

TE SERIES

The TE series comprises CCD cameras with incredibly low read noise, enabling detection of the faintest signals with exceptional detail. It is built around e2v CCD sensors, known for excellent image uniformity and stability across temperature ranges.

Its thermoelectric cooling (TE) with a 40°C delta is ideal for applications where dark current needs to be controlled but extreme cooling isn't required, offering high sensitivity in the visible spectrum. This camera series includes mechanical shutter capability, minimizing motion artifacts and making it suitable for fast-acquisition scenarios or synchronized systems, while also offering front and back-illuminated variants.

- High-sensitivity CCD sensors
- Extremely deep full well capacity
- Low noise design
- Enhanced cooling capacities
- Deep dynamic range
- Versatile mount options
- Flexible integration



TE Technical Specifications

	TE-47	TE-77
Image sensor	e2v CCD 47-10 (front or back illuminated)	e2v CCD 77 (front or back illuminated)
Resolution	1024 × 1024	512 × 512
Sensor diagonal (effective pixels)	18.81 mm (13.3 mm x 13.3 mm)	17.4 mm (12.3mm x 12.3 mm)
Pixel size	13 μm	24 μm
Full well capacity	100 000 e ⁻	315 000 e ⁻
Read noise	<8e ⁻	1.2 e ⁻
Dark current	0.0005 e ⁻ /p/s at -20°C	0.0005 e ⁻ /p/s at -20°C
Cooling capacity	40° C below room temperature	40° C below room temperature
Mount type	M54 × 0.75	M54 × 0.75
ADC	16 bit	16 bit
Back focus distance	16.9 mm ±0.5 (without shutter) 21.9mm ±0.5 (with shutter)	16.9 mm ±0.5 (without shutter) 21.9mm ±0.5 (with shutter)
Reading mode	Full frame CCD with optional physical shutter	Full frame CCD with optional physical shutter
Exposure range	0.01s to 24 hours	0.01s to 24 hours
Frame rate	1,554 (preview mode); 0,186 (low noise); 0,094 (lowest noise)	3,678 (preview mode); 0,688 (low noise); 0,361 (lowest noise)
Power supply	12VDC 12.5A	12VDC 12.5A