

# Industrial Color Vision Camera

CCD3 Vision

## VJ-A



\* lens not included

### SALIENT FEATURES

- ◆ C-Mount
- ◆ PAL Output
- ◆ DC lens control
- ◆ Horizontal 480 TVL
- ◆ 10 bit DSP Processor
- ◆ 752 x 582p CCD Sensor
- ◆ Reversible Mounting Base

### Model Number Legend

**VJ-A** □ □ □ □  
 1 2 3 4

#### 1. Series

VJ

#### 2. Type

A: 0.4megaPixel, PAL

#### 3. Output

B: BNC Out

V: BNC & Y/C Out

#### 4. Power Connector

J: Jack Connector

T: Terminal Connector

H: Hirose 12 pin Connector

#### #. Accessories

Mounting Screws : 1 Set

Sensor Cover : 1 No.

#### Example:

VJ-ABT

VJ Series - PAL Output Type, BNC Video out, with Terminal Connectors for Power.

**NOTE:** Contact us for models not shown in catalogue.

## Ratings and Specifications

Type	Color CCD			
Models	BNC	VJ-ABJ	VJ-ABT	VJ-ABH
	BNC & Y/C	VJ-AVJ	VJ-AVT	-
Image Sensor	1/3" Interline CCD - PAL: ICX409AK			
Sensor Size	5.59mm (H) x 4.68mm (V)			
Unit Cell Size	6.5µm (H) x 6.25µm (V)			
Resolution	752 (H) x 494 (V)			
Pixel Clock Frequency	14 MHz			
Horizontal Frequency	15.5 KHz			
Vertical Frequency	50 Hz			
Scanning	2:1 Interlaced			
Output Level	1V p-p/ 75Ω			
Horizontal Resolution	480 TVL			
Minimum Illumination	0.17 Lux with F 1.2 lens			
S/ N Ratio	min 48dB			
Y Correction	0%			
White Balance	VJ-AB_	AWB (Auto White Balance) only		
	VJ-AV_	AWB & White Balance Lock modes		
Aperture Correction	On			
AGC	On			
Pixel Blemish Correction	On			
Flicker Compensation	On/ Off (DIP SW Selectable)			
Mirror Image	On/ Off (DIP SW Selectable)			
Backlight Compensation	On/ Off (DIP SW Selectable)			
Shutter Function	1/50, Electronic Iris (Dip SW selectable)			
Electronic Iris	1/50 - 1/100,000 sec			
Auto Iris Lens Driver	Yes (VJ-ABJ/ VJ-ABT only)			
Iris Current Consumption	max. 220mA (higher Iris units are not compatible)			
Power Supply	12 VDC ±10%			
Current Consumption	max. 180mA			
Insulation Resistance	50 MΩ min. ( at 500 VDC) between case and lead wire			
Shock Resistance	4G, 3 times each in direction of X, Y and Z			
Vibration Resistance	0.5mm amplitude at 10-50 Hz for 2 hours each in direction of X, Y and Z			
Ambient Temperature	Operation: 0° ~ 40°C; Storage: -10° ~ 50°C (non- freezing; non- condensing)			
Ambient Humidity	Operation: 30 ~ 80% RH; Storage: 35 ~ 85% RH (non- condensing)			
Protection Class	IP 40 (after connection & attaching lens)			
Weight	aprox. 100g			
Material	Powder coated Aluminium			

**NOTE:**

All standard C/ CS- Mount lenses are compatible with the camera.  
 Recommended usage - Kowa, LM Series Lens. ([www.kowa-usa.com](http://www.kowa-usa.com))

## Product Highlights

## VJ-A

### ◆ Dual Output & Iris Control

The VJ-AV\_ models have dual mode outputs both BNC & Y/C for added interface convenience.

