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4mm UCi Series Fixed Focal Length Lens



1

€235⁰⁰

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Qty 1+	€235,00 each
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Product Downloads	
STEP:step	PDF Drawing:pdf
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EO Spec Sheet	

Prices shown are exclusive of VAT/local taxes

General

Product Family:	UCi Series	Type:	Fixed Focal Length Lens
IR Cut Filter:	No		

Physical & Mechanical Properties

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

Optical Properties

Horizontal Field of View @ Max Sensor Format:	23.0mm - 84.8°	Field of View at Max Sensor Format:	Horizontal: 22.9mm - 84.8° Vertical: 15.6mm - 65.4° Diagonal: 33.6mm - 101.7°
Horizontal Field of View, 1/2" Sensor:	23.0mm - 84.8°	Horizontal Field of View, 1/2.5" Sensor:	20.0mm - 77.8°
Horizontal Field of View, 1/3" Sensor:	15.6mm - 65.4°	Horizontal Field of View, 1/4" Sensor:	11.2mm - 49.7°
Maximum Image Circle (mm):	8.00	Numerical Aperture NA, Object Side:	0.0101
Number of Elements (Groups):	8 (7)	Focal Length FL (mm):	4.00

Working Distance (mm):	0 - ∞	Aperture (f/#):	f/16.0
Coating:	λ/4 MgF ₂	Coating:	λ/4 MgF ₂
Entrance Pupil Position (mm):	12.69		
Image Space Principal Plane (mm):	5.84	Distortion (%):	
Exit Pupil Position (mm):	-12.68	Lens Wavelength Range:	VIS

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Sensor			
Optimized Sensor Format:	1/2.5"	Maximum Sensor Format:	1/2"
Pixel Size (μm):	1.85		

Threading & Mounting			
Filter Thread:	M62 x 0.75 (Male)	Filter Thread Adapter:	#33-308 (Required)
Mount:	S-Mount (M12 x 0.5)		

Environmental & Durability Factors			
Storage Temperature (°C):	-20 to +60	Type of Ruggedization:	Industrial (Fixed Aperture with Simplified Mechanics)

Regulatory Compliance			
Certificate of Conformance:	View		

Product Details

- Up to 1/1.8", C-Mount, S-Mount Lens
- Up to 12 MegaPixels, 1.85μm 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 ≤2.2μm 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

#33-861, 4mm, f/16 UCi Series Fixed Focal Length Lens, Working Distance versus Field of View Plot

#33-861, 4mm, f/16 UCi Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 75mm Working Distance, f16

#33-861, 4mm, f/16 UCi Series Fixed Focal Length Lens, Depth of Field Plot, 75mm Working Distance, f16

#33-861, 4mm, f/16 UCi Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 200mm Working Distance, f16

#33-861, 4mm, f/16 UCi Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 190mm Working Distance, f16

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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
MORE+	C-Mount to M12 Adapter for UCi Lens		#12-879	€48,00 Request Quote	20+ In Stock 1
MORE+	Filter Adapter M62 x 0.75 from M40 x 0.5 (Female)		#33-308	€40,50 Request Quote	5 In Stock 1

Related Products



#33-300 - 4mm UC Series Fixed Focal Length Lens
€260,00

Qty



#89-347 - 4mm FL f/8.0, Blue Series M12 Lens
€81,00

Qty



#86-900 - 4.5mm C Series Fixed Focal Length Lens
€430,00

Qty



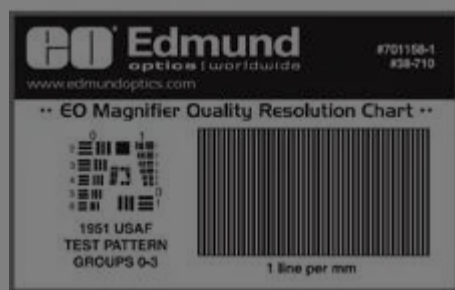
USAF 1951 Glass Slide Resolution Targets

Frequently Purchased Together



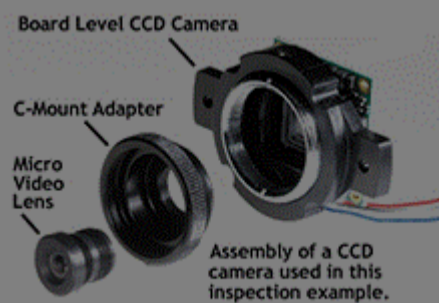
#33-361 - 25.0mm Dia. x 200.0mm FL, VIS-NIR Coated, Plano-Convex Lens
€54,00

