



### High resolution 1/3" Panasonic DSP CCD Color board camera

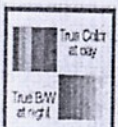
Here we introduce the paramount technology of 1/3" Panasonic HAD CCD Color cameras achieved by using 8 bit digital processing. Derived from our profound knowledge on the DSP color video security solution, we developed a series of compact color board camera visions performing the greatest picture quality with the most reliable circuitry. At this ages it is highly demanded for the ability of making the unit as compact as possible with quality and performance continuously upgraded. Based on their supreme features, it suits best for high-end CCTV applications and professional Digital network cameras as well.



Waterproof for outdoor use



Extremely accurate Color



(Option)



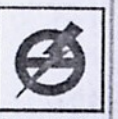
New DSP high grade CCD



ISO 1/S 16849



0.2Lux at F2.0



Surge protection

### Key features

- 1/3" Panasonic DSP Color CCD
  - : It is the world's first high performance camera in a bullet style.
  - It is noticeable in that the unit is used with the most high end 1/3" CCD chip set from Panasonic.
  - It is highly recommended for a special requirement where need more precise, more bright and high resolution such as for medical site, chemical plants, defence areas, precise inspection equipments or for crowded big halls etc.
- Extremely accurate Color and BW reproduction with 8 bit digital process
- High resolution 480TVL
- Excellent Color reproduction close to the human eye performance.
- Outstanding low light sensitivity
  - : The biggest benefit of using 1/3" DSP sensor for this micro bullet camera is that the low lux performance reaches up to an extreme darkness of 0.2 lux/F2.0.
  - Additionally noise-free picture quality at dark view makes its low lux performance to maximum.
- Wide dynamic working power tolerance
- Surge voltage input protection built-in
- Reverse Polarity input protection built-in
- Extremely reliable Power control

1/3" Panasonic DSP CCD  
480TVL Hi-Resolution  
Lens Exchangeable

**PERFECT  
PICTURE QUALITY!**

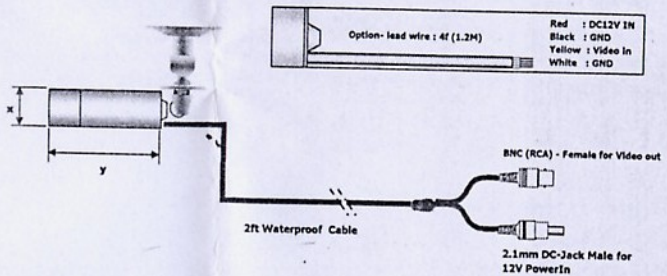


0.2Lux/F2.0 when AGC Max

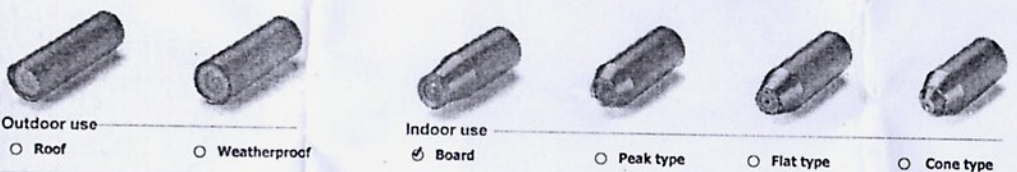
**Bullet camera**

### Dimensions(mm)

Remarks	x	y	weight
Waterproof	21mm	78mm	165g
Board	21mm	70mm	150g
Flat	21mm	63mm	150g
Cone	21mm	63mm	150g
Peak	21mm	65mm	140g



### Models available



### Optional features

- 850nm IR Sensitive
- TRUE Day / Night - Auto conversion, Clear Color at day and vivid BW at night
  - : The image is instantly changed from Color to Bw at 2 lux (True Color at day and true BW at night).
  - By this function, the horizontal and vertical resolution is greatly improved at night time mode.
  - the low lux performance is improved a lot accordingly.
- High Sensitive Audio - External Audio with C-Mic\* - 35dB / mV \*
- Reverse Image

