YAMANO OPTICAL CO., LTD.

YAMANO OPTICAL HIGH QUALITY CCTV LENS

Fixed & Vari Focal Lens

Zoom Lens

Customized Zoom Lens

Day & Night (IR) Zoom Lens

Auto Focus Zoom Lens

3CCD Zoom Lens

Mega Pixel Lens for FA Machine Vision

Customised Lens for FA Machine Vision

Develop Design Manufacture Sales Export Distribute

YAMANO OPTICAL HIGH QUALITY CCTV LENS

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Content

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Technical Information

1. Image Size - Image element of CCTV camera

As long as Lens Format Size is larger than Image Element of camera, they are compatible.

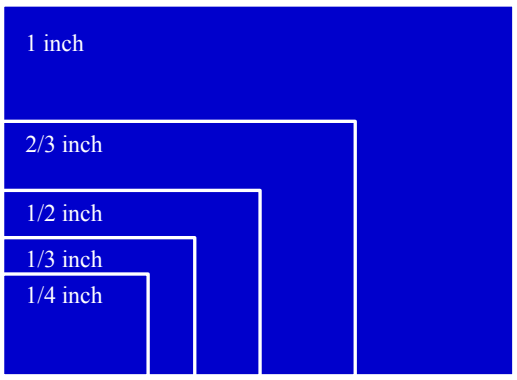


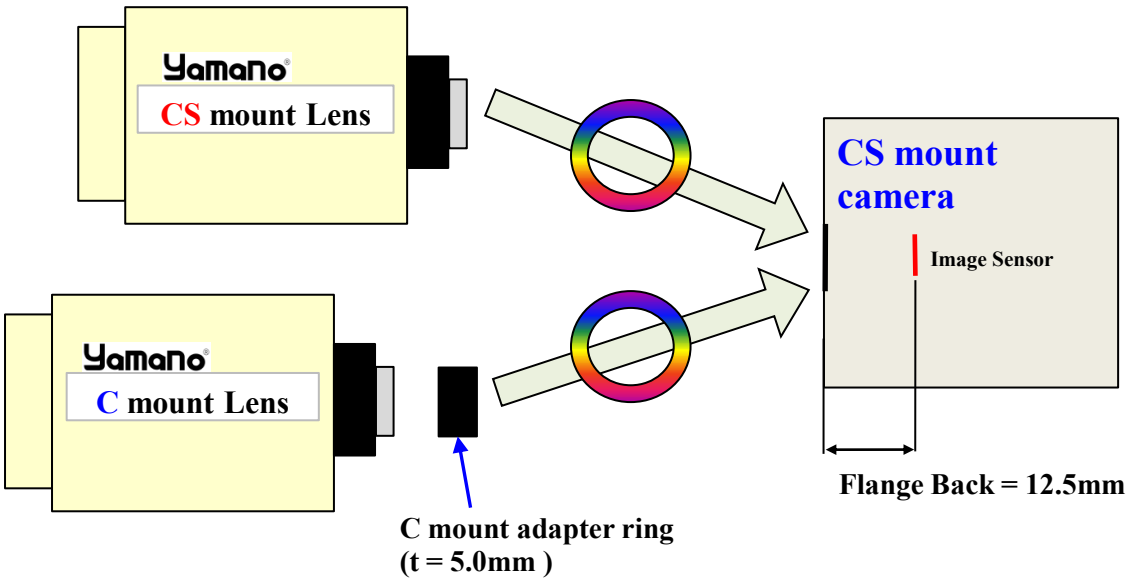
Image Element	Image Size (mm)			Lens Format Size		
	Horizontal	Vertical	Diagonal	1"	1/2 "	1/3 "
1 inch	12.8	9.6	16.0	○	×	×
2/3 inch	8.8	6.6	11.0	○	×	×
1/2 inch	6.4	4.8	8.0	○	○	×
1/3 inch	4.8	3.6	6.0	○	○	○
1/4 inch	3.6	2.7	4.5	○	○	○
35mm (ref.)	36.0	24.0	43.3	–	–	–

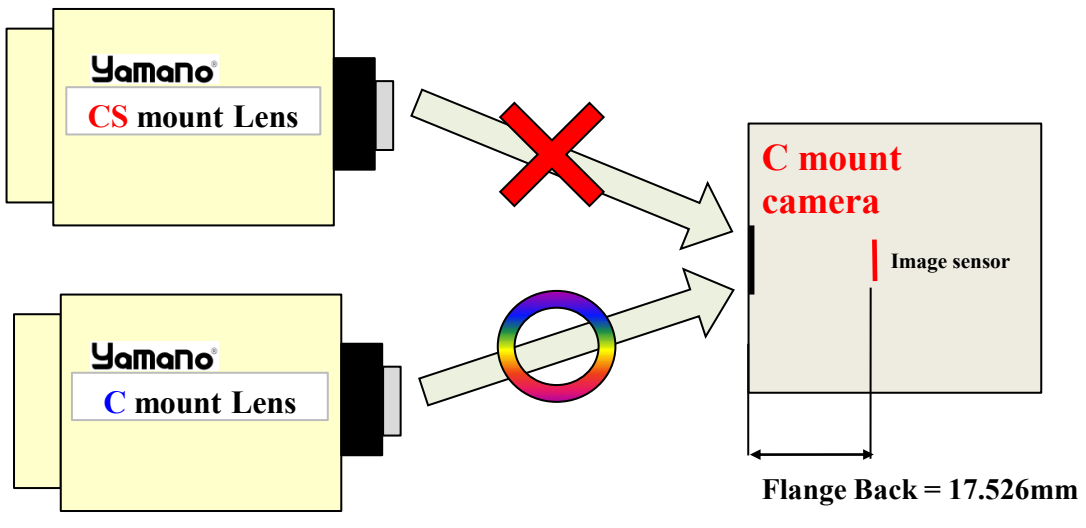
○ - Compatible
× - Not Compatible

2. Type of Mount - Mount type of CCTV camera

CCTV camera has two types of mount, such as C mount and CS mount. The diffrence between C & CS is only the flange back distance.

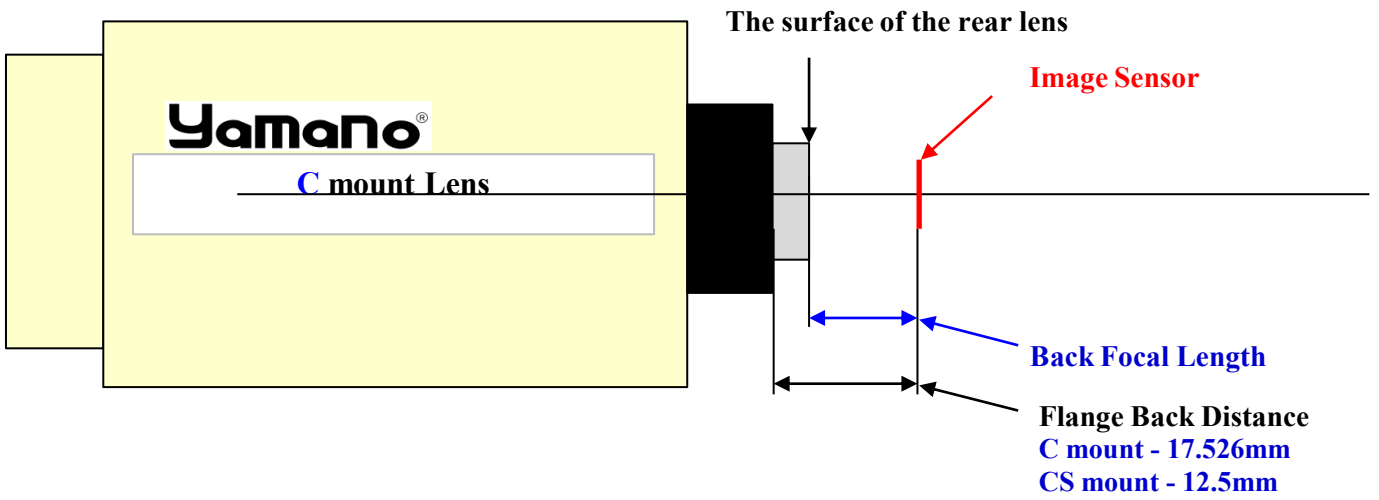
STANDARD	CS mount	C mount
Flange Back Distance	12.5mm (in air)	17.526mm (in air)
Diameter of screw thread	ϕ 25.4 (1-32 UNF)	





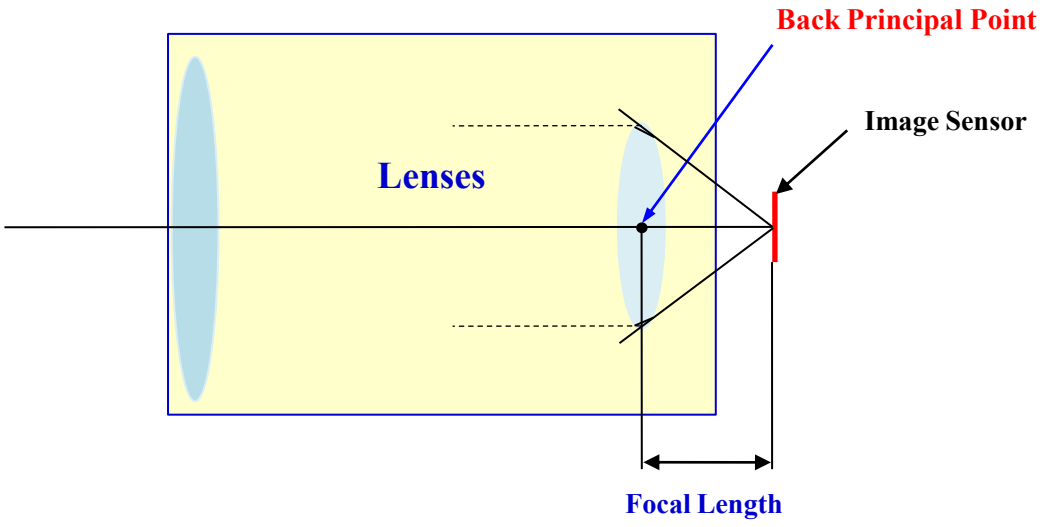
3. Flange Back & Back Foccal Distance - Distance from the flange back & the surface of the rear lens to the image sensor

Flange back is the distance between the mechanical mount surface and the image plain.
Back focal distance is the distance between the rear end of the lens part and the image plain.



4. Focal Length - From Back Principal Point To Focal Point

Focal Length is the distance from back principal point to focal point (usually image plain).
Longer the focal length become, less wide the angle of view become.



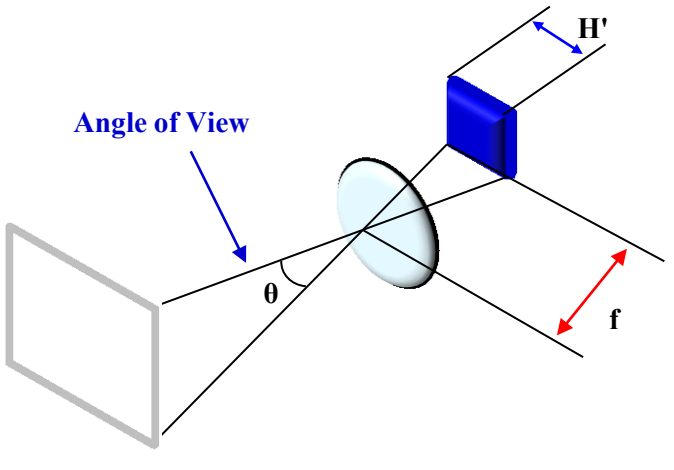
5. Angle of View - Shooting Range

Angle of view is the shooting range that can be captured by image sensor, and it is expressed in degree.
Normally angle of view means the shooting range when focused at infinity.
Angle of view can be calculated using focal length and image size.
The formula below is available when assuming that distortion is 0%.

θ = Angle of View
H' = Image Size *1
f = Focal Length

$$\theta = 2\tan^{-1}\frac{H'}{2f}$$

*1 - H' can be each size of image size such as Horizontal, Vertical and Diagonal



Technical Information

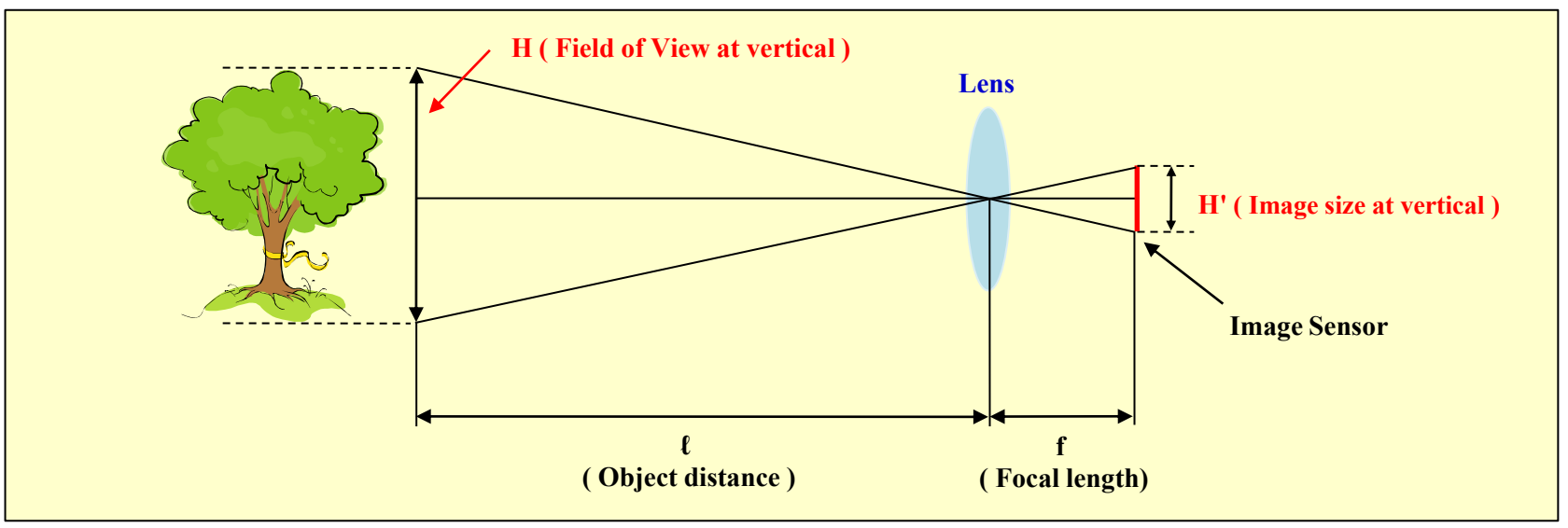
6. Field of view & Focal Length - Relation ship between Object Size & Focal Length

When object distance is limited, object size can be calculated using image size, focal length of lens and object distance.
In another word, when you are thinking which focal length of lens to choose, calulate it using each value of object size, object distance and image size. The formula below is available when assuming that distortion is 0%.