Qty



#38-710 - USAF Resolution Target Pocket Size
€9,75

Qty



#53-675 - C-Mount to M12 Lens Adapter
€32,75


































Qty



#58-365 - 4mm - 12mm Focal Length, Varifocal Video Lens
€251,00





















Qty

Compatible Cameras

	Title	Type	Compare	Stock Number	Price	Buy
	 Allied Vision Alvium 1800 U-501m NIR, 1/2.5" 5MP S-Mount, Right Angle USB 3.1 NIR Camera (Partial Housing)					CONTACT US 1 
	 Allied Vision Alvium 1800 U-501m NIR, 1/2.5" 5.0MP S-Mount, USB 3.0 NIR Camera (Partial Housing)	NIR Camera		#19-557	€270,00 Request Quote	CONTACT US 1 
	 Allied Vision Alvium 1800 U-501m NIR, 1/2.5" 5MP S-Mount, Right Angle USB 3.1 NIR Camera	NIR Camera		#19-552	€280,00 Request Quote	2 In Stock 1 
	 Allied Vision Alvium 1800 U-501m NIR, 1/2.5" 5.0MP S-Mount, USB 3.0 NIR Camera	NIR Camera		#19-551	€280,00 Request Quote	1 In Stock 1 
	 Allied Vision Alvium 1800 U-500m, 1/2.5" 5.0MP S-Mount, Right Angle USB 3.1 Monochrome Camera (Partial Housing)	Monochrome Camera		#14-148	€290,00 Request Quote	CONTACT US 1 
	 Allied Vision Alvium 1800 U-500m, 1/2.5" 5.0MP S-Mount, USB 3.0 Monochrome Camera (Partial Housing)	Monochrome Camera		#14-142	€299,00 Request Quote	CONTACT US 1 
	 Allied Vision Alvium 1800 U-500c, 1/2.5" 5.0MP S-Mount, Right Angle USB 3.1 Color Camera (Partial Housing)	Color Camera		#14-149	€300,00 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	€300,00 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	€310,00 Request Quote	1 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	€310,00 Request Quote	1 In Stock 1 
	 Allied Vision Alvium 1800 U-500c, 1/2.5" 5.0MP S-Mount,	Color Camera		#14-143	€311,00 Request Quote	CONTACT US 1 


































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	USB 3.0 Color Camera (Partial Housing)					
MORE+ 	Allied Vision Alvium 1800 500m, 1/2.5" 5.0MP S-Mount Right Angle USB 3.1 Monochrome Camera					CONTACT US 1 
MORE+ 	LUCID Vision Labs Phoenix™ PHX016S-CS, Sony IMX273, 1.6 MP, Color Camera	Color Camera		#13-654	€335,00 Request Quote	8 In Stock 1 
MORE+ 	LUCID Vision Labs Phoenix™ PHX016S-CS-IX, Sony IMX273, 1.6 MP, Color Camera	Color Camera		#13-660	€335,00 Request Quote	2 In Stock 1 
MORE+ 	LUCID Vision Labs Phoenix™ PHX016S-MS, Sony IMX273, 1.6 MP, Monochrome Camera	Monochrome Camera		#13-653	€335,00 Request Quote	CONTACT US 1 
MORE+ 	LUCID Vision Labs Phoenix™ PHX016S-MS-IX, Sony IMX273, 1.6 MP, Monochrome Camera	Monochrome Camera		#13-659	€335,00 Request Quote	CONTACT US 1 
MORE+ 	Allied Vision Alvium 1800 U-120m, 1/3" 1.2MP S-Mount, USB 3.0 Monochrome Camera	Monochrome Camera		#14-861	€350,00 Request Quote	1 In Stock 1 
MORE+ 	Allied Vision Alvium 1800 U-120m, 1/3" 1.2MP S-Mount, Right Angle USB 3.1 Monochrome Camera	Monochrome Camera		#14-863	€350,00 Request Quote	CONTACT US 1 
MORE+ 	Allied Vision Alvium 1800 U-158m, 1/2.9" 1.6MP S-Mount, USB 3.0 Monochrome Camera (Partial Housing)	Monochrome Camera		#14-869	€350,00 Request Quote	CONTACT US 1 
MORE+ 	Allied Vision Alvium 1800 U-158c, 1/2.9" 1.6MP S-Mount, USB 3.0 Color Camera (Partial Housing)	Color Camera		#14-870	€360,00 Request Quote	CONTACT US 1 
MORE+ 	Allied Vision Alvium 1800 U-158m, 1/2.9" 1.6MP S-Mount, USB 3.0 Monochrome Camera	Monochrome Camera		#14-865	€360,00 Request Quote	CONTACT US 1 

