



ManipCam MD 4000

Integrated Colour CCD Underwater Camera & Lighting

Features

- High resolution colour CCD sensor
- LED brightness control (automatic or manual)
- LED on/off control
- Highly resistant to shock and vibration
- Focus control

Applications

- Ideal for manipulator arms
- Diver helmet use
- Police, customs and emergency services
- General purpose



The new Tritech ManipCam is specifically designed to enhance ROV work tasks in both clear and turbid waters.

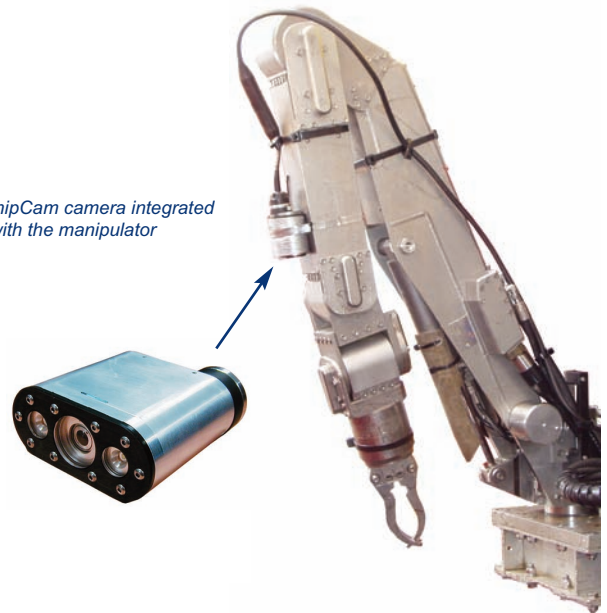
The camera produces extremely high resolution colour pictures, which will improve the efficiency, speed and safety of all manipulative tasks.

The ManipCam has integrated white L.E.D.s providing uniform illumination across the viewing area. A feedback loop automatically adjusts the lighting level so optimum picture quality is achieved, regardless of the reflectivity of work surfaces.

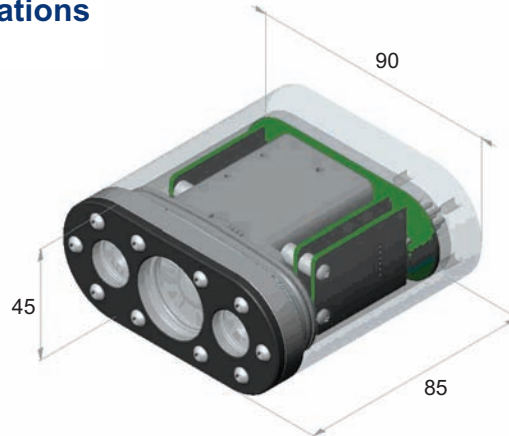
Both lighting and focus may also be controlled from the surface. This solid state camera is built to withstand considerable shock loads and is extremely cost effective.

The ManipCam also makes an ideal diver helmet camera and has many other applications for close upsubsea tasks.

The ManipCam camera integrated with the manipulator



Specifications



All measurements in millimetres

VIDEO

Sensor	High resolution 1/3" DSP colour CCD Sony
Effective pixel	NTSC 768 (H) x 494 (V) PAL 752 (H) x 582 (V)
Horizontal resolution	520 lines
Minimum illumination	0.1 Lux at f 2.0
Synchronising system	Internal
Scanning system	NTSC 525 lines PAL 625 lines
Video output	1.00v Peak to Peak composite 75 Ohms
S/N ratio	More than 50dB (AGC off)
Back Light Compensation	Automatic
Shutter speed	NTSC 1/60 - 1/100 second PAL 1/50 - 1/100 second
Gamma correction	0.46
White balance / colour temp.	2100°K - 8200°K auto
Gain control	4dB - 30dB auto
Smear effect	0.005%

LIGHT

Typical luminous flux	>120 lumens MTBF 50,000 hours
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CONTROL

Focus	+/- 12V to 24V
Light	+/- 12V to 24V
Dynamic Light Control	Automatic or manual
Connector	Tritech 6 pin
Dimensions	85mm (102mm with waterblock) x 90mm x 40mm
Weight in air	675 g
Weight in water	290 g
Depth rating	4,000m standard

"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-002.7