Object Size

Image Sensor Size

Image Element	Image Size (mm)		
	Horizontal	Vertical	Diagonal
1 inch	12.8	9.6	16.0
2/3 inch	8.8	6.6	11.0
1/2 inch	6.4	4.8	8.0
1/3 inch	4.8	3.6	6.0



H = Field of view
ℓ = Object Distance
H' = Image Size
f = Focal Length

Field of View $H = H'\frac{\ell}{f}$

Focal Length $f = \ell\frac{H'}{H}$

* When assuming Distortion is 0%

7. F Number & T Number - Brightness of Lens

Either F number (F No.) and T number (T No.) indicates how bright lens is. Smaller value of F No. or T No. means lens is brighter.
In general, F number is used more often than T number.
F No. is calculated by the formula as below:

F Number

f = Focal Length
d = Effective diameter of lens

$$\text{F number} = \frac{f}{d}$$

*Spectral transmittance is assumed as 100%.

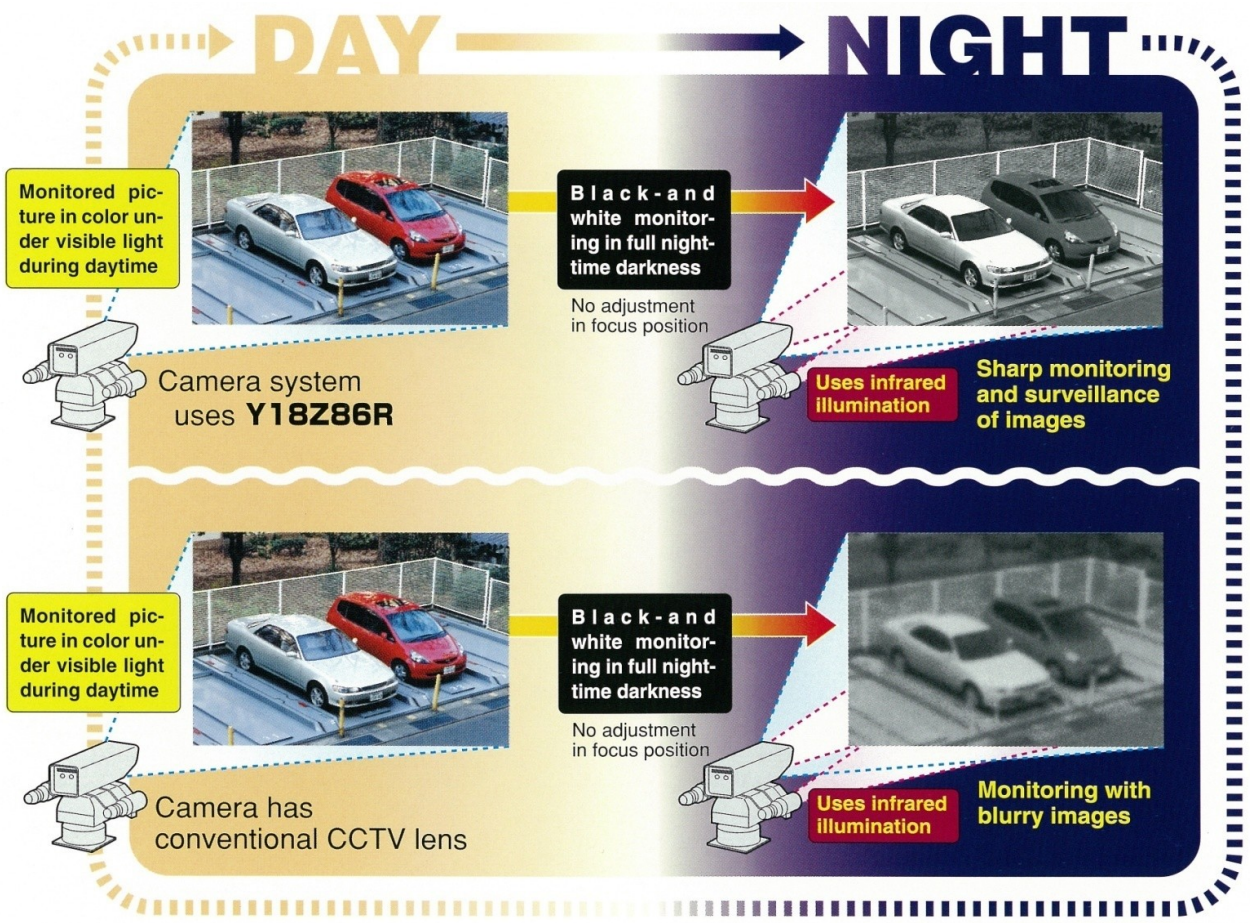
T number is more accurate value of brightness of lens than F number, since it is calculated using transmittance of lens.
T No. is calculated by the formula as below:

T Number

F = F number
t = Transmittance (%) of Lens

$$\text{T number} = \frac{F}{\sqrt{t\,(\%)}}$$

8. Infrared (IR) Corrected Zoom Lens - Day & Night

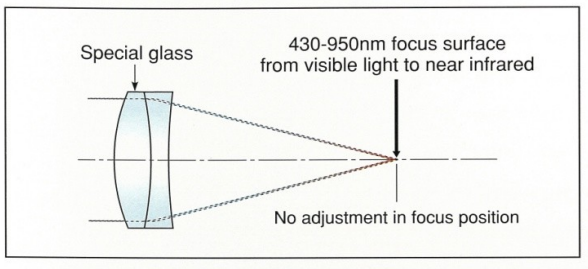


Near infrared lens resolution

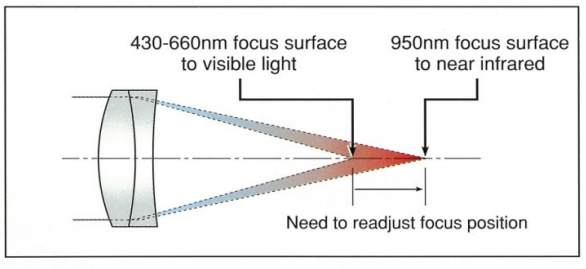
Since conventional CCTV lenses are being designed for the visible spectrum, once used in the (near) infrared. This will produce an out of focus and blurry image, even after re-adjusting the lens.

The Y18Z86R has extremely fine resolution in near infrared because there is no offset of focus position from visible light to near infrared. It provides a clear image because there is no drop in its recognition ability.

● Y18Z86R lens



● Standard CCTV lens

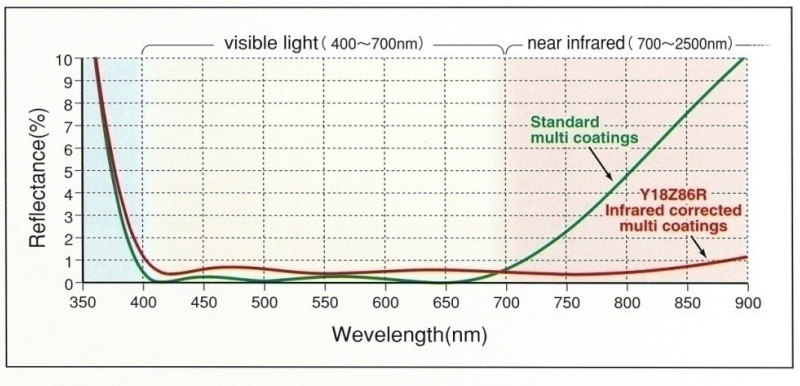


Special coating technology decisive in light transmission factor

Brightness in a lens is indicated by the F-number. Another factor affecting brightness in addition to the F-number is the transmission factor. The transmission factor is important because of the large number of separate lenses put together to create the compound lens that is a zoom lens. Special coating technology is necessary for increasing the transmission factor in the broad light band from visible to near infrared.

The Y18Z86R CCTV Zoom lens for use in high performance infrared was created by taking advantage of a large number of advanced design and production technologies. This lens is a major advance in the security field and is the pride of Yamano Optics products.

● Y18Z86R: Reflectance



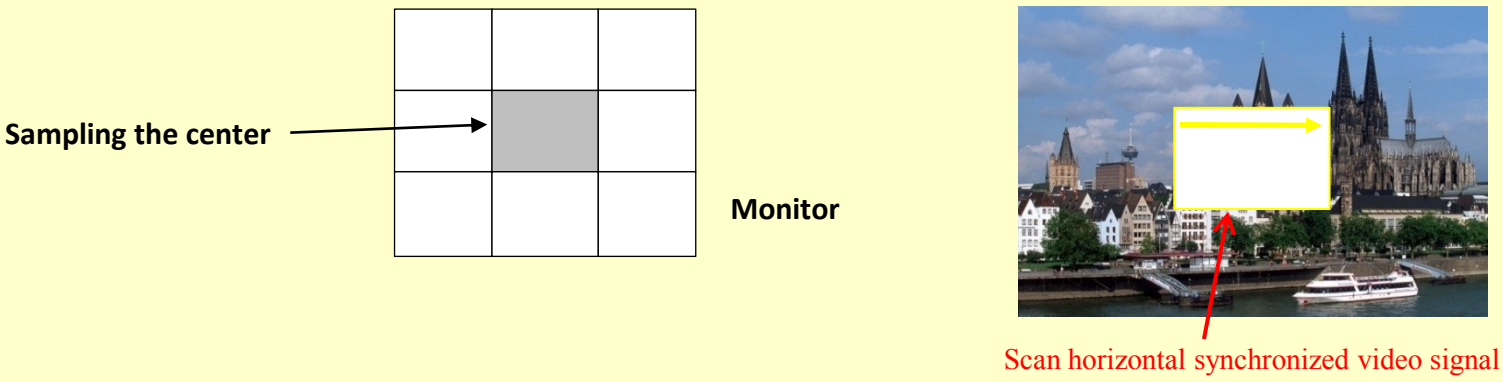
Technical Information

9. Auto Focus Zoom Lens - Mechanism

Yamano Auto Focus (AF) operates by sampling **Analog Composite Video Signal** from camera.
This video signal must be composed of video signal and vertical & horizontal synchronized signal in NTSC, PAL, or PROGRESSIVE .
AF micro processor converts the change rate of horizontal contrast into voltage and detects the highest point of the voltage by moving front lens to get focus.

How AF works:
If the contrast of an object change,

1: AF Micro Processor is monitoring the change of the contrast of horizontal synchronized video signal in the center part of the monitor devided into nine parts, and the rate of change of contrast is converted to voltage. (Fig. 1)



2: If AF micro processor detects that the converted voltage changes exceeding some threshold level, AF will start operation.

3: By moving front lens(focusing lens), AF micro processor will searches the peak point where the converted voltage becomes at maximum. (The lower the converted voltage becomes, the more the image gets blur.) (Fig. 2)

4: When AF find the maximum point of the voltage, focusing lens will move to the maximum point (focus position) to get focused.