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	Title	Type	Compare	Stock Number	Price	Buy
	 Allied Vision Alvium 1800 U-158m, 1/2.9\" data-bbox="204 44 278 118"/> 1.6MP S-Mount, Right Angle USB 3.1 Monochrome Camera					CONTACT US 1 
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	 Allied Vision Alvium 1800 U-120c, 1/3\" data-bbox="204 132 292 198"/> 1.2MP S-Mount, USB 3.0 Color Camera	Color Camera		#14-862	€370,00 Request Quote	3 In Stock 1 
	 Allied Vision Alvium 1800 U-120c, 1/3\" data-bbox="204 212 294 286"/> 1.2MP S-Mount, Right Angle USB 3.1 Color Camera	Color Camera		#14-864	€370,00 Request Quote	CONTACT US 1 
	 Allied Vision Alvium 1800 U-158c, 1/2.9\" data-bbox="204 300 292 366"/> 1.6MP S-Mount, USB 3.0 Color Camera	Color Camera		#14-866	€370,00 Request Quote	CONTACT US 1 
	 Allied Vision Alvium 1800 U-158c, 1/2.9\" data-bbox="204 380 294 454"/> 1.6MP S-Mount, Right Angle USB 3.1 Color Camera	Color Camera		#14-868	€370,00 Request Quote	4 In Stock 1 
	 LUCID Vision Labs Phoenix™ PHX023S-CS, Sony IMX392, 2.3MP, Color Camera	Color Camera		#13-666	€371,00 Request Quote	CONTACT US 1 
	 LUCID Vision Labs Phoenix™ PHX023S-CS-IX, Sony IMX392, 2.3MP, Color Camera	Color Camera		#13-672	€371,00 Request Quote	CONTACT US 1 
	 LUCID Vision Labs Phoenix™ PHX023S-MS, Sony IMX392, 2.3MP, Monochrome Camera	Monochrome Camera		#13-665	€371,00 Request Quote	CONTACT US 1 
	 LUCID Vision Labs Phoenix™ PHX023S-MS-IX, Sony IMX392, 2.3MP, Monochrome Camera	Monochrome Camera		#13-671	€371,00 Request Quote	CONTACT US 1 
	 IDS U3-3041LE- C-HQ, USB 3.0, 1/2.9\" Color Camera	Color Camera		#24-085	€375,00 Request Quote	2 In Stock 1 
	 IDS U3-3041LE- M-GL, USB 3.0, 1/2.9\" Monochrome Camera	Monochrome Camera		#24-087	€375,00 Request Quote	1 In Stock 1 

