



*Experts In Low Light Imaging*



# TE Series

## TE Series Overview



Introducing Atik Cameras advanced imaging TE series, showcasing the power and possibilities of CCD technology. Utilising novel new chamber sealing methodology, alongside increased cooling delta, these cameras achieve incredibly low read noise, enabling detection of the faintest signals. Furthermore, the exceptionally deep full well depth means there is much lower saturation when imaging, revealing exceptional detail. Atik's design and engineering complements these advanced sensors from Teledyne e2v perfectly.

With their large pixel, low noise characteristics and excellent QE, these cameras will provide fantastic results in the most demanding of applications such as chemiluminescence, fluorescence, spectroscopy, microscopy, and bioluminescence.

These advanced imaging solutions come with a choice of back or front illuminated sensor and the option to add a 45mm, bi-stable high speed scientific shutter, capable of 20.0 millisecond opening times.

## Technical Specifications

	TE-77		TE-47		TE-42		TE-30	
Image sensor	e2v CCD 77 Front Illuminated	e2v CCD 77 Back Illuminated	e2v CCD 47-10 Front Illuminated	e2v CCD 47-10 Back Illuminated	e2v CCD 42-40 Front Illuminated	e2v CCD 42-40 Back Illuminated	e2v CCD 30-11 Front Illuminated	e2v CCD 30-11 Back Illuminated
Resolution	512 x 512		1024 x 1024		2048 x 2048		1024 x 256	
Sensor size	12.3 x 12.3 mm		13.3 x 13.3 mm		26.6 x 26.6 mm		26.6 x 6.7 mm	
Pixel size (µm)	24 x 24		13 x 13		13.5 x 13.5		26 x 26	
ADC	16 bit or 18 bit		16 bit or 18 bit		16 bit or 18 bit		16 bit or 18 bit	
Digitisation	200kHz or 2 MHz		200kHz or 2 MHz		200kHz or 2 MHz		200kHz or 2 MHz	
Read noise (Typ.)	8e <sup>-</sup>		<8e <sup>-</sup>		<8e <sup>-</sup> (provisional)		<8e <sup>-</sup> (provisional)	
QE (peak)	46%	>92% with midband coating	46%	92%	46%	92%	46%	92%
Full Well	300,000 e <sup>-</sup> (summing well 600,000 e <sup>-</sup> )		100,000 e <sup>-</sup>		150,000 e <sup>-</sup>		500,000 e <sup>-</sup>	
Set point cooling at ambient of 20°C	-30°C		-30°C		-30°C (provisional)		-30°C (provisional)	
Regulated cooler	Yes		Yes		Yes		Yes	
Max. exposure	Unlimited		Unlimited		Unlimited		Unlimited	
Min. exposure	0.01s		0.01s		0.01s		0.01s	
PC Interface	USB2		USB2		USB2		USB2	
Power requirements	12VDC, 10A		12VDC, 10A		12VDC, 10A		12VDC, 10A	
Backfocus distance	11.9mm ±0.5 16.9mm ±0.5 with Shutter		11.9mm ±0.5 16.9mm ±0.5 with Shutter		11.9mm ±0.5 16.9mm ±0.5 with Shutter		11.9mm ±0.5 16.9mm ±0.5 with Shutter	
Mount type	M54 x 0.75		M54 x 0.75		M54 x 0.75		M54 x 0.75	
Weight	2.5kg without shutter 2.65kg with shutter		<3kg without shutter		<3kg without shutter		<3kg without shutter	