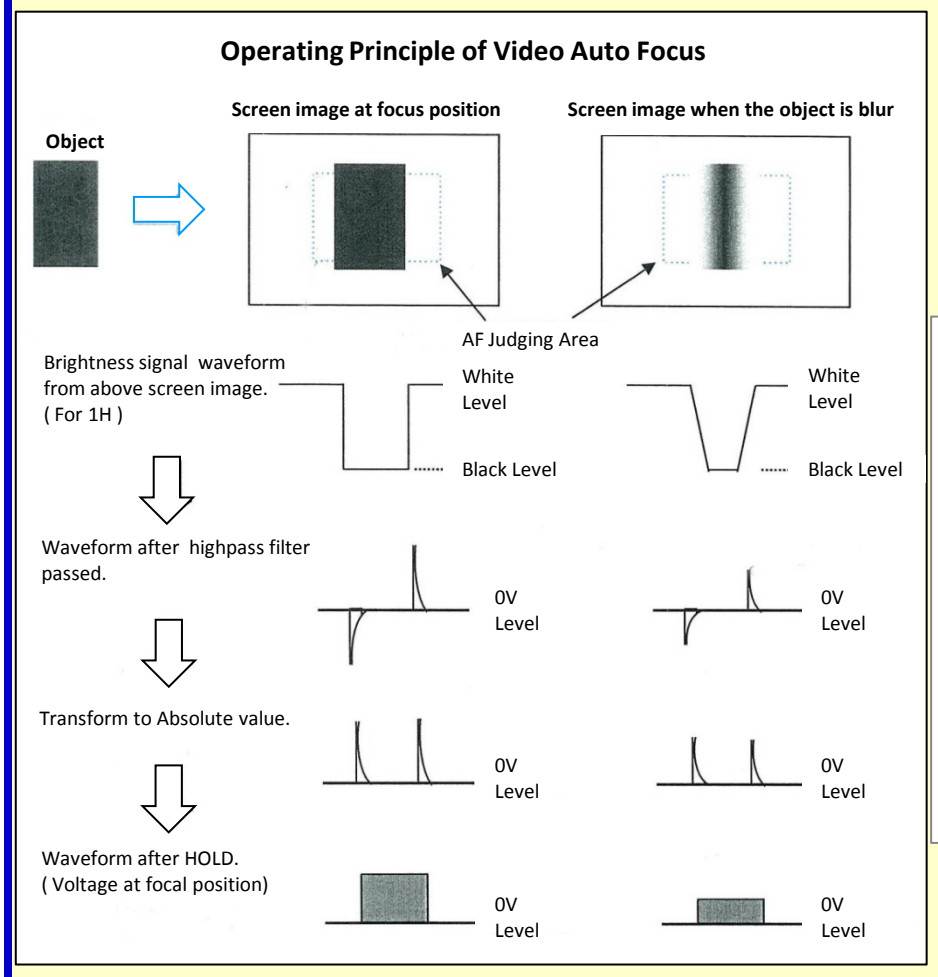


Fig. 1

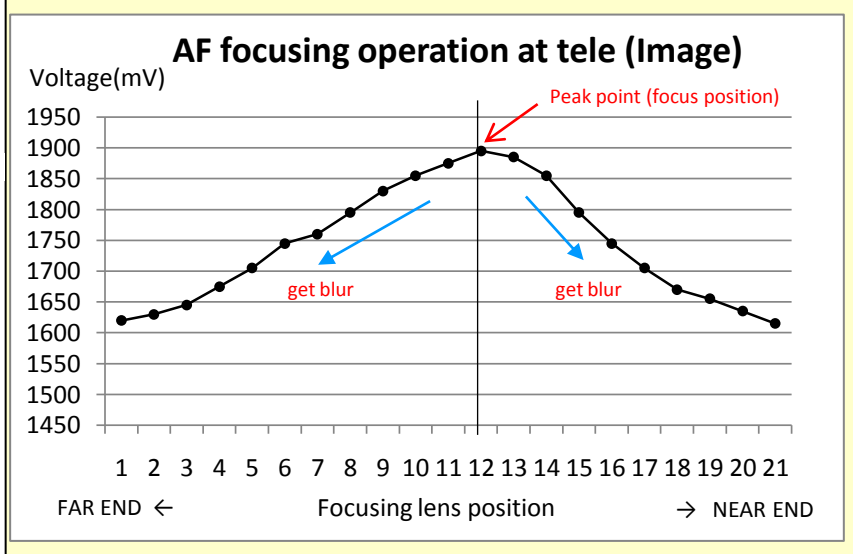


Fig. 2

9. Auto Focus Zoom Lens - Mechanism

(1) One Push Auto Focus

When it is difficult to bring lens into focused, just push AF button to come into focus easily.
(When monitoring same place, it is recommended to turn off AF.)

(2) Auto Focus Mode

Under this mode, AF will operate automatically in two ways when the contrast of an object changes.
This mode is suitable for monitoring with the operation by panning or tilting.

①Entire Area Search (*1)

・When turn on the system, AF will search focusing point over entire focus area as first movement.

②Speed Search

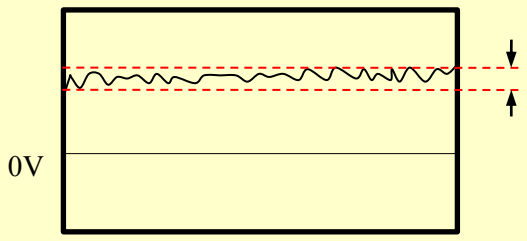
After Entire Are Search is completed, Micro Processor automatically switches to Speed Search.
When Pan-Tilt to the object, automatically focus within 1～3 seconds.
(In contrast of the object etc., focus speed is variable).

*Important Reminder for Operating Pan-Tilt

Operating Pan-Tilt during focus motor operation、it may occur focus error in some objects.
Under those circumstances, re-focused will perform when turn on AF again.

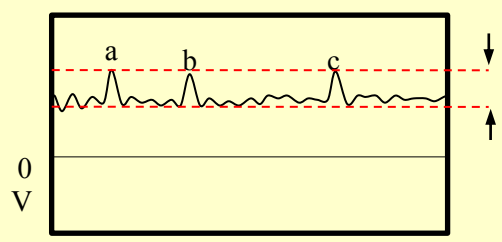
Under the following circumstances, AF does not take the focus properly on the target you try to aim at,

a: Low contrast of an object (little difference of the converted voltage).



Little difference of the converted voltage
ex. Dark object or object in Light of high intensity

b: When there are some high peak points of which the converted voltage are almost same level, even though the converted voltage exceeds particular threshold level.

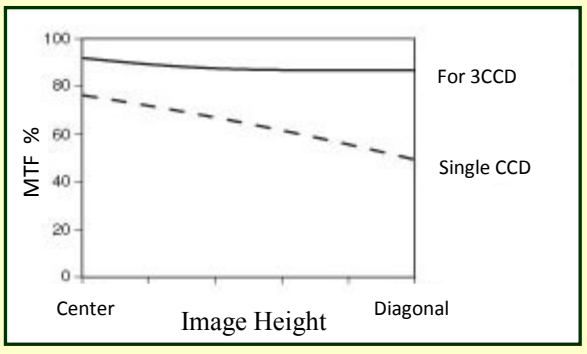


There are some peak points at which voltage difference is the same level
ex. Some objects in near distance and far distance is in the center of image at once

c: When accumulation mode of a camera is turned on and in operation.

11. Motorized Zoom Lenses for 3CCD Camera

Yamano 3CCD Zoom Lens for 3CCD Camera is designed for coming into focus with each red, green and blue CCD of 3CCD camera. Since 3CCD camera is equipped with 3 pieces of CCD which corresponds with each red, green and blue color separation by prism, thicker glass block than single CCD camera is in place between lens and CCD.
Therefore, using general-purpose lens for 3CCD camera may not use its full capability due to optical impact.
Following figure shows the MTF differences in Yamano 3CCD lens designed for 3CCD camera and the normal lens designed for single CCD camera which mounts on 3CCD camera.



Although Yamano Motorized Zoom Lens for 3CCD camera is designed to be perfectly matched with Panasonic 3CCD camera, it is also adjustable to Sony 3CCD camera. Panasonic and Sony use same bayonet mount, however each has different diameter. Please advise us the camera maker when you order with us.

12. Auto Focused Other Zoom Lenses

We provide services to auto focused other zoom lenses.
This service is to cooperate with you to increase profitability by adding our AF function on your zoom lens.
Auto Focused neither convert the lens nor affect optical performance. It is just a simple operation to mount our AF circuit board, interface board and BNC cable on existing circuit board.
Please feel free to contact us.
Consult development cost separately.

【Past Performance】Fujinon x60 (12.5-750mm）Zoom Lens
Kowa x25（30-750mm）Zoom Lens

13. Custom Specification of Zoom Lens

Our Zoom Lenses (x10, x15, x18, x20 series）are acceptable to various specifications.
Please feel free to contact us.

14. Rohs Directives Compliance

All our lenses conform to Rohs Directive.（except x18 Zoom Lens for 3CCD Camera）

15. PFOS Usage

Under Examination

Lens Colour

Cover case color = Ivory

Cover case color = Black

Lens Colour

WIRING DIAGRAM (x10, x15, x18, x20)

For 3 Motor Zoom Lens (x10, x15, x18, x20)

Wiring Diagram of Drive Cable for 3 Motor Type			For +/+ power supply	For +/- power supply(*1)
Control	Iris	Green	+Vcc Open	+ Open, - Close
		Brown	+Vcc Close	NC
	Zoom	Red	+Vcc Wide	+ Wide, -Tele
		Gray	+Vcc Tele	Common GND
	Focus	Yellow	+Vcc Near	+Near, -Far
		Blue	+Vcc Far	NC
Potentio mtr. (Preset Type Only)	Zoom	L.Green	+Vcc	
		Purple	Wiper	
		Black	GND	
	Focus	Orange	+Vcc	
		White	Wiper	
		Sky Blue	GND	

*1 - It is need to switch on the PCB at factory.. When placing order , please inform us .

For Auto Iris Zoom Lens (x10, x15, x18, x20)

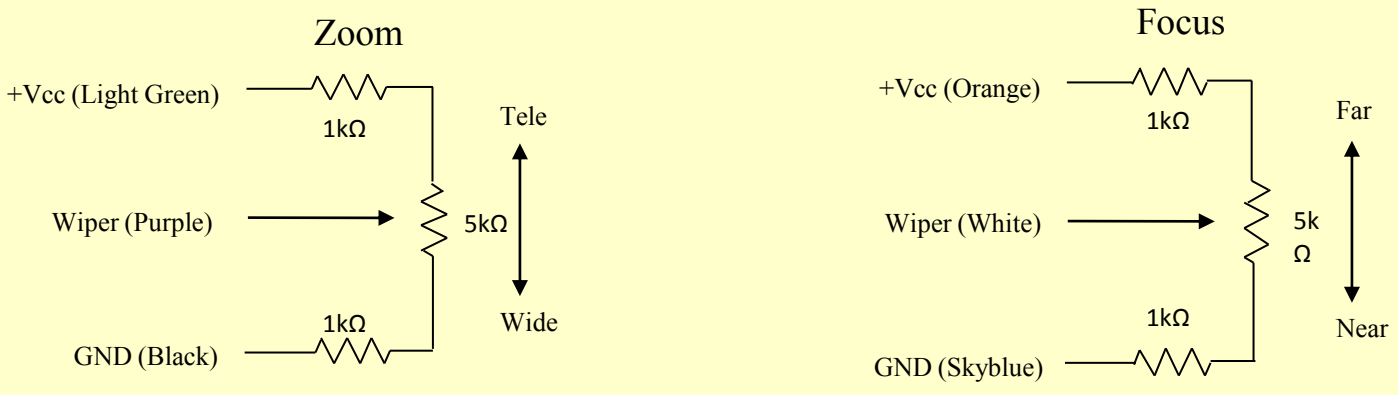
Wiring Diagram of Drive Cable			For +/+ power supply	For +/- power supply(*1)
Control	Zoom	1.Red	+Vcc Wide	+Vcc Wide , - Tele
		2.Gray	+Vcc Tele	Common GND
	Focus	3.Yellow	+Vcc Near	+Vcc Near, - Far
		4.Blue	+Vcc Far	-
Potentio mtr. (Preset Type Only)	Zoom	L.Green	+Vcc	
		Purple	Wiper	
		Black	GND	
	Focus	Orange	+Vcc	
		White	Wiper	
		Sky Blue	GND	

Wiring Diagram of Auto Iris Cable			
Control	Auto Iris	1.Red	+Vcc
		2.-	-
		3.White	Video Signal
		4.Black	Ground

Wiring Diagram of Manual Override Cable			
Control	Auto Iris	1.Red	+Vcc
		2.Green	Con 1
		3.White	Con 2
		4.Black	Ground

Potentio Diagram for 3 Motor & Auto Iris Type (x10, x15, x18, x20)

Potentio Meter



WIRING DIAGRAM (x10, x15, x18, x20)

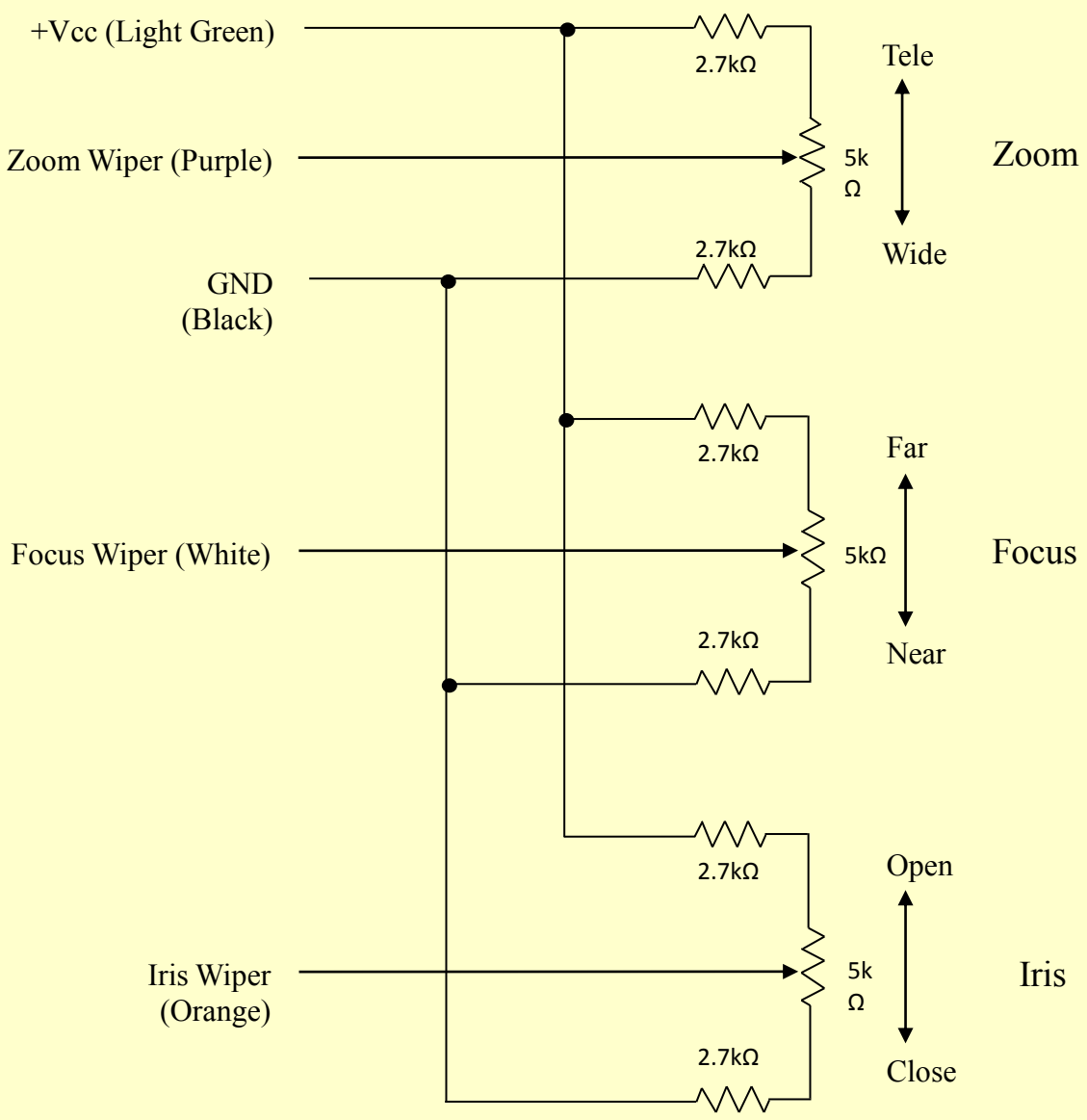
WIRING DIAGRAM (x10, x15, x18, x20)

For 3 Motor Zoom Lens (x10, x15, x18, x20) with 3 preset

Wiring Diagram of Drive Cable for 3 Motor Type			For +/+ power supply	For +/- power supply(*1)
Control	Iris	1.Green	+Vcc Open	+ Open, - Close
		2.Brown	+Vcc Close	NC
	Zoom	3.Red	+Vcc Wide	+ Wide, -Tele
		4.Gray	+Vcc Tele	Common GND
	Focus	5.Yellow	+Vcc Near	+Near, -Far
		6.Blue	+Vcc Far	NC
Potentio mtr. (Preset Type Only)	Common	L.Green	+Vcc	
		Black	GND	
	Wiper	Purple	Zoom Wiper	
		White	Focus Wiper	
		Orange	Iris Wiper	

*1 - It is need to switch on the PCB at factory.. When placing order , please inform us .

