

LOW LIGHT CAMERA

Model BCM-700CLL-001

DATASHEET



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LOW LIGHT CAMERA

MODEL BCM-700CLL-001



The Low light camera model BCM-700CLL-001, developed by BMPTECH, was designed to integrate into underwater inspection systems that require high-definition imaging and exceptional detail clarity. The camera features one of the best optical units available on the market and an ultra-low latency digital Ethernet transmission system. Digital video transmission opens up numerous possibilities and cost reductions at all stages of project integration.

The camera operates within a range of (13 to 60) VDC, offering operational flexibility and simplifying its integration into underwater inspection systems.

The external housing is made of 6Al4V GR5 titanium alloy, enabling pressure resistance at depths of up to 4,500 meters.

The equipment is available with a wide range of connectors and cables, with BMPTECH's Quick Connector Series being the recommended solution for greater efficiency and reliability.

MAIN FEATURES:

- The unit features a 1/2-inch CCD sensor with BSI (Backside Illumination) technology, which increases light sensitivity and provides sharp, detailed images even under low-light conditions;
- The lens incorporates advanced aspherical lens elements, offering versatility for viewing both near and distant objects and improving corner resolution. This lens is also effective in minimizing ghosting and reflections in backlight situations. It includes multi-coated IR correction to produce extremely bright images and can be used under normal lighting as well as ultra-low-light conditions;
- Clear imaging is maintained even in very low available light. The camera requires a minimum illumination of 0.0001 lx at F1.4;
- Control features electronic iris, electronic shutter, AGC, MGC, BLC, and gamma adjustment;
- The High-hardness glass dome, with excellent surface finish, ensuring clear images and high durability;

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TECHNICAL SPECIFICATIONS

Video	Sensor Type	1/2" interline CCD image sensor
	Number of Effective Pixels	752(H) x 582(V)
	Unit Cell Size	8.6µm(H) x 8.3µm(V)
	Synchronizing System	Internal
	Scanning System	2:1 interlaced
	Video Output	Composite video, 1.0 V(p-p), 75 Ω (Unbalanced)
	Resolution	570 TVL
	Angle of View (AOV) in Water	Horizontal: 78° Vertical: 58° Diagonal: 97°
	Minimum Illumination	0.0001 lx, F1.4 (AGC HIGH = 60 dB, Shutter = OFF)
	Signal-to-Noise Ratio (S/N)	More than 50 dB (AGC OFF = 5 dB, γ = 1.0)
	Function Settings	DIP Switch
	AE Mode (Fixed)	1/250, 1/500, 1/1000, 1/2000, 1/5000, 1/10000, 1/100000 s
	AE Mode (EI)	1/50 – 1/100000 s; 1/120 – 1/100000 s
	AGC on	5 – 32 dB (LOW), 5 – 60 dB (HIGH)
	MGC	5 – 60 dB
	Gamma Characteristics	γ = 0,35; 0,45; 1,0
	Lens	4 mm to 12 mm varifocal, F1.2
	Water Compensation	Optical glass dome port
	Signal-to-Noise Ratio	> 60 dB (weighted)
Power Supply	Video Output	Composite video, 1 V(p-p) into 75 Ω
	Supply Voltage	13 – 60 VDC (contact us for more information)
	Power Consumption	< 5 W
Mechanical	Dimensions	Ø 82 mm (housing) x Ø 100 mm (lens) x 218 mm
	Weight	2 kg in air; 1 kg in water
	Standard Housing	Titanium alloy 6Al/4V ASTM B348
	Connector	BQC-BK-08
Environmental	Operating Depth	4.500m
	Storage Temperature	(-20 a 80)°C
	Operating Temperature	(-10 a 40)°C
	Shock	30 G peak acceleration, 25 ms half-sine duration, on all three axes
	Vibration	10 G, from 20 to 150 Hz, on all three axes

DIMENSIONS

