a href="#">MORE+</a> 	Allied Vision Alvium 1800 U-158m, 1/2.9" 1.6MP S-Mount, USB 3.0 Monochrome Camera (Partial Housing)	Monochrome Camera		#14-869	C\$564.20 <a href="#">Request Quote</a>	<a href="#">CONTACT US</a> <input type="text" value="1"/> 
<a href="#">MORE+</a> 	IDS U3-3861LE-C-HQ, USB 3.0, 1/2.8" Color Camera	Color Camera		#24-095	C\$574.00 <a href="#">Request Quote</a>	2 In Stock <input type="text" value="1"/> 
<a href="#">MORE+</a> 	IDS U3-3866LE-C-HQ, USB 3.0, 1/2.8" Color Camera	Color Camera		#24-114	C\$574.00 <a href="#">Request Quote</a>	1 In Stock <input type="text" value="1"/> 
<a href="#">MORE+</a> 	IDS U3-3866LE-M-GL, USB 3.0, 1/2.8" Monochrome Camera	Monochrome Camera		#24-115	C\$574.00 <a href="#">Request Quote</a>	<a href="#">CONTACT US</a> <input type="text" value="1"/> 
<a href="#">MORE+</a> 	IDS U3-3861LE-M-GL, USB 3.0, 1/2.8" Monochrome Camera	Monochrome Camera		#24-097	C\$574.00 <a href="#">Request Quote</a>	1 In Stock <input type="text" value="1"/> 
<a href="#">MORE+</a> 	Allied Vision Alvium 1800 U-158m, 1/2.9" 1.6MP S-Mount, USB 3.0 Monochrome Camera	Monochrome Camera		#14-865	C\$579.60 <a href="#">Request Quote</a>	<a href="#">CONTACT US</a> <input type="text" value="1"/> 
<a href="#">MORE+</a> 	Allied Vision Alvium 1800 U-158m, 1/2.9" 1.6MP S-Mount, Right Angle USB 3.1 Monochrome Camera	Monochrome Camera		#14-867	C\$579.60 <a href="#">Request Quote</a>	<a href="#">CONTACT US</a> <input type="text" value="1"/> 
<a href="#">MORE+</a> 	IDS Imaging U3-3046LE-C-HQ 1/2.9" Color USB3 Camera (Recertified 05-P)	Color Camera		#24-105-RCD-05P <b>RECERTIFIED</b>	C\$588.00 <a href="#">Request Quote</a>	1 In Stock <input type="text" value="1"/> 
<a href="#">MORE+</a> 	Allied Vision Alvium 1800 U-120c, 1/3" 1.2MP S-Mount, USB 3.0 Color Camera	Color Camera		#14-862	C\$596.40 <a href="#">Request Quote</a>	4 In Stock <input type="text" value="1"/> 