Potentio Meter



WIRING DIAGRAM (x10, x15, x18, x20)

WIRING DIAGRAM (x30, x33)

For Auto Iris Zoom Lens (x30)

Wiring Diagram of Drive Cable for Auto Iris Type			
Control	Zoom	Red	+Vcc Wide
		Yellow	+Vcc Tele
	Focus	Green	+Vcc Near
		Black	+Vcc Far
Potentio mtr. (AP Only)	Zoom	Gray	Wiper (Max at Tele)
	Focus	Blue	Wiper (Max at Near)
	Common	Purple	+Vcc
		Orange	Ground

Wiring Diagram of Auto Iris Cable			
Control	Auto Iris	Red	+Vcc
		-	-
		White	Video Signal
		Black	Ground

For 3 Motor Zoom Lens (x33)

Wiring Diagram of Drive Cable for 3 Motor Type			
Control	Iris	Yellow	+Vcc Open
		Brown	+Vcc Close
	Zoom	Green	+Vcc Wide
		White	+Vcc Tele
	Focus	Green	+Vcc Near
		Black	+Vcc Far

Wiring Diagram of Potentio Cable			
Potentio mtr. (MP Only)	Zoom	White	Wiper
	Focus	Green	Wiper
	Common	Red	+Vcc
		Black	Ground

For Auto Iris Zoom Lens (x33)

Wiring Diagram of Drive Cable for Auto Iris Type			
Control	Zoom	Green	+Vcc Wide
		White	+Vcc Tele
	Focus	Red	+Vcc Near
		Black	+Vcc Far
Potentio mtr. (AP Only)	Zoom	Gray	Wiper (Max at Tele)
	Focus	Blue	Wiper (Max at Near)
	Common	Purple	+Vcc
		Orange	Ground

Wiring Diagram of Auto Iris Cable			
Control	Auto Iris	Red	+Vcc
		-	-
		White	Video Signal
		Black	Ground

WIRING DIAGRAM (x30, x33)

WIRING DIAGRAM (x50)

For 3 Motor Zoom Lens (x50)

Wiring Diagram of Drive Cable for 3 Motor Type			
Control	Iris	White	+Vcc Open
		Brown	+Vcc Close
	Zoom	Red	+Vcc Wide
		Yellow	+Vcc Tele
	Focus	Green	+Vcc Near
		Black	+Vcc Far

Wiring Diagram of Potentio Cable			
Potentio mtr. (MP Only)	Zoom	White	Wiper
	Focus	Green	Wiper
	Common	Red	+Vcc
		Black	Ground

For Auto Iris Zoom Lens (x50)

Wiring Diagram of Drive Cable for Auto Iris Type			
Control	Zoom	Red	+Vcc Wide
		Yellow	+Vcc Tele
	Focus	Green	+Vcc Near
		Black	+Vcc Far

Wiring Diagram of Potentio Cable			
Potentio mtr. (AP Only)	Zoom	White	Wiper
	Focus	Green	Wiper
	Common	Red	+Vcc
		Black	Ground

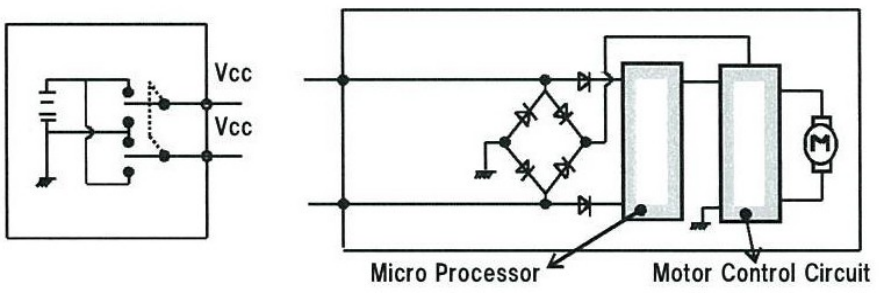
Wiring Diagram of Auto Iris Cable			
Control	Auto Iris	Red	+Vcc
		-	-
		White	Video Signal
		Black	Ground

AF WIRING DIAGRAM (x10, x15, x18, x20)

For Auto Focus Zoom Lens (x10, x15, x18, x20) - Standard Type

When the type of power supply for zoom & focus from the conroller you use is +/+ type, please select Standard type.

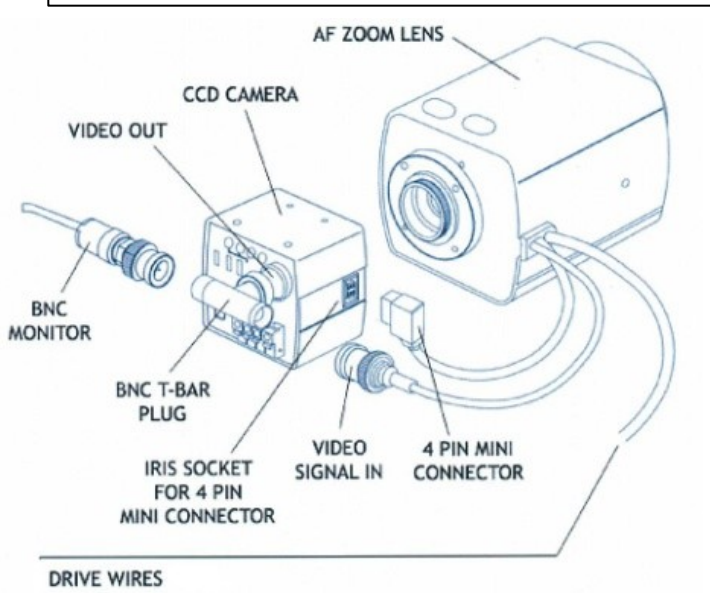
Type of Power Supply of Controller = +/+ (reverse) Type



Wiring Diagram of Drive Cable for Standard Type			
Control	Zoom	1.Red	+Vcc Wide (DC4V - 16V)
		2.Gray	+Vcc Tele (DC4V - 16V)
	Focus	3.Yellow	+Vcc Near (DC4V - 16V)
		4.Blue	+Vcc Far (DC4V - 16V)
	AF	5.Green	+Vcc AF (DC8V - 16V, Max. 150mA)
		6.Sky Blue	AF Off (DC2V - 12V) / AF On (DC0V)
	Common	7.Black	Common GND (Control / Potentio)
		Core Wire	Earthing
Potentio mtr. (AFP Only)	Zoom	L.Green	+Vcc
		Purple	Wiper
	Focus	Orange	+Vcc
		Brown	Wiper

Wiring Diagram of Auto Iris Cable			
Control	Auto Iris	1.Red	+Vcc
		2.-	-
		3.White	Video Signal
		4.Black	Ground

Potentio Meter

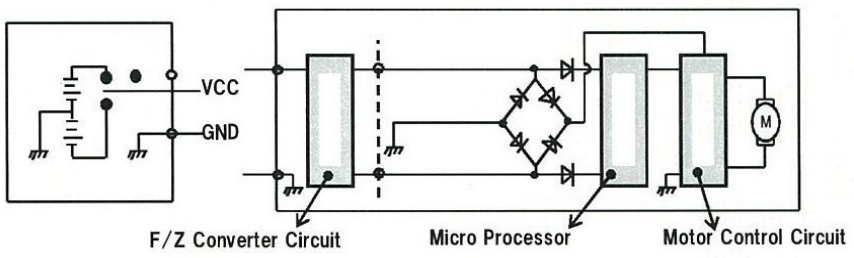


WIRING DIAGRAM (x10, x15, x18, x20)

For Auto Focus Zoom Lens (x10, x15, x18, x20) - Interface Type

When the type of power supply for zoom & focus from the conroller you use is +/- type, please select Interface type.

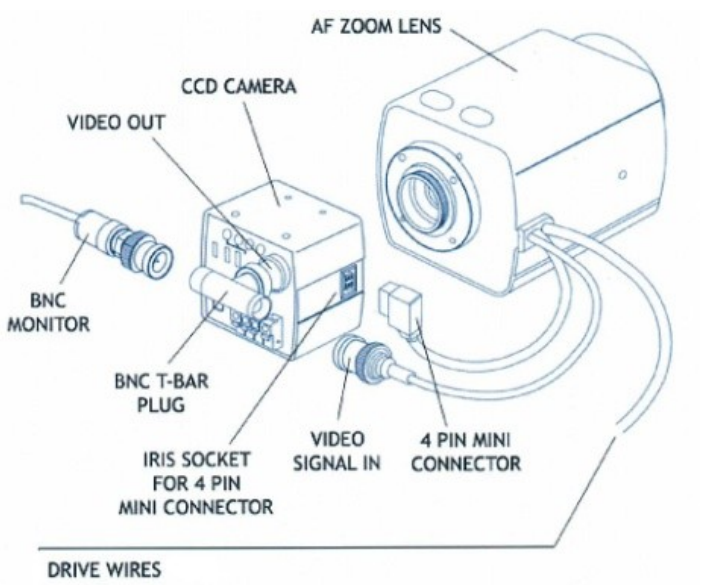
Type of Power Supply of Controller = +/- Type



Wiring Diagram of Drive Cable for Interface Type			
Control	Zoom	1.-	-
		2.Red	+Vcc Tele, -Vcc Wide (DC±4V - ±8V)
	Focus	3.-	-
		4.Yellow	+Vcc Far, -Vcc Near (DC±4V - ±8V)
	AF	5.Green	+Vcc AF (DC8V - 16V, Max . 150mA)
		6.Sky Blue	AF Off (DC2V - 12V) / AF On (DC0V)
	Common	7.Black	Common GND (Control / Potentio)
		Core Wire	Earthing
Potentio mtr. (AFP Only)	Zoom	L.Green	+Vcc
		Purple	Wiper
	Focus	Orange	+Vcc
		Brown	Wiper

Wiring Diagram of Auto Iris Cable			
Control	Auto Iris	1.Red	+Vcc
		2.-	-
		3.White	Video Signal
		4.Black	Ground

Potentio Meter



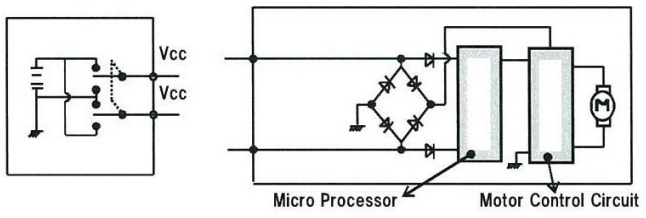
WIRING DIAGRAM (x10, x15, x18, x20)

For Auto Focus Zoom Lens (x10, x15, x18, x20) - Standard / Interface Type

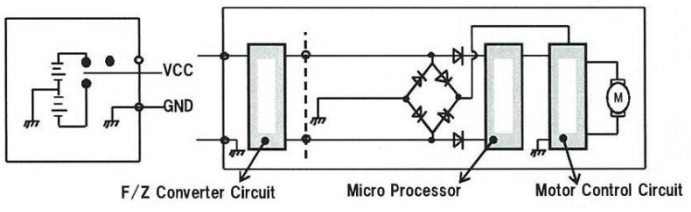
If you are not sure which type of power supply you use, please select standard type.

***When you connect cables, please make sure the cables are connected according to the wiring diagram below.**
Also make sure the cables are not in short circuit, otherwise, PCB will get damaged.

