

Super SeaSpy

Underwater Video Camera with LED Array



The Tritech Super SeaSpy underwater video camera is a compact, high resolution, full colour camera with integral low voltage lighting.

Built to survive the harsh underwater inspection environment, the Super SeaSpy has been designed to be compact and rugged, whilst providing high quality colour video.

The Super SeaSpy incorporates a ring of white LEDs, which provide uniform illumination over the field of view. The LED engine utilises dynamic light control, which automatically adjusts the lighting level to optimise video image quality, regardless of the reflectivity of the work surface. This feature also helps to enhance picture quality by reducing the amount of backscatter from suspended particles in the water column.

This integral lighting provides a camera that is suited for close proximity inspection work where little or no lighting is available. The Super SeaSpy is also specified for ROV intervention tooling by several of the major developers in this field.

Integrated LED lighting, Ivanoff corrected lens and variable gain long line driver

An integrated array of high power LEDs ensures the camera always has light to operate. The Super SeaSpy is also fitted with an Ivanoff corrected lens system that optimises the picture quality by reducing radial distortion and reducing chromatic aberration. Additionally an integral video line driver can be fitted which compensates for attenuation of the signal when used through longer cables.

Benefits

- Compact design
- Dynamic light control
- Optimised illumination
- Water corrected optics

Features

- 4000m depth rating
- Dynamic or manual illumination
- Evenly distributed beam from LED
- Optimised optics using Ivanoff correction
- Amplified video for long umbilical

Applications

- ROV inspection and ancillary camera
- ROV intervention tooling camera
- Emergency services search and inspection
- Restricted access area inspection
- Marine science research

Specification

Optical	PAL	NTSC
Vertical resolution	550 lines	470 lines
Scanning system	625 lines at 50 Hz	525 lines at 60 Hz
CCD module	1/3" Interline Transfer CCD	
Viewing angle	72° in water (diagonal)	
Focus range	50mm to infinity	
Primary lens	Fixed, 4.2mm (f/2.2) Ivanoff water corrected optics	
Iris control	Auto Iris	
Video output	1V peak to peak composite, 75Ω unbalanced	
Signal to noise ratio	>48dB (AGC off)	
Other features	Auto white balance, back light compensation, gamma correction	

Illumination	
Minimum illuminance	0.5 lux
Illumination	10lux at 1m and 110 lux at 0.3m
Illumination control	Dynamic Light Control, on/off, manual override

Electrical and Communication	
Power requirement	12 to 48V DC (drawing 4.8W at 24V)
Standard connector	Tritech 6-pin connector
Optional connector	Schilling SeaNet

Physical	
Weight in air	0.65kg
Weight in water	0.45kg
Depth rating	4000m
Operating temperature	-10 to 35°C
Storage temperature	-20 to 50°C
Shock	30g _n for 6ms in each axis (operating)
Vibration	Sinusoidal sweep & dwell in each axis from 5 to 150Hz at 10g _n (operating)
Materials	Housing: Stainless steel 316 Lens: Water corrected optical acrylic
Diameter	53mm
Body length	82mm
Overall length	99mm (with Tritech connector)

Specifications subject to change according to a policy of continual development.

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