



## Tornado

### Low Light Monochrome Camera

#### Features

- High resolution 570 horizontal TV Lines
- Compact stainless steel housing
- 4000m depth rated
- High sensitivity  $3 \times 10^{-4}$  lux
- PAL or NTSC format
- Water corrected view port
- Long line high frequency boost

#### Applications

- Underwater surveillance
- High resolution pipeline inspection
- Alternative to a SIT camera for inspection class vehicles



The Tritech family of underwater video products offers a complete range of high specification and performance cameras, from low cost black and white inspection cameras to broadcast quality colour zoom cameras.

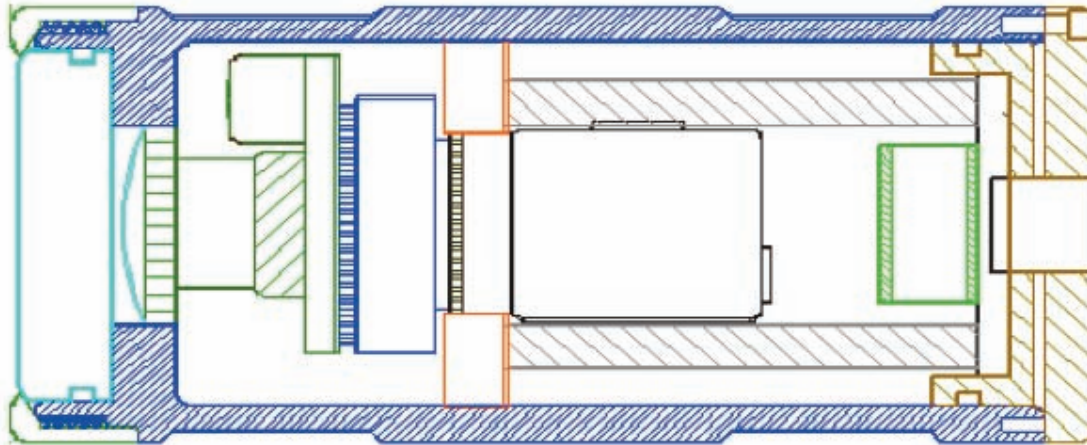
The Tornado camera from Tritech is a high quality low light system using the latest CCD technology. A  $\frac{1}{2}$ " Interline CCD sensor provides a high-resolution 570 horizontal line monochrome picture. The Tornado module has a sensitivity of  $3 \times 10^{-4}$  lux. It is contained within a new 4000m compact stainless steel housing fitted with a high quality water corrected acrylic view port.

The importance of the view port is often underestimated in underwater cameras. The acrylic view ports used on all Tritech cameras have similar refractive properties to that of water providing the optimum solution for deep water lenses. This ensures a clear and sharp picture during close proximity viewing in all water conditions.

The Tornado is supplied with a switchable high frequency boost amplifier making it suitable for use with short or long umbilicals.



## Specifications



### Camera module

Pick-up element	1/2" Interline transfer CCD image sensor
Number of total pixels	EIA 810(H) X 508(V) CCIR 795(H) X 596(V)
Number of effective pixels	EIA 768(H) X 494(V) CCIR 752(H) X 582(V)
Sync system	Internal crystal control
Scanning system	2:1 Interlace
Video output	1Vp-p 75 Ohms
Resolution	>570TV Lines
Minimum illumination	0.0003 Lux F1.2
S/N ratio	More than 50dB (AGC off)
Gamma characteristic	y=0.45 y=0.6 y=1
Storage temperature	-30 degrees ~ +70 degrees Celsius
Operating temperature	-10 degrees ~ +40 degrees Celsius
Power Supply	12v to 39v dc

### Lens

Auto Video Iris	
Focal Length	4mm
Aperture	F1.2
Angle of view	In air: D 95° - H 82° - V 66° In water: D 63.5° - H 56° - V 46°
Object Distance	0.1m ~ infinity
Pressure housing	Stainless Steel
Depth Rating	4000M
Diameter:	78mm
Length:	172mm
Weight (Air)	2.80 Kg
Weight (Water)	1.75 Kg

"This camera is not designed for use in a helium/oxygen atmosphere"

All specifications are subject to change in line with Tritech's policy of continual product development.

Ref: EDS-CAM-005.7



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