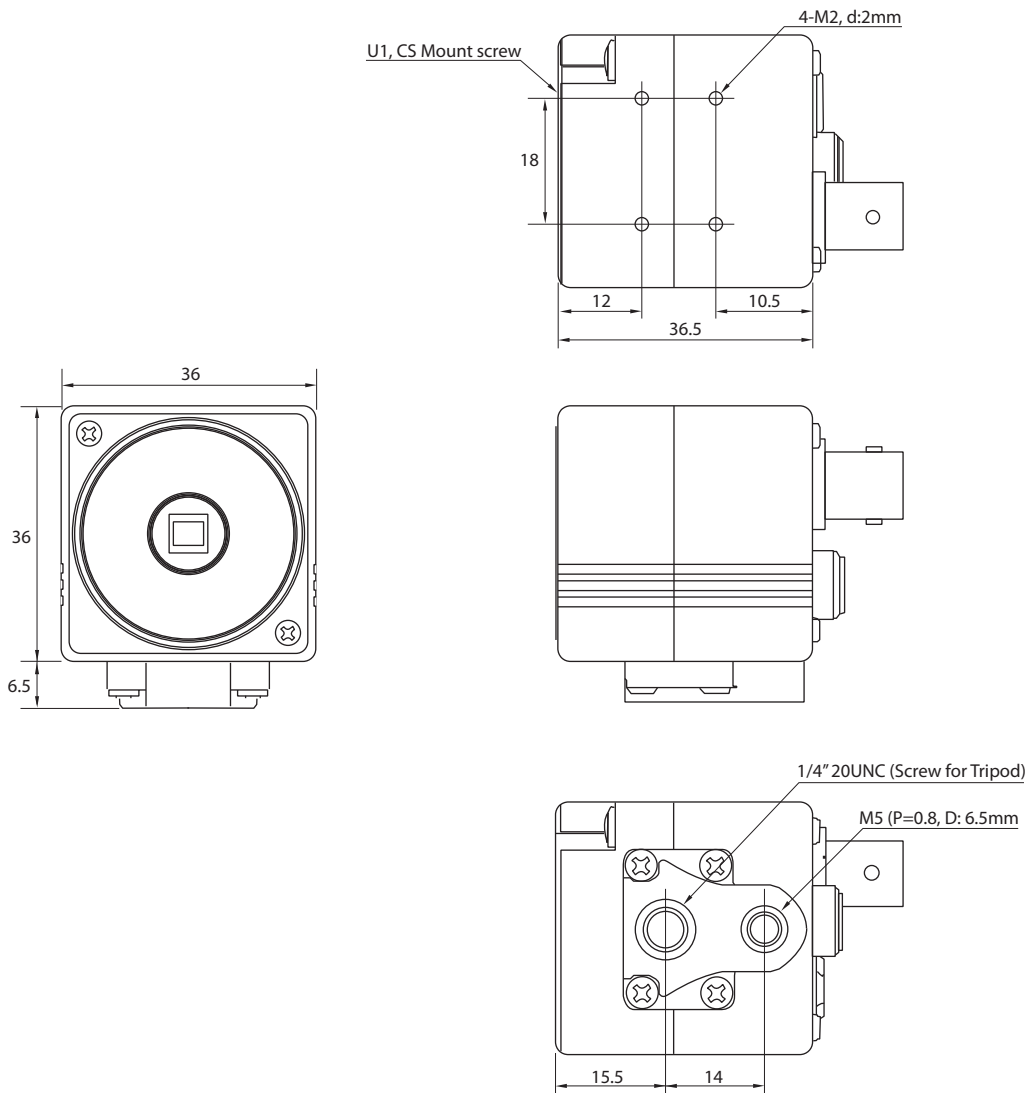
The VJ-AB\_ models feature DC Iris Lens control with power and level, removing the need for a separate Lens power supply and controller, thus significantly reducing the cost and footprint of the Vision system.

### ◆ Built-in Image Compensation!

The VJ-A series comes with AWB (Auto White Balance), Aperture Correction, AGC, Blemish & Flicker compensation and Image mirroring built-in this helps in stable image output under varying conditions..

Also included is the backlight compensation and shutter variation function for auto-adjustment of image under minor lighting variations.

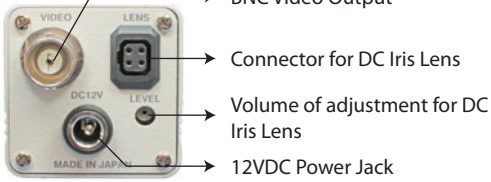
## Sensor Dimension Drawing



All dimensions are in mm

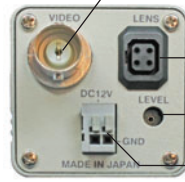
## Nomenclature

### ◆ VJ-ABJ



- BNC Video Output
- Connector for DC Iris Lens
- Volume of adjustment for DC Iris Lens
- 12VDC Power Jack

### ◆ VJ-ABT



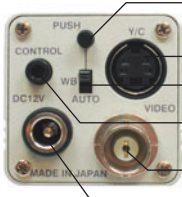
- BNC Video Output
- Connector for DC Iris Lens
- Volume of adjustment for DC Iris Lens
- 12VDC Power Terminals

### ◆ VJ-ABH



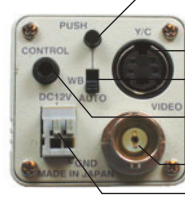
- WB Push to adjust
- WB Auto/ Manual selector
- 12VDC, 12 pin Hirose Connector
- PC Communication
- BNC Video Output

### ◆ VJ-AVJ



- WB Push to adjust
- Y/C Video Output
- WB Auto/ Manual selector
- PC Communication
- BNC Video Output
- 12VDC Power Jack

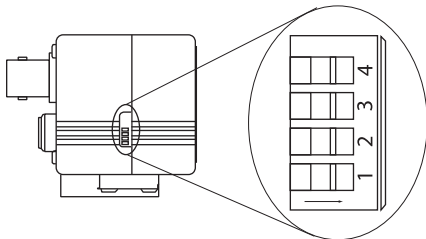
### ◆ VJ-AVT



- WB Push to adjust
- Y/C Video Output
- WB Auto/ Manual selector
- PC Communication
- BNC Video Output
- 12VDC Power Terminals

## Settings and Adjustments

Dip Switch is provided on the side face of the Camera unit, this is toggled between On & Off position to achieve different image compensation settings.



Dip SW	OFF Position	ON Position
4	Back Light Compensation: OFF	Back Light Compensation: ON
3	Flicker Compensation: OFF	Flicker Compensation: ON
2	Electronics Iris [1/60 (1/50) to 1/100,000]	Fixed Shutter [1/50]
1	Normal Image	Mirror Image

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Cat. No. VJ-A-B12