Type of Power Supply of Controller = +/+ Type



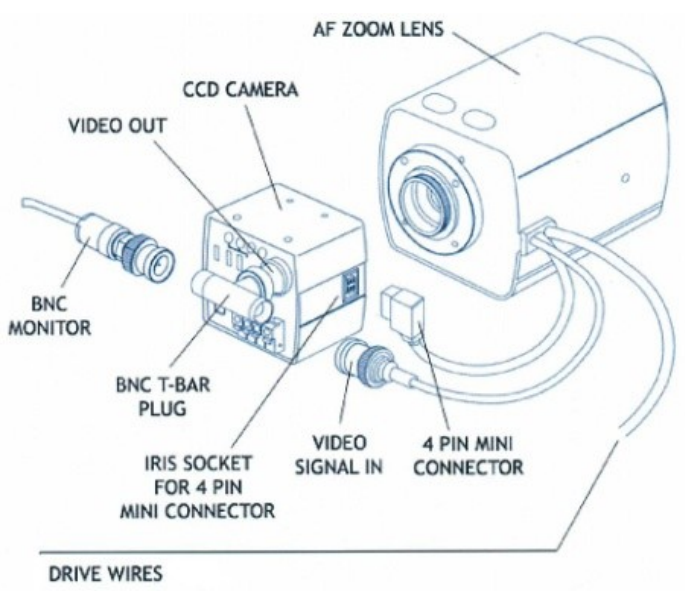
Type of Power Supply of Controller = +/- Type



Wiring Diagram of Drive Cable for :			Standard Type	Interface Type
Control	Zoom	1.Red	+Vcc Wide (DC4V - 16V)	-
		2.Gray	+Vcc Tele (DC4V - 16V)	+Vcc Tele, -Vcc Wide (DC±4V - ±8V)
	Focus	3.Yellow	+Vcc Near (DC4V - 16V)	-
		4.Blue	+Vcc Far (DC4V - 16V)	+Vcc Far, -Vcc Near (DC±4V - ±8V)
	AF	5.Green	+Vcc AF (DC8V - 16V, Max. 150mA)	+Vcc AF (DC8V - 16V, Max . 150mA)
		6.Sky Blue	AF Off (DC2V - 12V) / AF On (DC0V)	AF Off (DC2V - 12V) / AF On (DC0V)
	Common	7.Black	GND (AF / Potentio)	Common GND (Control / Potentio)
		Core Wire	Earthing	Earthing
Potentio mtr. (AFP Only)	Zoom	L.Green	+Vcc	+Vcc
		Purple	Wiper	Wiper
	Focus	Orange	+Vcc	+Vcc
		Brown	Wiper	Wiper

Wiring Diagram of Auto Iris Cable			
Control	Auto Iris	1.Red	+Vcc
		2.-	-
		3.White	Video Signal
		4.Black	GND

Potentio Meter



3CCD WIRING DIAGRAM (x18)

For 3CCD Auto Iris Zoom Lens (x18)

Wiring Diagram of Drive Cable for Auto Iris Type			
Control	Zoom	Red	+Vcc Wide
		Gray	+Vcc Tele
	Focus	Yellow	+Vcc Near
		Blue	+Vcc Far
Potentio mtr. (MP Only)	Zoom	L.Green	+Vcc
		Purple	Wiper
		Black	Ground
	Focus	Orange	+Vcc
		White	Wiper
		Sky Blue	Ground

Wiring Diagram of Auto Iris Cable : Servo Style			
Control	Auto Iris	Red	+Vcc
		Green	Iris Follow
		White	Iris Control
		Black	Ground

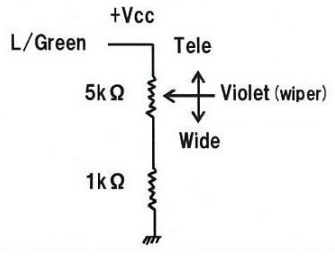
For 3CCD Auto Focus Zoom Lens (x18)

Wiring Diagram of Drive Cable			Standard Type	Interface Type
Control	Zoom	Red	+Vcc Wide (DC4V - 16V)	-
		Gray	+Vcc Tele (DC4V - 16V)	+Vcc Tele, -Vcc Wide (DC±4V - ±8V)
	Focus	Yellow	+Vcc Near (DC4V - 16V)	-
		Blue	+Vcc Far (DC4V - 16V)	+Vcc Far, -Vcc Near (DC±4V - ±8V)
	AF	Green	+Vcc AF (DC8V - 16V, Max. 150mA)	+Vcc AF (DC8V - 16V, Max. 150mA)
		Sky Blue	AF Off (DC2V - 12V) / AF On (DC0V)	AF Off (DC2V - 12V) / AF On (DC0V)
		Black	Ground (AF / Potentio)	Common Ground (Control / Potentio)
		Core Wire	Earthing	Earthing
Potentio mtr. (AFP Only)	Zoom	L.Green	+Vcc	+Vcc
		Purple	Wiper	Wiper
	Focus	Orange	+Vcc	+Vcc
		Brown	Wiper	Wiper

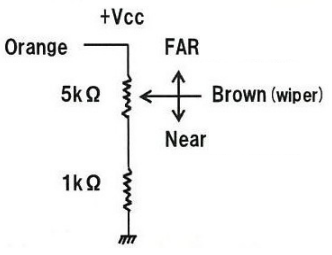
Wiring Diagram of Auto Iris Cable : Servo Style			
Control	Auto Iris	Red	+Vcc
		Green	Iris Follow
		White	Iris Control
		Black	Ground

Potentio Meter

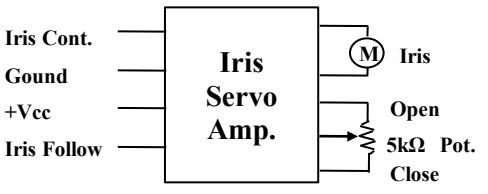
Zoom



Focus



Iris



How to connect Zoom Lens

Page 1 How to connect Zoom Lens with Camera

Please read instruction below, before connecting lens with your camera.

How to connect Zoom Lens with Camera

Before set the lens to the camera,
Check the CCD size & mount type of the camera

- **1/2 inch With C mount** → All of AF zoom lens except Y10Z06 series do not need CS mount adapter
- **1/2 inch With CS mount** → All of AF zoom lens except Y10Z06 series* need CS mount adapter to set it between camera & lens
- **1/3 inch With CS mount** → All of AF zoom lens except Y10Z06 series* need CS mount adapter to set it between camera & lens

***Y10Z06 Series is only for 1/3" camera.**

After set the lens to the camera, Connect wires and cable correctly.
Regarding AF Lens, Go to Instruction Page 2

To adjust back focus of the camera, Go to Instruction Page 3

All the settings is done.
Now ready to work Auto Focus with your camera.

How to connect AF Zoom Lens

Page 2 How to connetct AF Zoom Lens with Camera

Please read instruction below, before connecting lens with your camera.

How to connect AF Zoom Lens with Camera

Check type of power supply to zoom & focus from the controller (*1)

*1- If you are not sure which type of power supply your controller is, Please choose standard type & go to Page "W-6" for wiring diagram of Standard/Interface Type

+/+ type
Standard Type

To connect wire correctly

- Zoom Wide / DC+4 ~+16V
- Zoom Tele / DC+4 ~+16V
- Focus Far / DC+4 ~+16V
- Focus Near / DC+4 ~+16V
- Ground
- +Vcc AF DC+8~+16V
- AF on / off DC0V / ON DC+2~+12V / OFF

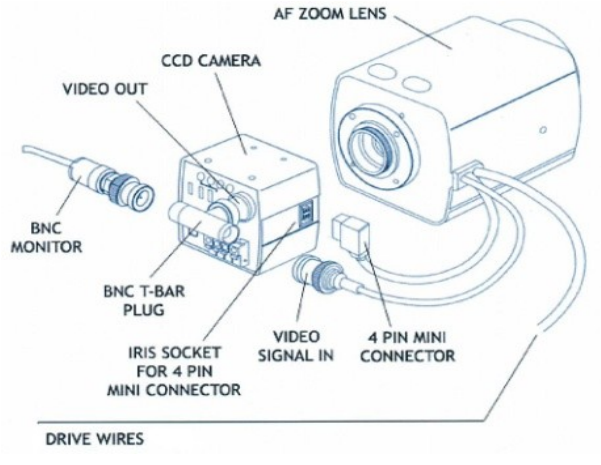
+/- type (Common GND)
Interface Type

To connect wire correctly

- Zoom Tele / DC +4~+8V Wide / DC -4~-8V
- Focus Far / DC +4~+8V Near / DC -4~-8V
- Common Ground
- +Vcc AF DC+8~+16V
- AF on / off DC0V / ON DC+2~+12V / OFF

To connect cable with BNC connector to video out put connector at the back side of the camera.

To connect Iris 4 pin connector to ALC output connector of the camera



To make sure that all function of zoom & focus & iris work correctly

Back to Instruction Page 1

How to adjust Back Focus

Page 3 How to adjust Back Focus

Please read instruction below, before connecting lens with your camera.

How to adjust Back Focus

*Before setting, make sure to set iris full open. When auto iris lens type, keep covering the front lens by hand to get iris full open , and then disconnect iris 4pin plug off the camera.

(1) Bring zoom to Tele end

↓

(2) Adjust Focus to get focused

↓

(3) Bring zoom to Wide end

↓

(4) Adjust back focus ring on camera to get focused

↓

(5) Bring Zoom to Tele end, Check if keep focused?

↓ Yes

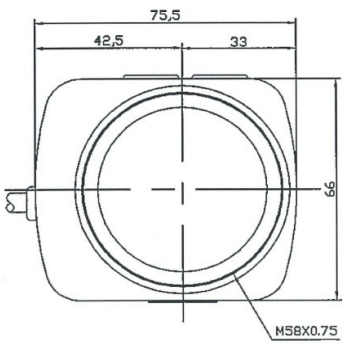
↓ No

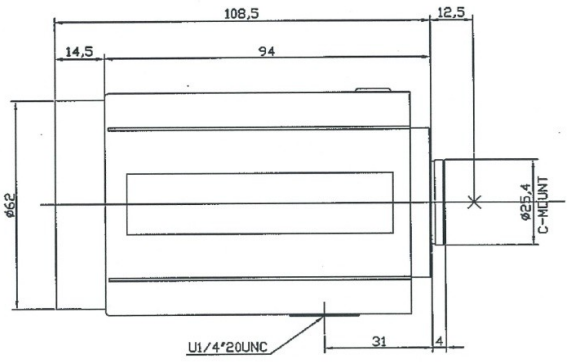
Back to (1) & do it over

Back focus is adjusted. Go back to Instruction Page 1

x10 Zoom Lens

Y10Z06 (6.0-60.0mm) Series





Lens Type		3 Mortors			Auto Iris		Auto Focus (Standard)		Auto Focus (Interface)	
Model No.		Y10Z06M	Y10Z06MP	Y10Z06MIP	Y10Z06A	Y10Z06AP	Y10Z06AF	Y10Z06AFP	Y10Z06AF-I	Y10Z06AFP-I
Format Size		1/3"								
Mount		CS								
Focal Length		6.0 - 60.0 mm								
Max. Aperture Ratio		1 : 1.2								
Iris Range		F1.2 - 360								
Min. Object Distance		1.5 m								
Operation	Iris	Motorized			Auto (Video Drive) (*1)					
	Focus	Motorized					Auto(*4) / Motorized			
	Zoom	Motorized								
Angle of View		Wide / Tele								
	Diagonal	57.4° / 5.7°								
	Horizontal	44.6° / 4.5°								
	Vertical	33.4° / 3.4°								
Iris	Input Voltage	DC 8V-12V			DC 8.5V-16V		DC 8V-16V			
	Current Consumption	Max. 40 mA (Motor)			Max. 40 mA (Motor)					
	Response Speed	Approx. 3 sec.			Approx. 3 sec.					
	Input Signal	-			Video Signal (VS or V)					
	Accuracy	-			±15% at Image Signal					
	Sensitivity Adjustment	-			0.5-1.0 Vp-p (*2)					
	Metering Method	-			Average - Peak (*2)					
Zoom	Input Voltage	DC 8V-12V					DC 4V-16V		DC ±4V - ±8V	
	Current Consumption	Max. 80 mA (Motor)					Max. 10 mA (Circuit)			
	Motorization Speed	Approx. 4-7 sec. (Variable)(*2)					Approx. 2-7 sec. (Variable)(*2)			
Manual Focus	Input Voltage	DC 8V-12V					DC 4V-16V		DC ±4V - ±8V	
	Current Consumption	Max. 80 mA (Motor)					Max. 10 mA (Circuit)			
	Motorization Speed	Approx. 4-7 sec. (Variable)(*2)					Approx. 2-7 sec. (Variable)(*2)			
Auto Focus	Input Voltage	-					DC8V-16V			
	Current Consumption	-					Max.50mA (Standby) / Max.150mA (Zoom or Focus on)			
Preset Function (*3)		-	2 Potentio	3 Potentio	-	2 Potentio	-	2 Potentio	-	2 Potentio
Applicable Wavelength		430 nm - 680 nm								
Back Focal Length		8.9 mm (in air)								
Flange Back Length		12.5 mm								
Temperature Range		-10℃ ~ +50℃								
Filter Screw Size		M58.0 mm P=0.75								
Dimension (H x W x D)		66 x 75.5 x 108.5 mm								
Weight		590g	600g	605g	595g	605g	600g	610g	600g	610g

*Specifications are subject to change without notice

*1- Manual override (Manual / Auto Iris) available

*2- Adjustable with volume

*3- There are 2 types of preset:

2 potentio - Preset on Zoom / Focus

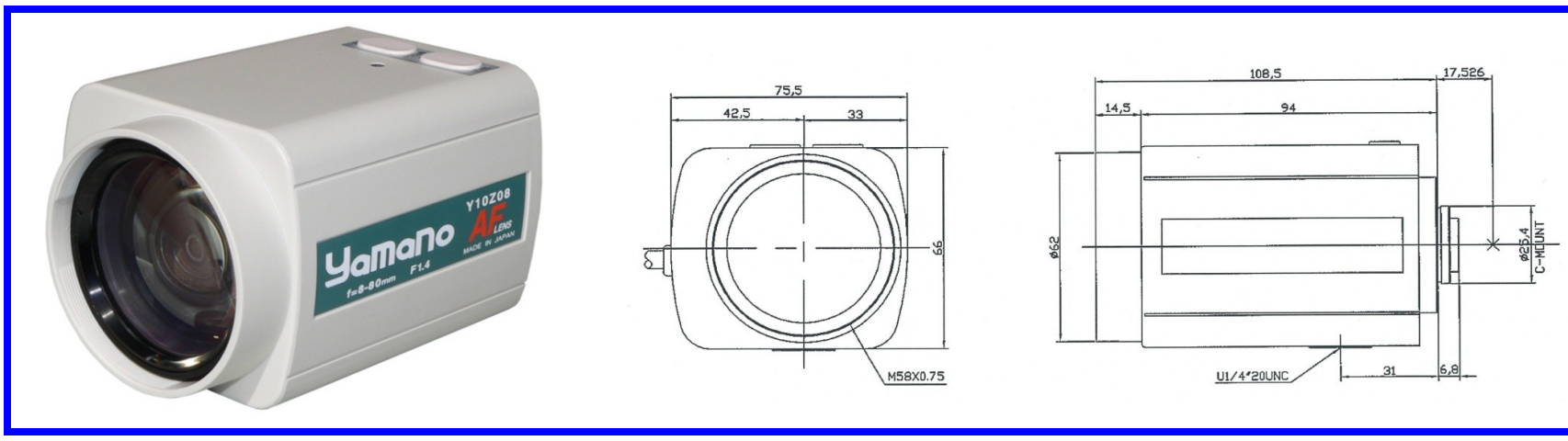
3 potentio - Preset on Zoom / Focus / Iris

