

## UV EXTENDED GLOBAL SHUTTER SCIENTIFIC CMOS CAMERA



UV - VISIBLE  
Optimized for 200 - 400 nm



170 FPS (8 bits)  
121 FPS (12 bits)



1.40 e<sup>-</sup> RMS



2848 x 2848 CMOS  
2.74 μm pixel pitch



80 dB and true 16 bits  
High Dynamic Range



SDK compatible with μManager, LabVIEW, MatLab, Python...

**ULTRA VIOLET EXTENDED &  
GLOBAL SHUTTER**



### APPLICATIONS

#### RESEARCH:

Contamination detection  
Fluorochemistry  
Mineralogy  
Entomology  
Electrophoresis

#### INDUSTRY:

Gas leak detection  
Non-destructive inspection  
Forensic applications  
Hydrogen combustion analysis

#### ASTRONOMY:

Ultra-violet astronomy  
Hot plasma studies

# C-BLUE ONE UV PERFORMANCES



## SENSOR SPECIFICATIONS

Back illuminated stacked sensor	
Sensor size	2848 x 2848 pixels 8.13 MP
Pixel pitch	2.74 $\mu\text{m}$
Sensor type	Type 2/3 Monochrome CMOS
Sensor diagonal	11.1 mm
Shutter architecture	Global shutter
Peak quantum efficiency	> 70 %

## MAIN FEATURES

Data interface:	<ul style="list-style-type: none"> <li>CoaXPress 2.0 (CXP-12)</li> <li>High speed SFP+ 10 GigE interface with Ethernet or Fiber</li> </ul>
GigE Vision	
GenICam compatible	

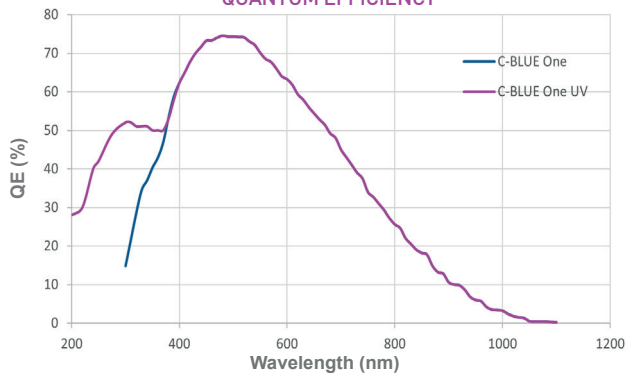
## CAMERA SPECIFICATIONS & PERFORMANCES

		CoaXPress	GigE Vision	
Analog gain		0 to 24 dB		
Quantization A/D		8, 12 bits		
Quantization with HDR (High Dynamic Range)		16 bits		
Maximum speed Full Frame	in 8 bits	170 fps	141 fps	
	in 12 bits	121 fps	72 fps	96 fps
	in 12 bits packed			
Maximum speed in 2x2 binning full frame	in 16 bits (HDR)	62 fps	60 fps	
	in 8 bits	516 fps	to be measured	
	in 12 bits	392 fps	to be measured	
Minimum integration time	in 16 bits (HDR)	n/a	n/a	
	in 8 bits	4.34 $\mu\text{s}$	4.72 $\mu\text{s}$	
	in 12 bits	5.15 $\mu\text{s}$	6.97 $\mu\text{s}$	5.84 $\mu\text{s}$
	in 12 bits packed			
	in 16 bits (HDR)	5.15 $\mu\text{s}$	5.22 $\mu\text{s}$	
Readout Noise [24 dB, @ 50 $\mu\text{s}$ ]		1.31 $e^-_{\text{MED}}$ (typical)		
Dark Current at 10 $^{\circ}\text{C}$ sensor temperature		1.40 $e^-_{\text{RMS}}$ (typical)		
Full well capacity [0 dB]		0.017 $e^-/\text{p/s}$ (typical)		
		9.2 $ke^-$		

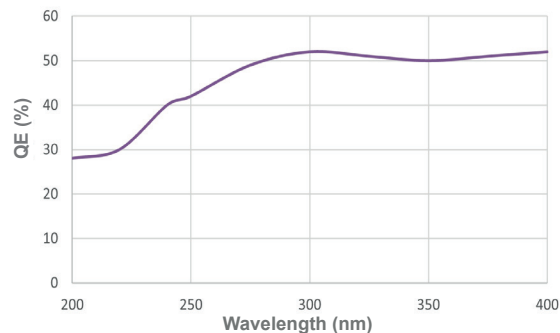
## ADDITIONAL FEATURES

Optical interface:	C-Mount / CS-Mount
<b>Stabilization with <math>\Delta T^{\circ}</math> of 25<math>^{\circ}\text{C}</math> between case and sensor (typ. 0<math>^{\circ}\text{C}</math> for 25<math>^{\circ}\text{C}</math> environment)</b>	
<b>Optional liquid cooling plate</b>	
Operating temperature: -10 $^{\circ}\text{C}$ to 50 $^{\circ}\text{C}$	
Software:	<ul style="list-style-type: none"> <li><b>Graphical User Interface:</b> First Light Vision</li> <li><b>Software Development Kit:</b> (C, C++, C#, Python, MatLab) / LabVIEW / <math>\mu</math>Manager / Halcon</li> </ul>

### QUANTUM EFFICIENCY



### OPTIMIZED FOR 200 - 400 nm



### FRAME RATE TABLE FOR CoaXPress & GigE VISION INTERFACE

Lines	Quantization							
	8 bits		12 bits		16 bits (HDR)		12 Packed	
	CXP	GigE	CXP	GigE	CXP	GigE	[GigE Vision only]	
16	1867	1867	1573	1534	1174	1146	1534	
64	1597	1597	1307	1275	901	879	1275	
256	1012	1012	779	674	466	455	760	
1024	410	361	298	188	159	155	250	
2848	170	141	121	72	62	60	96	

Cropping granularity: 16 lines & 8 columns  
The number of columns does not affect acquisition speed



Size and Weight :  
H64.1 x W76.2 x L154.3 mm, 1.1 kg, 15W max

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