### Specifications

● Image color	<input checked="" type="radio"/> Color <input type="radio"/> Black and White																											
● Image sensor	<table border="1"> <thead> <tr> <th>Image Format</th> <th>Model</th> <th>H.Resolution</th> </tr> </thead> <tbody> <tr><td><input type="radio"/> 1/3" Sharp Super HAD, Color</td><td>VB21C</td><td>380TVL</td></tr> <tr><td><input type="radio"/> 1/3" Sharp Super HAD, Color</td><td>VB21CH</td><td>480TVL</td></tr> <tr><td><input checked="" type="radio"/> 1/3" Panasonic Super HAD, Color</td><td>VB21CPH</td><td>480TVL</td></tr> <tr><td><input type="radio"/> 1/3" Sony Super HAD, Color</td><td>VB21CS</td><td>400TVL</td></tr> <tr><td><input type="radio"/> 1/3" Sony Super HAD, Color</td><td>VB21CSHR</td><td>480TVL</td></tr> <tr><td><input type="radio"/> 1/3" Sony HQ1 Super HAD, Color</td><td>VB21HQ</td><td>550TVL</td></tr> <tr><td><input type="radio"/> 1/3" Sony Ex-view HAD, Color</td><td>VB21CSHRX</td><td>480TVL</td></tr> <tr><td><input type="radio"/> 1/3" Sony HQ1 Ex-view HAD, Color</td><td>VB21HQX</td><td>550TVL</td></tr> </tbody> </table>	Image Format	Model	H.Resolution	<input type="radio"/> 1/3" Sharp Super HAD, Color	VB21C	380TVL	<input type="radio"/> 1/3" Sharp Super HAD, Color	VB21CH	480TVL	<input checked="" type="radio"/> 1/3" Panasonic Super HAD, Color	VB21CPH	480TVL	<input type="radio"/> 1/3" Sony Super HAD, Color	VB21CS	400TVL	<input type="radio"/> 1/3" Sony Super HAD, Color	VB21CSHR	480TVL	<input type="radio"/> 1/3" Sony HQ1 Super HAD, Color	VB21HQ	550TVL	<input type="radio"/> 1/3" Sony Ex-view HAD, Color	VB21CSHRX	480TVL	<input type="radio"/> 1/3" Sony HQ1 Ex-view HAD, Color	VB21HQX	550TVL
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● Effective pixels	<input type="radio"/> CCIR / PAL 500 (H) X 582 (V) <input type="radio"/> EIA / NTSC 512 (H) X 492 (V) <input checked="" type="radio"/> PAL / CCIR 752 (H) X 582 (V) <input type="radio"/> NTSC / EIA 768 (H) X 494 (V)																											
● Lens	Board lens option : <input type="radio"/> 2.9mm 120° <input type="radio"/> 8.0mm 39° <input checked="" type="radio"/> 3.6mm 92° <input type="radio"/> 12.0mm 26° <input type="radio"/> 4.3mm 78° <input type="radio"/> 16.0mm 15° <input type="radio"/> 6.0mm 54° Pinhole lens option : <table border="1"> <tr> <td>Flat type</td> <td><input type="radio"/> 3.7mm 90°</td> <td><input type="radio"/> 5.0mm 60°</td> </tr> <tr> <td>Cone type</td> <td><input type="radio"/> 3.7mm 90°</td> <td><input type="radio"/> 4.3mm 78°</td> </tr> <tr> <td>Peak Cone type</td> <td><input type="radio"/> 3.7mm 90°</td> <td><input type="radio"/> 5.0mm 60°</td> </tr> </table>	Flat type	<input type="radio"/> 3.7mm 90°	<input type="radio"/> 5.0mm 60°	Cone type	<input type="radio"/> 3.7mm 90°	<input type="radio"/> 4.3mm 78°	Peak Cone type	<input type="radio"/> 3.7mm 90°	<input type="radio"/> 5.0mm 60°																		
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\*All lenses are exchangeable

● Min. Illumination	<input type="radio"/> 0.1 Lux at F2.0 <input checked="" type="radio"/> 0.2 Lux at F2.0 <input type="radio"/> 0.3 Lux at F2.0 <input type="radio"/> 0.7 Lux at F2.0						
● Synchronizing system	Internal						
● Scanning system	EIA/NTSC 525 Lines CCIR/PAL 625 Lines 2:1 Interlaced						
● Video output	1.0Vp-p Composite, 75 Ohms						
● S/N ratio	More than 50 dB (AGC Off)						
● Shutter Speed	EIA/NTSC: 1/60 ~ 1/100,000 sec CCIR/PAL : 1/50 ~ 1/100,000 sec						
● Back Light Compensation	Automatic						
● Gamma correction	Standard $\gamma=0.45$						
● White Balance	2100°K ~ 9100°K Auto						
● Gain Control	Auto, 0dB - 32dB						
● Smear Effect	0.005%						
● MTBF	80,000 hours						
● Operating Temperature	14° F ~ 122° F (-10° C ~ + 50° C)						
● Humidity	Within 90% RH						
● Power source	<table border="1"> <thead> <tr> <th>Sharp</th> <th>Sony</th> <th>Panasonic</th> </tr> </thead> <tbody> <tr> <td>DC12V / 80mA</td> <td>DC12V / 130mA</td> <td>DC12V / 90mA</td> </tr> </tbody> </table>	Sharp	Sony	Panasonic	DC12V / 80mA	DC12V / 130mA	DC12V / 90mA
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DC12V / 80mA	DC12V / 130mA	DC12V / 90mA					
● Output Terminal	Refer to dimension						
● Measurement(mm)	Refer to dimension						
● Weight (Approx.g)	Refer to dimension						