*4- When the camera with accumulator function is on, Auto Focus function does not work correctly. In that case, please turn off the Auto Focus to obtain correct operation.

x10 Zoom Lens

x10 Zoom Lens

Y10Z08 (8.0-80.0mm) Series



Lens Type		3 Mortors			Auto Iris		Auto Focus (Standard)		Auto Focus (Interface)	
Model No.		Y10Z08M	Y10Z08MP	Y10Z08MIP	Y10Z08A	Y10Z08AP	Y10Z08AF	Y10Z08AFP	Y10Z08AF-I	Y10Z08AFP-I
Format Size		1/2"								
Mount		C / CS (with CS adapter)								
Focal Length		8.0-80.0 mm								
Max. Aperture Ratio		1 : 1.4								
Iris Range		F1.4 - 360								
Min. Object Distance		1.5 m								
Operation	Iris	Motorized			Auto (Video Drive) (*1)					
	Focus	Motorized					Auto(*4) / Motorized			
	Zoom	Motorized								
Angle of View		Wide / Tele								
	Diagonal	57.4° / 5.7°								
	Horizontal	45.8° / 4.6°								
	Vertical	34.5° / 3.5°								
Iris	Input Voltage	DC 8V-12V			DC 8.5V-16V		DC 8V-16V			
	Current Consumption	Max. 40 mA (Motor)			Max. 40 mA (Motor)					
	Response Speed	Approx. 3 sec.			Approx. 3 sec.					
	Input Signal	-			Video Signal (VS or V)					
	Accuracy	-			±15% at Image Signal					
	Sensitivity Adjustment	-			0.5-1.0 Vp-p (*2)					
	Metering Method	-			Average - Peak (*2)					
Zoom	Input Voltage	DC 8V-12V					DC 4V-16V		DC ±4V - ±8V	
	Current Consumption	Max. 80 mA (Motor)					Max. 10 mA (Circuit)			
	Motorization Speed	Approx. 4-7 sec. (Variable)(*2)					Approx. 2-7 sec. (Variable)(*2)			
Manual Focus	Input Voltage	DC 8V-12V					DC 4V-16V		DC ±4V - ±8V	
	Current Consumption	Max. 80 mA (Motor)					Max. 10 mA (Circuit)			
	Motorization Speed	Approx. 4-7 sec. (Variable)(*2)					Approx. 2-7 sec. (Variable)(*2)			
Auto Focus	Input Voltage	-					DC8V-16V			
	Current Consumption	-					Max.50mA (Standby) / Max.150mA (Zoom or Focus on)			
Preset Function (*3)		-	2 Potentio	3 Potentio	-	2 Potentio	-	2 Potentio	-	2 Potentio
Applicable Wavelength		430 nm - 680 nm								
Back Focal Length		11.0 mm (in air)								
Flange Back Length		17.526 mm								
Temperature Range		-10℃ ~ +50℃								
Filter Screw Size		M58.0 mm P=0.75								
Dimension (H x W x D)		66 x 75.5 x 108.5 mm								
Weight		590g	600g	605g	595g	605g	600g	610g	600g	610g

*Specifications are subject to change without notice

*1- Manual override (Manual / Auto Iris) available

*2- Adjustable with volume

*3- There are 2 types of preset:

2 potentio - Preset on Zoom / Focus

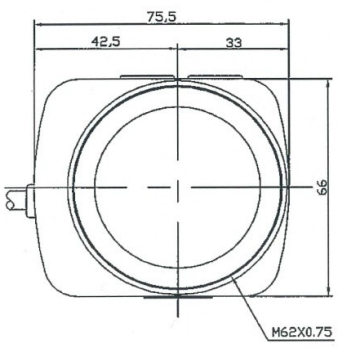
3 potentio - Preset on Zoom / Focus / Iris

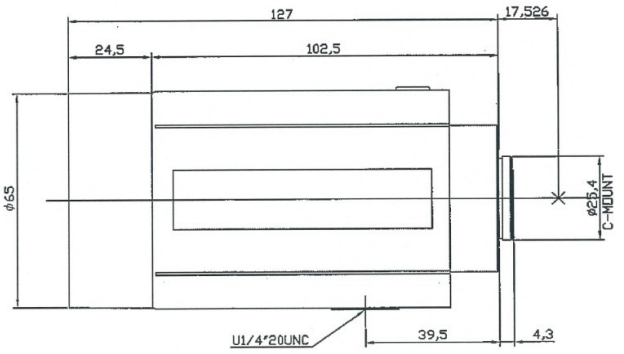
*4- When the camera with accumulator function is on, Auto Focus function does not work correctly. In that case, please turn off the Auto Focus to obtain correct operation.

x10 Zoom Lens

x15 Zoom Lens

Y15Z75 (7.5-112.5mm) Series





Lens Type		3 Mortors			Auto Iris		Auto Focus（Standard）		Auto Focus（Interface）	
Model No.		Y15Z75M	Y15Z75MP	Y15Z75MIP	Y15Z75A	Y15Z75AP	Y15Z75AF	Y15Z75AFP	Y15Z75AF-I	Y15Z75AFP-I
Format Size		1/2"								
Mount		C / CS (with CS adapter)								
Focal Length		7.5 - 112.5 mm								
Max. Aperture Ratio		1 : 1.6								
Iris Range		F1.6 - 360								
Min. Object Distance		1.5 m								
Operation	Iris	Motorized			Auto（Video Drive ）(*1)					
	Focus	Motorized					Auto(*4) / Motorized			
	Zoom	Motorized								
Angle of View		Wide / Tele								
	Diagonal	57.1° / 4.0°								
	Horizontal	46.8° / 3.3°								
	Vertical	35.7° / 2.5°								
Iris	Input Voltage	DC 8V-12V			DC 8.5V-16V		DC 8V-16V			
	Current Consumption	Max. 40 mA (Motor)			Max. 40 mA (Motor)					
	Response Speed	Approx. 3 sec.			Approx. 3 sec.					
	Input Signal	-			Video Signal (VS or V)					
	Accuracy	-			±15% at Image Signal					
	Sensitivity Adjustment	-			0.5-1.0 Vp-p (*2)					
	Metering Method	-			Average - Peak (*2)					
Zoom	Input Voltage	DC 8V-12V					DC 4V-16V		DC ±4V - ±8V	
	Current Consumption	Max. 80 mA（Motor）					Max. 10 mA (Circuit)			
	Motorization Speed	Approx. 4-7 sec. (Variable)(*2)					Approx. 2-7 sec. (Variable)(*2)			
Manual Focus	Input Voltage	DC 8V-12V					DC 4V-16V		DC ±4V - ±8V	
	Current Consumption	Max. 80 mA（Motor）					Max. 10 mA (Circuit)			
	Motorization Speed	Approx. 4-7 sec. (Variable)(*2)					Approx. 2-7 sec. (Variable)(*2)			
Auto Focus	Input Voltage	-					DC8V-16V			
	Current Consumption	-					Max.50mA (Standby) / Max.150mA (Zoom or Focus on)			
Preset Function (*3)		-	2 Potentio	3 Potentio	-	2 Potentio	-	2 Potentio	-	2 Potentio
Applicable Wavelength		430 nm - 680 nm								
Back Focal Length		13.6 mm (in air)								
Flange Back Length		17.526 mm								
Temperature Range		-10℃ ~ +50℃								
Filter Screw Size		M62.0 mm P=0.75								
Dimension (H x W x D)		66 x 75.5 x 127.0 mm								
Weight		700g	710g	715g	705g	715g	710g	720g	710g	720g

*Specifications are subject to change without notice

*1- Manual override (Manual / Auto Iris) available

*2- Adjustable with volume

*3- There are 2 types of preset:

2 potentio - Preset on Zoom / Focus

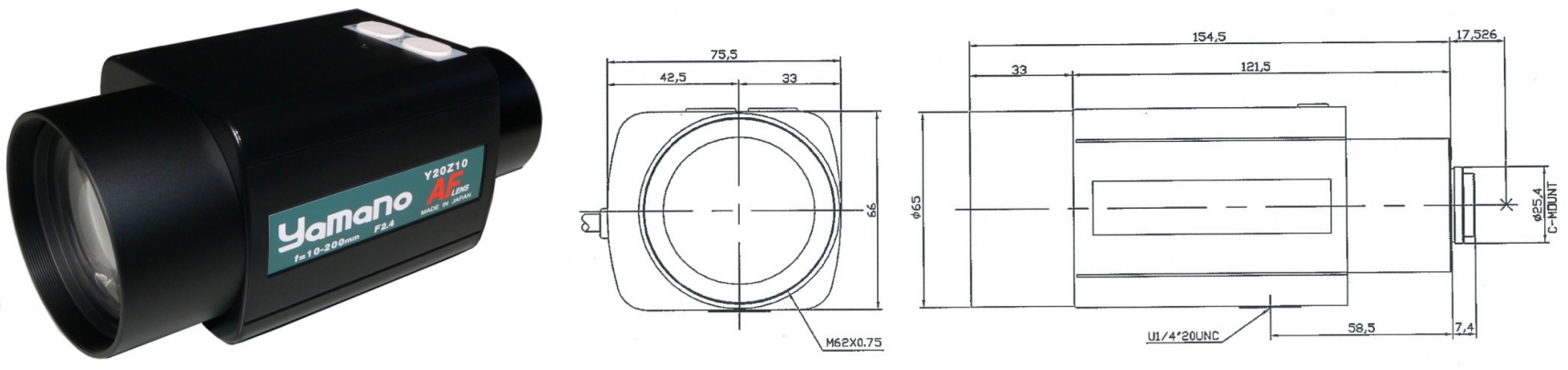
3 potentio - Preset on Zoom / Focus / Iris

*4- When the camera with accumulator function is on, Auto Focus function does not work correctly. In that case, please turn off the Auto Focus to obtain correct operation.

x15 Zoom Lens

x20 Zoom Lens

Y20Z10 (10-200mm) Series



Lens Type		3 Mortors			Auto Iris		Auto Focus (Standard)		Auto Focus (Interface)	
Model No.		Y20Z10M	Y20Z10MP	Y20Z10MIP	Y20Z10A	Y20Z10AP	Y20Z10AF	Y20Z10AFP	Y20Z10AF-I	Y20Z10AFP-I
Format Size		1/2"								
Mount		C / CS (with CS adapter)								
Focal Length		10.0 - 200.0 mm								
Max. Aperture Ratio		1 : 2.4								
Iris Range		F2.4 - 360								
Min. Object Distance		1.8 m								
Operation	Iris	Motorized			Auto (Video Drive)(*1)					
	Focus	Motorized					Auto(*4) / Motorized			
	Zoom	Motorized								
Angle of View		Wide / Tele								
	Diagonal	42.4° / 2.2°								
	Horizontal	37.8° / 1.8°								
	Vertical	26.4° / 1.4°								
Iris	Input Voltage	DC 8V-12V			DC 8.5V-16V		DC 8V-16V			
	Current Consumption	Max. 40 mA (Motor)			Max. 40 mA (Motor)					
	Response Speed	Approx. 3 sec.			Approx. 3 sec.					
	Input Signal	-			Video Signal (VS or V)					
	Accuracy	-			±15% at Image Signal					
	Sensitivity Adjustment	-			0.5-1.0 Vp-p (*2)					
	Metering Method	-			Average - Peak (*2)					
Zoom	Input Voltage	DC 8V-12V					DC 4V-16V		DC ±4V - ±8V	
	Current Consumption	Max. 80 mA (Motor)					Max. 10 mA (Circuit)			
	Motorization Speed	Approx. 4-7 sec. (Variable)(*2)					Approx. 2-7 sec. (Variable)(*2)			
Manual Focus	Input Voltage	DC 8V-12V					DC 4V-16V		DC ±4V - ±8V	
	Current Consumption	Max. 80 mA (Motor)					Max. 10 mA (Circuit)			
	Motorization Speed	Approx. 4-7 sec. (Variable)(*2)					Approx. 2-7 sec. (Variable)(*2)			
Auto Focus	Input Voltage	-					DC8V-16V			
	Current Consumption	-					Max.50mA (Standby) / Max.150mA (Zoom or Focus on)			
Preset Function (*3)		-	2 Potentio	3 Potentio	-	2 Potentio	-	2 Potentio	-	2 Potentio
Applicable Wavelength		430 nm - 680 nm								
Back Focal Length		11.1 mm (in air)								
Flange Back Length		17.526 mm								
Temperature Range		-10℃ ~ +50℃								
Filter Screw Size		M62.0 mm P=0.75								
Dimension (H x W x D)		66 x 75.5 x 154.5 mm								
Weight		760g	770g	775g	765g	775g	770g	780g	770g	780g

*Specifications are subject to change without notice

*1- Manual override (Manual / Auto Iris) available

*2- Adjustable with volume

*3- There are 2 types of preset:

2 potentio - Preset on Zoom / Focus

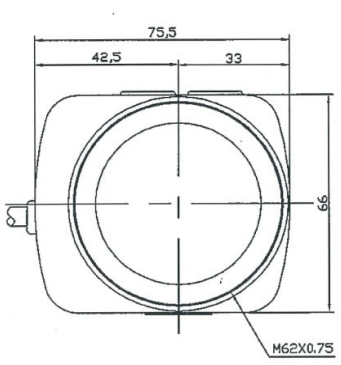
3 potentio - Preset on Zoom / Focus / Iris