	Title	Type	Compare	Stock Number	Price	Buy
 	Allied Vision Alvium 1800 U-120c, 1/3" 1.2MP S-Mount, Right Angle USB 3.1 Color Camera	Color Camera		#14-864	C\$596.40 Request Quote	1 In Stock <input type="text" value="1"/> 
 	Allied Vision Alvium 1800 U-158c, 1/2.9" 1.6MP S-Mount, USB 3.0 Color Camera	Color Camera		#14-866	C\$596.40 Request Quote	2 In Stock <input type="text" value="1"/> 
 	Allied Vision Alvium 1800 U-158c, 1/2.9" 1.6MP S-Mount, Right Angle USB 3.1 Color Camera	Color Camera		#14-868	C\$596.40 Request Quote	6 In Stock <input type="text" value="1"/> 
 	Allied Vision Alvium 1800 U-240m, 1/2.3" 2.35MP S- Mount, USB 3.0 Monochrome Camera	Monochrome Camera		#23-178	C\$611.80 Request Quote	2 In Stock <input type="text" value="1"/> 
 	Allied Vision Alvium 1800 U-240m, 1/2.3" 2.35MP S- Mount, Right Angle USB 3.1 Monochrome Camera	Monochrome Camera		#23-202	C\$611.80 Request Quote	1 In Stock <input type="text" value="1"/> 
 	Allied Vision Alvium 1800 U-240c, 1/2.3" 2.35MP S- Mount, USB 3.0 Color Camera	Color Camera		#23-179	C\$628.60 Request Quote	CONTACT US <input type="text" value="1"/> 
 	Allied Vision Alvium 1800 U-240c, 1/2.3" 2.35MP S- Mount, Right Angle USB 3.1 Color Camera	Color Camera		#23-203	C\$628.60 Request Quote	3 In Stock <input type="text" value="1"/> 
 	Allied Vision Alvium G1-240m, 1/2.3" 2.4MP S-Mount, GigE PoE Monochrome Camera	Monochrome Camera		#23-545	C\$693.00 Request Quote	CONTACT US <input type="text" value="1"/> 
 	Allied Vision Alvium G1-240c, 1/2.3" 2.4MP S- Mount, GigE PoE Color Camera	Color Camera		#23-546	C\$707.00 Request Quote	CONTACT US <input type="text" value="1"/> 
 	IDS U3-3041LE- C-HQ-AF, USB 3.0, 1/2.9" Color Camera	Color Camera		#24-086	C\$707.00 Request Quote	3 In Stock <input type="text" value="1"/> 
 	Allied Vision Alvium G1-158m, 1/2.9" 1.6MP S-Mount, GigE PoE Monochrome Camera	Monochrome Camera		#23-539	C\$707.00 Request Quote	1 In Stock <input type="text" value="1"/> 
 	IDS U3-3041LE- M-GL-AF, USB 3.0, 1/2.9"	Monochrome Camera		#24-088	C\$707.00 Request Quote	1 In Stock <input type="text" value="1"/> 

	Title	Type	Compare	Stock Number	Price	Buy
	Monochrome Camera					
<a href="#">MORE+</a> 	Allied Vision Alvium G1-158c, 1/2.9" 1.6MP S-Mount, GigE PoE Color Camera	Color Camera		#23-540	C\$728.00 <a href="#">Request Quote</a>	3 In Stock <input type="text" value="1"/> 
<a href="#">MORE+</a> 	Allied Vision Alvium G1-500m, 1/2.5" 5MP S-Mount, GigE PoE Monochrome Camera	Monochrome Camera		#23-553	C\$742.00 <a href="#">Request Quote</a>	<a href="#">CONTACT US</a> <input type="text" value="1"/> 
<a href="#">MORE+</a> 	IDS U3-3861LE-C-HQ-AF, USB 3.0, 1/2.8" Color Camera	Color Camera		#24-096	C\$749.00 <a href="#">Request Quote</a>	2 In Stock <input type="text" value="1"/> 
<a href="#">MORE+</a> 	IDS U3-3861LE-M-GL-AF, USB 3.0, 1/2.8" Monochrome Camera	Monochrome Camera		#24-098	C\$749.00 <a href="#">Request Quote</a>	1 In Stock <input type="text" value="1"/> 
<a href="#">MORE+</a> 	Allied Vision Alvium G1-500c, 1/2.5" 5MP S-Mount, GigE PoE Color Camera	Color Camera		#23-554	C\$770.00 <a href="#">Request Quote</a>	<a href="#">CONTACT US</a> <input type="text" value="1"/> 
<a href="#">MORE+</a> 	Allied Vision Alvium G5-500m, 1/2.5" 5MP S-Mount, 5GigE PoE Monochrome Camera	Monochrome Camera		#23-621	C\$1,211.00 <a href="#">Request Quote</a>	1 In Stock <input type="text" value="1"/> 
<a href="#">MORE+</a> 	Allied Vision Alvium G5-500c, 1/2.5" 5MP S-Mount, 5GigE PoE Color Camera	Color Camera		#23-622	C\$1,225.00 <a href="#">Request Quote</a>	1 In Stock <input type="text" value="1"/> 

## Resources

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- Glossary
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 APPLICATION NOTE

An Introduction to Optical Coatings

 VIDEO

Wavelength and f#

 APPLICATION NOTE

Understanding Focal Length and Field of View

 APPLICATION NOTE

Introduction to Modulation Transfer Function

 WEBINARS

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