



- ▶ 1 Megapixel EMCCD
- ▶ 10µm Pixel Size
- ▶ 30 Frames Per Second
- ▶ 14.5mm Field of View
- ▶ 95% Quantum Efficiency

# evolve<sup>®</sup> 10

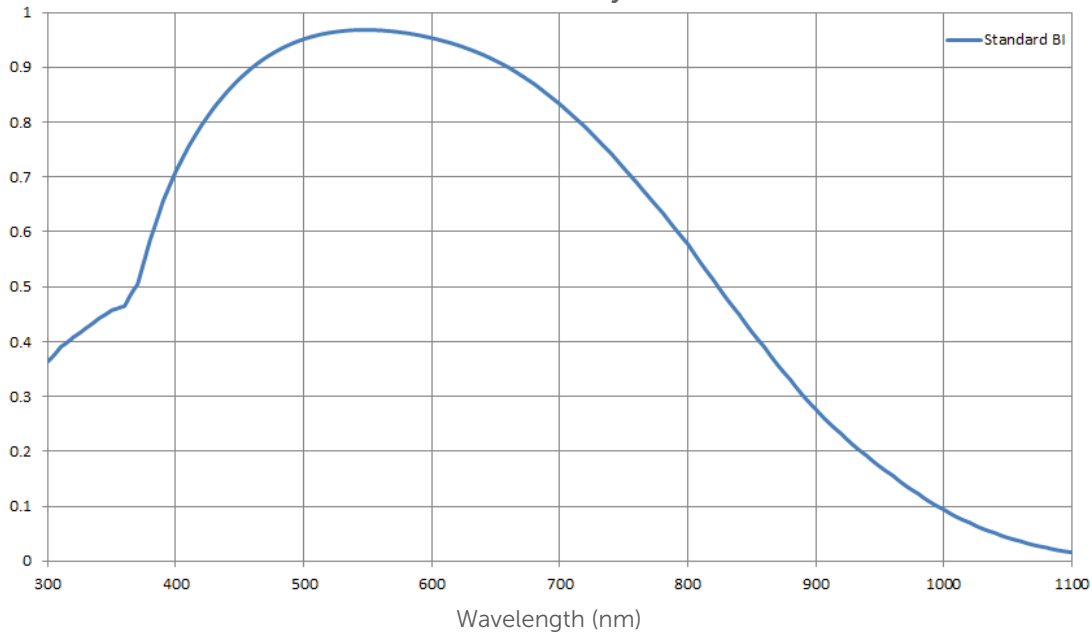
Specifications	Camera Performance
Sensor	Teledyne e2V CCD351 EMCCD Sensor
Active Array Size	1024 x 1024 (1 Megapixel)
Pixel Area	10 $\mu$ m x 10 $\mu$ m (100 $\mu$ m <sup>2</sup> )
Sensor Area	10.2mm x 10.2mm 14.48mm diagonal
Peak QE%	95%
Full-Well Capacity	30,000e- (Single Pixel) 150,000e- (EM Output Amplifier)
Bit-Depth	16-bit
Cooling Options	Air Cooled
Linearity	>99%
Binning	2-32x Horizontal Binning 1-1024x Vertical Binning
Vertical Shift Rate	800 nsec/row (Variable)
Clock Induced Charge	0.002e-/pixel/frame
EM Gain Range	1-1000x linearized

## Camera Modes

Specifications	Fast Mode (30MHz)	Slow Mode (10MHz)
Frame Rate (Full Frame)	30 fps	10 fps
Read Noise	80e- 0.23e- @ 350x EM Gain	26e- 0.26e- @ 100x EM Gain
Cooling	-70°C @ 20°C ambient	
Dark Current	Dark Current: 0.002e/p/s @ -70°C	

Specification	Camera Interface
Digital Interface	Gigabyte Ethernet (GigE)
Lens Interface	C-Mount
Mounting Points	2 x 1/4" -20 mounting points per side
Trigger Modes	External Trigger, Bulb Mode, Single Trigger
Trigger Signals	Exposure, Read Out, Trigger Ready, Trigger In
optiCAL	On-camera EM Gain linear calibration
Built in Shutter	Acquire reference dark frames and protect sensor from dust
Vacuum Guarantee	Lifetime vacuum guarantee, built using all-metal, hermetic vacuum design.

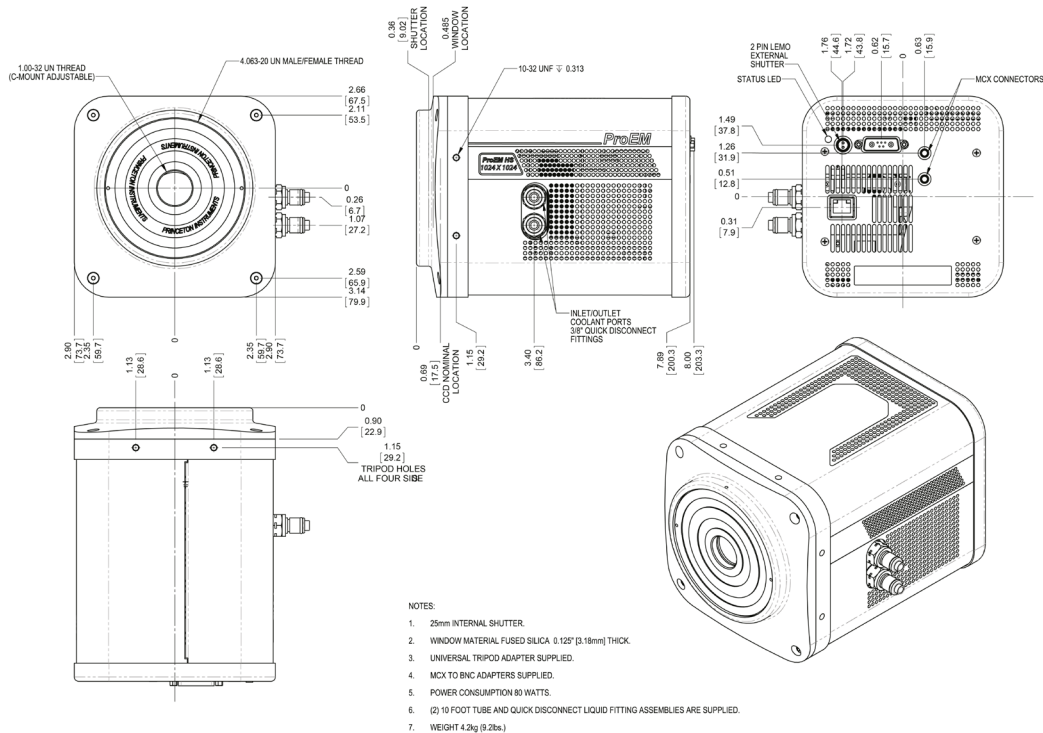
Quantum Efficiency Curve



Frame Rate - Standard Mode (fps)

Binning	1024 x 1024	512 x 512	256 x 256	128 x 128	64 x 64	1024 x 100	1024 x 32	1024 x 1
1 x 1	30	56	103	175	268	207	366	546
2 x 2	56	103	175	268	366	303	446	
4 x 4	103	176	268	366	446	398	502	

Frame rates are measured with 36.67 MHz ADC rate and 800 ns vertical shift rate and 1 ms exposure time



Specifications in this datasheet are subject to change. Refer to the Teledyne Photometrics website for most current specifications.