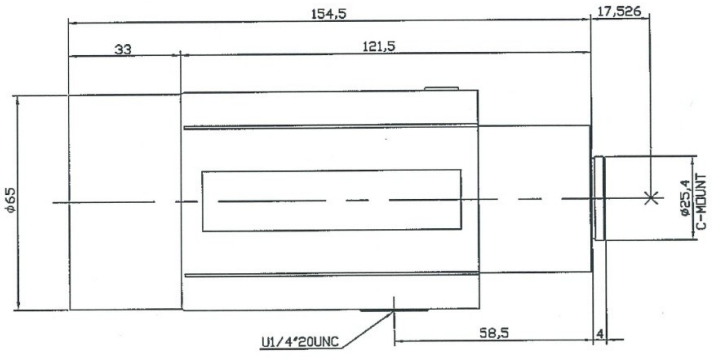
*4- When the camera with accumulator function is on, Auto Focus function does not work correctly. In that case, please turn off the Auto Focus to obtain correct operation.

x20 Zoom Lens

x20 Zoom Lens

Y20Z15 (15-300mm) Series





Lens Type		3 Mortors			Auto Iris		Auto Focus（Standard）		Auto Focus（Interface）	
Model No.		Y20Z15M	Y20Z15MP	Y20Z15MIP	Y20Z15A	Y20Z15AP	Y20Z15AF	Y20Z15AFP	Y20Z15AF-I	Y20Z15AFP-I
Format Size		1/2"								
Mount		C / CS (with CS adapter)								
Focal Length		15.0 - 300.0 mm								
Max. Aperture Ratio		1 : 3.6								
Iris Range		F3.6 - 360								
Min. Object Distance		2.5 m								
Operation	Iris	Motorized			Auto（Video Drive ）(*1)					
	Focus	Motorized					Auto(*4) / Motorized			
	Zoom	Motorized								
Angle of View		Wide / Tele								
	Diagonal	29.2˚ / 1.5˚								
	Horizontal	23.4˚ / 1.2˚								
	Vertical	17.7˚ / 0.9˚								
Iris	Input Voltage	DC 8V-12V			DC 8.5V-16V		DC 8V-16V			
	Current Consumption	Max. 40 mA (Motor)			Max. 40 mA (Motor)					
	Response Speed	Approx. 3 sec.			Approx. 3 sec.					
	Input Signal	-			Video Signal (VS or V)					
	Accuracy	-			±15% at Image Signal					
	Sensitivity Adjustment	-			0.5-1.0 Vp-p (*2)					
	Metering Method	-			Average - Peak (*2)					
Zoom	Input Voltage	DC 8V-12V					DC 4V-16V		DC ±4V - ±8V	
	Current Consumption	Max. 80 mA（Motor）					Max. 10 mA (Circuit)			
	Motorization Speed	Approx. 4-7 sec. (Variable)(*2)					Approx. 2-7 sec. (Variable)(*2)			
Manual Focus	Input Voltage	DC 8V-12V					DC 4V-16V		DC ±4V - ±8V	
	Current Consumption	Max. 80 mA（Motor）					Max. 10 mA (Circuit)			
	Motorization Speed	Approx. 4-7 sec. (Variable)(*2)					Approx. 2-7 sec. (Variable)(*2)			
Auto Focus	Input Voltage	-					DC8V-16V			
	Current Consumption	-					Max.50mA (Standby) / Max.150mA (Zoom or Focus on)			
Preset Function (*3)		-	2 Potentio	3 Potentio	-	2 Potentio	-	2 Potentio	-	2 Potentio
Applicable Wavelength		430 nm - 680 nm								
Back Focal Length		14.9 mm (in air)								
Flange Back Length		17.526 mm								
Temperature Range		-10℃ ~ +50℃								
Filter Screw Size		M62.0 mm P=0.75								
Dimension (H x W x D)		66 x 75.5 x 154.5 mm								
Weight		760g	770g	775g	765g	775g	770g	780g	770g	780g

*Specifications are subject to change without notice

*1- Manual override (Manual / Auto Iris) available

*2- Adjustable with volume

*3- There are 2 types of preset:

2 potentio - Preset on Zoom / Focus

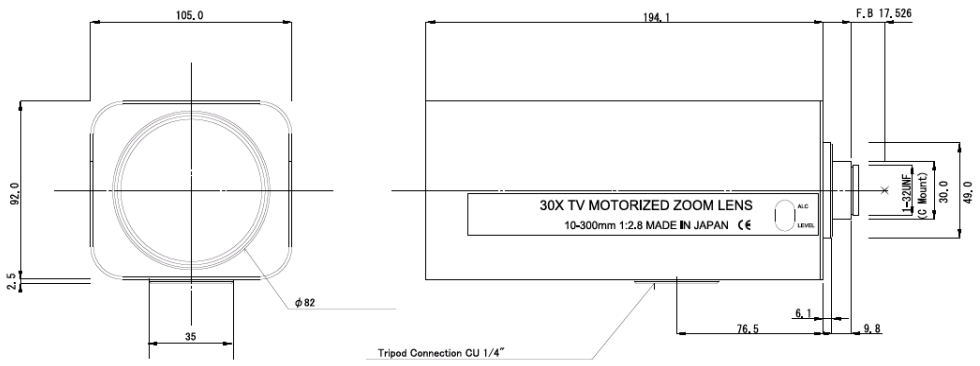
3 potentio - Preset on Zoom / Focus / Iris

*4- When the camera with accumulator function is on, Auto Focus function does not work correctly. In that case, please turn off the Auto Focus to obtain correct operation.

x20 Zoom Lens

x30 Zoom Lens

Y30Z10 (10-300mm) Series



Lens Type		Auto Iris		Auto Focus (Standard)		Auto Focus (Interface)		
Model No.		Y30Z10A	Y30Z10AP	Y30Z10AF	Y30Z10AFP	Y30Z10AF-I	Y30Z10AFP-I	
Format Size		1/2"						
Mount		C / CS (with CS adapter)						
Focal Length		10.0 - 300.0 mm						
Max. Aperture Ratio		1 : 2.8						
Iris Range		F2.8 - 360						
Min. Object Distance		3.0 m						
Operation	Iris	Auto (Video Drive)						
	Focus	Motorized		Auto(*4) / Motorized				
	Zoom	Motorized						
Angle of View		Wide / Tele						
	Diagonal	43.6° / 1.5°						
	Horizontal	35.5° / 1.2°						
	Vertical	27.0° / 0.9°						
Iris	Input Voltage	DC 8V-16V						
	Current Consumption	Max. 50 mA						
	Response Speed	Approx. 3 sec.						
	Input Signal	Video Signal (VS or V)						
	Sensitivity Adjustment	0.5-1.0 Vp-p						
	Metering Method	Average - Peak (*2)						
Zoom	Input Voltage	DC 6V-12V		DC 6V-16V		DC ±6V - ±8V		
	Current Consumption	Max. 40mA (Motor)		Max. 10 mA (Circuit)				
	Motorization Speed	Approx. 6.5 sec. (6V)		Approx. 2-7 sec. (Variable)(*2)				
Manual Focus	Input Voltage	DC 6V-12V		DC 6V-16V		DC ±6V - ±8V		
	Current Consumption	Max. 40 mA (Motor)		Max. 10 mA (Circuit)				
	Motorization Speed	Approx. 10 sec. (6V)		Approx. 2-7 sec. (Variable)(*2)				
Auto Focus	Input Voltage	-		DC8V-16V				
	Current Consumption	-		Max.50mA (Standby) / Max.150mA (Zoom or Focus on)				
Preset Function (*1)		-	2 Potentio		2 Potentio		2 Potentio	
Applicable Wavelength		430 nm - 680 nm						
Back Focal Length		37.87 mm (in air)						
Flange Back Length		17.526 mm						
Temperature Range		-10℃ ー +50℃						
Filter Screw Size		M82.0 mm P=0.75						
Dimension (H x W x D)		92.0 x 105.0 x 210.0 mm						
Weight		1830g	1850g	2200g	2250g	2200g	2250g	

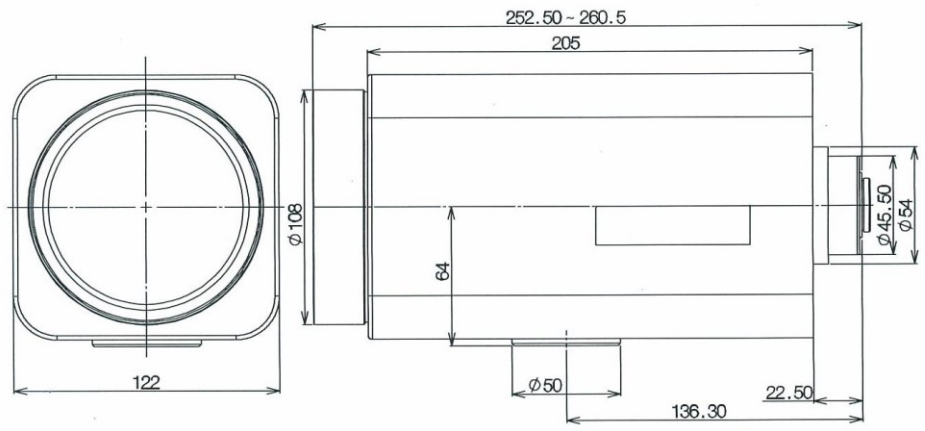
*Specifications are subject to change without notice

*1- 2 potentio - Preset on Zoom / Focus

*2- Adjustable with volume

x33 Zoom Lens

Y33Z10 (10-330mm) Series



Lens Type		3 Mortors		Auto Iris		Auto Focus (Standard)		Auto Focus (Interface)		
Model No.		Y33Z10M	Y33Z10MP	Y33Z10A	Y33Z10AP	Y33Z10AF	Y33Z10AFP	Y33Z10AF-I	Y33Z10AFP-I	
Format Size		1/2"								
Mount		C / CS (with CS adapter)								
Focal Length		10.0 - 330.0 mm								
Max. Aperture Ratio		1 : 1.5								
Iris Range		F1.5 - 560								
Min. Object Distance		2.9 m								
Operation	Iris	Motorized		Auto (Video Drive)						
	Focus	Motorized								
	Zoom	Motorized								
Angle of View		Wide / Tele								
	Diagonal	43.3˚ / 1.4˚								
	Horizontal	35.0˚ / 1.1˚								
	Vertical	26.5˚ / 0.9˚								
Iris	Input Voltage	DC 8V-16V								
	Current Consumption	Max. 40 mA (Motor)								
	Response Speed	Approx. 4 sec.								
	Input Signal	Video Signal (VS or V)								
	Accuracy	±15% at Image Signal								
	Sensitivity Adjustment	0.5-1.0 Vp-p								
	Metering Method	Average - Peak (*2)								
Zoom	Input Voltage	DC 8V								
	Current Consumption	Max. 80 mA (Motor)								
	Motorization Speed	Approx. 5 sec.								
Manual Focus	Input Voltage	DC 8V								
	Current Consumption	Max. 70 mA (Motor)								
	Motorization Speed	Approx. 10 sec.								
Auto Focus	Input Voltage	-								
	Current Consumption	-								
Preset Function (*1)		-	2Potentio	-	2Potentio					
Applicable Wavelength		430 nm - 680 nm								
Back Focal Length		14.2 mm (in air)								
Flange Back Length		17.526 mm								
Temperature Range		-10℃～+50℃								
Filter Screw Size		M105.0 mm P=1.00								
Dimension (H x W x D)		125.0 x 122.0 x 260.5 mm								
Weight		3000g	3000g	3000g	3000g					

Currently in Developpment

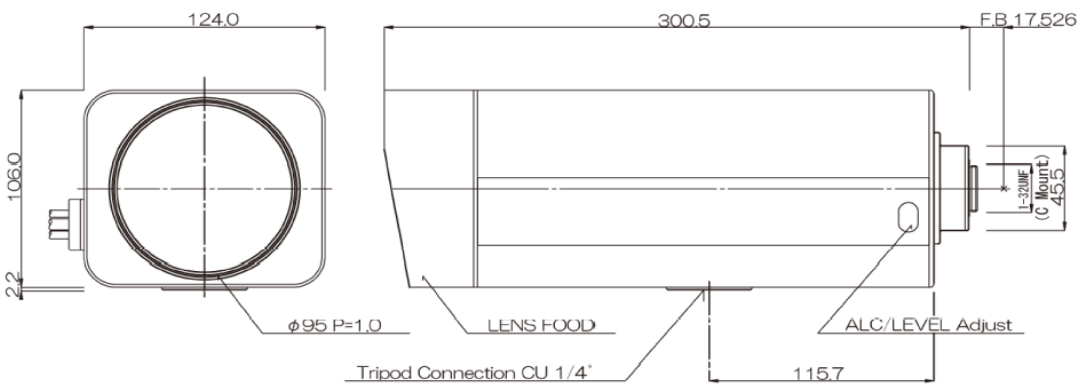
*Specifications are subject to change without notice