	Title	Type	Compare	Stock Number	Price	Buy
MORE+ 	Allied Vision Alvium 1800 U-240m, 1/2.3" 2.35MP S-Mount, USB 3.0 Monochrome Camera					1 In Stock <input type="text" value="1"/> 
<div style="border: 1px solid black; padding: 5px; background-color: white;"> <p>Please select your shipping country to view the most accurate inventory information, and to determine the correct Edmund Optics sales office for your order.</p> <p>Select Your Country/Region:</p> </div>						
MORE+ 	Allied Vision Alvium 1800 U-240m, 1/2.3" 2.35MP S-Mount, Right Angle USB 3.1 Monochrome Camera	Monochrome Camera		#23-202	€380,00 Request Quote	CONTACT US <input type="text" value="1"/> 
MORE+ 	Allied Vision Alvium 1800 U-240c, 1/2.3" 2.35MP S-Mount, USB 3.0 Color Camera	Color Camera		#23-179	€390,00 Request Quote	CONTACT US <input type="text" value="1"/> 
MORE+ 	Allied Vision Alvium 1800 U-240c, 1/2.3" 2.35MP S-Mount, Right Angle USB 3.1 Color Camera	Color Camera		#23-203	€390,00 Request Quote	1 In Stock <input type="text" value="1"/> 
MORE+ 	IDS Imaging U3-3046LE-C-HQ 1/2.9" Color USB3 Camera	Color Camera		#24-105	€400,00 Request Quote	1 In Stock <input type="text" value="1"/> 
MORE+ 	IDS U3-3861LE-C-HQ, USB 3.0, 1/2.8" Color Camera	Color Camera		#24-095	€410,00 Request Quote	2 In Stock <input type="text" value="1"/> 
MORE+ 	IDS U3-3866LE-C-HQ, USB 3.0, 1/2.8" Color Camera	Color Camera		#24-114	€410,00 Request Quote	1 In Stock <input type="text" value="1"/> 
MORE+ 	IDS U3-3866LE-M-GL, USB 3.0, 1/2.8" Monochrome Camera	Monochrome Camera		#24-115	€410,00 Request Quote	CONTACT US <input type="text" value="1"/> 
MORE+ 	IDS U3-3861LE-M-GL, USB 3.0, 1/2.8" Monochrome Camera	Monochrome Camera		#24-097	€410,00 Request Quote	1 In Stock <input type="text" value="1"/> 
MORE+ 	IDS Imaging U3-3046LE-C-HQ 1/2.9" Color USB3 Camera (Recertified 05-P)	Color Camera		#24-105-RCD-05P RECERTIFIED	€420,00 Request Quote	1 In Stock <input type="text" value="1"/> 
MORE+ 	Allied Vision Alvium G1-240m, 1/2.3" 2.4MP S-Mount, GigE PoE Monochrome Camera	Monochrome Camera		#23-545	€430,00 Request Quote	CONTACT US <input type="text" value="1"/> 
MORE+ 	Allied Vision Alvium G1-240c, 1/2.3" 2.4MP S-Mount, GigE PoE Color Camera	Color Camera		#23-546	€440,00 Request Quote	CONTACT US <input type="text" value="1"/> 
MORE+ 	Allied Vision Alvium G1-158m, 1/2.9" 1.6MP S-Mount, GigE PoE	Monochrome Camera		#23-539	€440,00 Request Quote	1 In Stock <input type="text" value="1"/> 

	Title	Type	Compare	Stock Number	Price	Buy
	Monochrome Camera					
MORE+	Allied Vision Alvium G1-15 1/2.9" 1.6MP S-Mount, GigE PoE Color Camera					2 In Stock <input type="text" value="1"/>
MORE+	Allied Vision Alvium G1-500m, 1/2.5" 5MP S-Mount, GigE PoE Monochrome Camera	Monochrome Camera		#23-553	€460,00 Request Quote	CONTACT US <input type="text" value="1"/>
MORE+	Allied Vision Alvium G1-500c, 1/2.5" 5MP S-Mount, GigE PoE Color Camera	Color Camera		#23-554	€480,00 Request Quote	CONTACT US <input type="text" value="1"/>
MORE+	IDS U3-3041LE-C-HQ-AF, USB 3.0, 1/2.9" Color Camera	Color Camera		#24-086	€505,00 Request Quote	3 In Stock <input type="text" value="1"/>
MORE+	IDS U3-3041LE-M-GL-AF, USB 3.0, 1/2.9" Monochrome Camera	Monochrome Camera		#24-088	€505,00 Request Quote	1 In Stock <input type="text" value="1"/>
MORE+	IDS U3-3861LE-C-HQ-AF, USB 3.0, 1/2.8" Color Camera	Color Camera		#24-096	€535,00 Request Quote	2 In Stock <input type="text" value="1"/>
MORE+	IDS U3-3861LE-M-GL-AF, USB 3.0, 1/2.8" Monochrome Camera	Monochrome Camera		#24-098	€535,00 Request Quote	1 In Stock <input type="text" value="1"/>
MORE+	Allied Vision Alvium G5-500m, 1/2.5" 5MP S-Mount, 5GigE PoE Monochrome Camera	Monochrome Camera		#23-621	€750,00 Request Quote	CONTACT US <input type="text" value="1"/>
MORE+	Allied Vision Alvium G5-500c, 1/2.5" 5MP S-Mount, 5GigE PoE Color Camera	Color Camera		#23-622	€760,00 Request Quote	CONTACT US <input type="text" value="1"/>

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APPLICATION NOTE

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VIDEO

Wavelength and f#

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Understanding
Focal Length
and Field
of View

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