*1- 2 potentio - Preset on Zoom / Focus

*2- Adjustable with volume

x50 Zoom Lens

Y50Z10 (10-500mm) Series



Lens Type		**3 Motor**	**Auto Iris**	**Auto Focus** (Standard)	**Auto Focus** (Interface)
Model No.		**Y50Z10MP**	**Y50Z10AP**	**Y30Z10AFP**	**Y30Z10AFP-I**
Format Size		1/2"			
Mount		C / CS (with CS adapter)			
Focal Length		10.0 - 500.0 mm			
Max. Aperture Ratio		1 : 4.0			
Iris Range		F4.0 - 360			
Min. Object Distance		4.0 m			
Operation	Iris	Motorized	Auto (Video Drive)		
	Focus	Motorized		Auto Focus / Motorized	
	Zoom	Motorized			
Angle of View		Wide / Tele			
	Diagonal	43.6˚ / 0.9˚			
	Horizontal	35.5˚ / 0.7˚			
	Vertical	27.0˚ / 0.6˚			
Iris	Input Voltage	DC 8V-16V	DC 8V-16V		
	Current Consumption	Max. 40 mA (Motor)	Max. 50 mA (Motor)		
	Response Speed	Approx. 3 sec.	Approx. 3 sec.		
	Input Signal	-	Video Signal (VS or V)		
	Accuracy	-	±15% at Image Signal		
	Sensitivity Adjustment	-	0.5-1.0 Vp-p		
	Metering Method	-	Average - Peak (*2)		
Zoom	Input Voltage	DC 6V-12V		DC 6V-12V	DC ±6V - ±8V
	Current Consumption	Max. 50 mA (Motor)		Max. 10 mA (Circuit)	
	Motorization Speed	Approx. 6.5 sec. (6V)		Variable	
Manual Focus	Input Voltage	DC 6V-12V		DC 6V-12V	DC ±6V - ±8V
	Current Consumption	Max. 50 mA (Motor)		Max. 10 mA (Circuit)	
	Motorization Speed	Approx. 13 sec. (6V)		Variable	
Auto Focus	Input Voltage	-	-	DC8V-16V	
	Current Consumption	-	-	Max.50mA (Standby) / Max.250mA (Zoom or Focus on)	
Preset Function (*1)		2 Potentio			
Applicable Wavelength		430 nm - 700 nm			
Back Focal Length		62.67 mm (in air)			
Flange Back Length		17.526 mm			
Temperature Range		-10℃ ~ +50℃			
Filter Screw Size		M95.0 mm P=1.0			
Dimension (H x W x D)		106.0 x 124.0 x 300.5 mm			
Weight		3200g	3200g	3700g	3700g

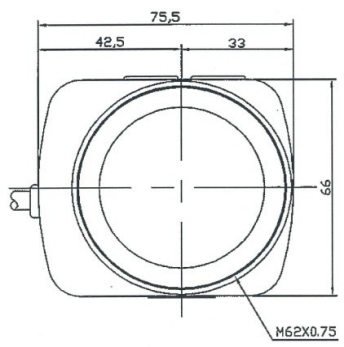
*Specifications are subject to change without notice

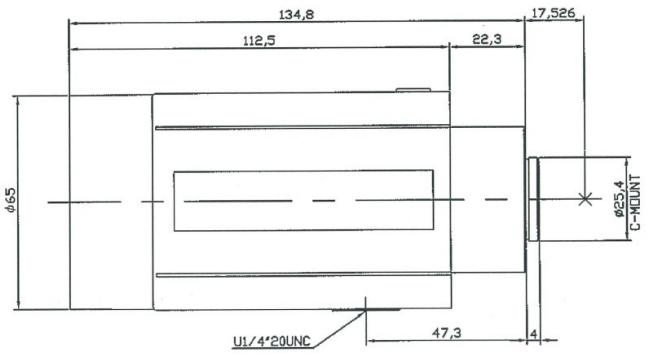
*1- 2 potentio - Preset on Zoom / Focus

*2- Adjustable with volume

x10 Infrared Corrected Zoom Lens (Day & Night)

Y10Z85R (8.5-85mm)Series - Infrared Corrected Zoom Lens





Lens Type		3 Motors			Auto Iris		Auto Focus (Standard)		Auto Focus (Interface)	
Model No.		Y10Z85RM	Y10Z85RMP	Y10Z85RMIP	Y10Z85RA	Y10Z85RAP	Y10Z85RAF	Y10Z85RAFP	Y10Z85RAF-I	Y10Z85RAFP-I
Format Size		1/2"								
Mount		C / CS (with CS adapter)								
Focal Length		8.5 - 85.0 mm								
Max. Aperture Ratio		1 : 1.5								
Iris Range		F1.5 - 360								
Min. Object Distance		1.5 m								
Operation	Iris	Motorized			Auto (Video Drive) (*1)					
	Focus	Motorized					Auto(*4) / Motorized			
	Zoom	Motorized								
Angle of View		Wide / Tele								
	Diagonal	53.7° / 5.4°								
	Horizontal	41.5° / 4.3°								
	Vertical	31.3° / 3.3°								
Iris	Input Voltage	DC 8V-12V			DC 8.5V-16V		DC 8V-16V			
	Current Consumption	Max. 40 mA (Motor)			Max. 40 mA (Motor)					
	Response Speed	Approx. 3 sec.			Approx. 3 sec.					
	Input Signal	-			Video Signal (VS or V)					
	Accuracy	-			±15% at Image Signal					
	Sensitivity Adjustment	-			0.5-1.0 Vp-p (*2)					
	Metering Method	-			Average - Peak (*2)					
Zoom	Input Voltage	DC 8V-12V					DC 4V-16V		DC ±4V - ±8V	
	Current Consumption	Max. 80 mA (Motor)					Max. 10 mA (Circuit)			
	Motorization Speed	Approx. 4-7 sec. (Variable)(*2)					Approx. 2-7 sec. (Variable)(*2)			
Manual Focus	Input Voltage	DC 8V-12V					DC 4V-16V		DC ±4V - ±8V	
	Current Consumption	Max. 80 mA (Motor)					Max. 10 mA (Circuit)			
	Motorization Speed	Approx. 4-7 sec. (Variable)(*2)					Approx. 2-7 sec. (Variable)(*2)			
Auto Focus	Input Voltage	-					DC8V-16V			
	Current Consumption	-					Max.50mA (Standby) / Max.150mA (Zoom or Focus on)			
Preset Function *3		-	2 Potentio	3 Potentio	-	2 Potentio	-	2 Potentio	-	2 Potentio
Applicable Wavelength		430 nm - 950 nm								
Back Focal Length		14.65 mm (in air)								
Flange Back Length		17.526 mm								
Temperature Range		-10℃ ~ +40℃								
Filter Screw Size		M62.0 mm P=0.75								
Dimension (H x W x D)		66 x 75.5 x 134.8 mm								
Weight		685g	695g	700g	690g	700g	695g	705g	695g	705g

*Specifications are subject to change without notice

*1- Manual override (Manual / Auto Iris) available

*2- Adjustable with volume

*3- There are 2 types of preset:

2 potentio - Preset on Zoom / Focus

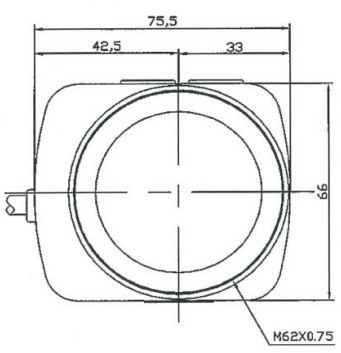
3 potentio - Preset on Zoom / Focus / Iris

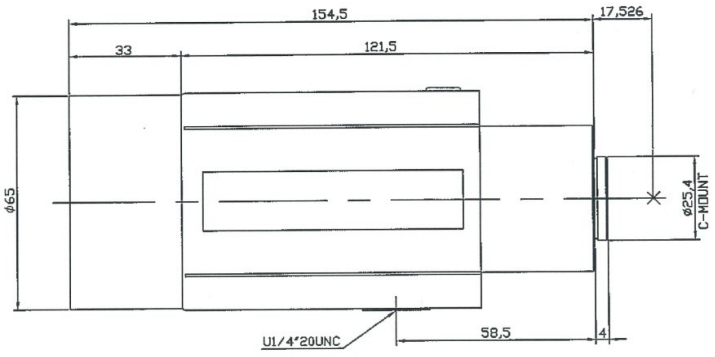
*4- When the camera with accumulator function is on, Auto Focus function does not work correctly. In that case, please turn off the Auto Focus to obtain correct operation.

x10 Infrared Corrected Zoom Lens (Day & Night)

x18 Infrared Corrected Zoom Lens (Day & Night)

Y18Z86R (8.6-154mm)Series - Infrared Corrected Zoom Lens





Lens Type		3 Motors			Auto Iris		Auto Focus (Standard)		Auto Focus (Interface)	
Model No.		Y18Z86RM	Y18Z86RMP	Y18Z86RMIP	Y18Z86RA	Y18Z86RAP	Y18Z86RAF	Y18Z86RAFP	Y18Z86RAF-I	Y18Z86RAFP-I
Format Size		1/2"								
Mount		C / CS (with CS adapter)								
Focal Length		8.6 - 154.0 mm								
Max. Aperture Ratio		1 : 2.5								
Iris Range		F2.5 - 360								
Min. Object Distance		2.0 m								
Operation	Iris	Motorized			Auto (Video Drive)(*1)					
	Focus	Motorized					Auto(*4) / Motorized			
	Zoom	Motorized								
Angle of View		Wide / Tele								
	Diagonal	48.9˚ / 3.0˚								
	Horizontal	40.6˚ / 2.4˚								
	Vertical	30.8˚ / 1.8˚								
Iris	Input Voltage	DC 8V-12V			DC 8.5V-16V		DC 8V-16V			
	Current Consumption	Max. 40 mA (Motor)			Max. 40 mA (Motor)					
	Response Speed	Approx. 3 sec.			Approx. 3 sec.					
	Input Signal	-			Video Signal (VS or V)					
	Accuracy	-			±15% at Image Signal					
	Sensitivity Adjustment	-			0.5-1.0 Vp-p (*2)					
	Metering Method	-			Average - Peak (*2)					
Zoom	Input Voltage	DC 8V-12V					DC 4V-16V		DC ±4V - ±8V	
	Current Consumption	Max. 80 mA (Motor)					Max. 10 mA (Circuit)			
	Motorization Speed	Approx. 4-7 sec. (Variable)(*2)					Approx. 2-7 sec. (Variable)(*2)			
Manual Focus	Input Voltage	DC 8V-12V					DC 4V-16V		DC ±4V - ±8V	
	Current Consumption	Max. 80 mA (Motor)					Max. 10 mA (Circuit)			
	Motorization Speed	Approx. 4-7 sec. (Variable)(*2)					Approx. 2-7 sec. (Variable)(*2)			
Auto Focus	Input Voltage	-					DC8V-16V			
	Current Consumption	-					Max.50mA (Standby) / Max.150mA (Zoom or Focus on)			
Preset Function (*3)		-	2 Potentio	3 Potentio	-	2 Potentio	-	2 Potentio	-	2 Potentio
Applicable Wavelength		430 nm - 950 nm								
Back Focal Length		14.2 mm (in air)								
Flange Back Length		17.526 mm								
Temperature Range		-10℃ ~ +40℃								
Filter Screw Size		M62.0 mm P=0.75								
Dimension (H x W x D)		66 x 75.5 x 154.5 mm								
Weight		760g	770g	775g	765g	775g	770g	780g	770g	780g

*Specifications are subject to change without notice

*1- Manual override (Manual / Auto Iris) available

*2- Adjustable with volume

*3- There are 2 types of preset:

2 potentio - Preset on Zoom / Focus

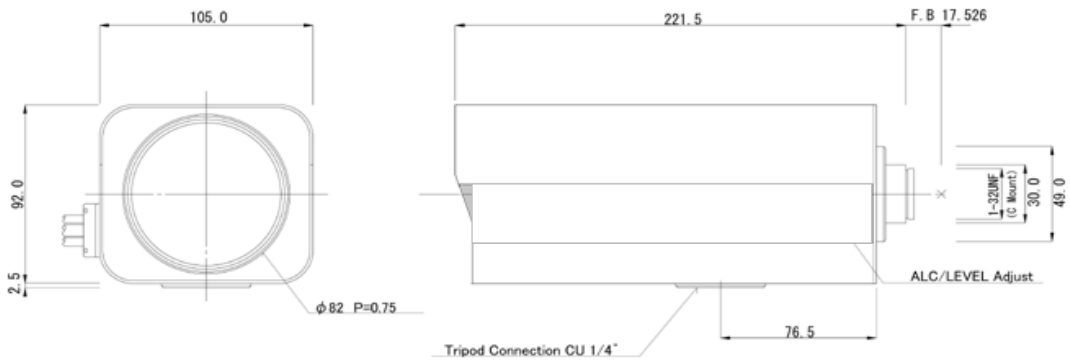
3 potentio - Preset on Zoom / Focus / Iris

*4- When the camera with accumulator function is on, Auto Focus function does not work correctly. In that case, please turn off the Auto Focus to obtain correct operation.

x18 Infrared Corrected Zoom Lens (Day & Night)

x30 Infrared Corrected Zoom Lens (Day & Night)

Y30Z10R (10-300mm) Series - Infrared Corrected Zoom Lens



Lens Type		Auto Iris		Auto Focus (Standard)		Auto Focus (Interface)		
Model No.		Y30Z10RA	Y30Z10RAP	Y30Z10RAF	Y30Z10RAFP	Y30Z10RAF-I	Y30Z10RAFP-I	
Format Size		1/2"						
Mount		C / CS (with CS adapter)						
Focal Length		10.0 - 300.0 mm						
Max. Aperture Ratio		1 : 2.8						
Iris Range		F2.8 - 360						
Min. Object Distance		3.0 m						
Operation	Iris	Auto (Video Drive)						
	Focus	Motorized		Auto(*4) / Motorized				
	Zoom	Motorized						
Angle of View		Wide / Tele						
	Diagonal	43.6° / 1.5°						
	Horizontal	35.5° / 1.2°						
	Vertical	27.0° / 0.9°						
Iris	Input Voltage	DC 8V-16V						
	Current Consumption	Max. 50 mA						
	Response Speed	Approx. 3 sec.						
	Input Signal	Video Signal (VS or V)						
	Sensitivity Adjustment	0.5-1.0 Vp-p						
	Metering Method	Average - Peak (*2)						
Zoom	Input Voltage	DC 6V-12V		DC 6V-16V		DC ±6V - ±8V		
	Current Consumption	Max. 40 mA (Motor)		Max. 10 mA (Circuit)				
	Motorization Speed	Approx. 6.5 sec. (6V)		Approx. 2-7 sec. (Variable)(*2)				
Manual Focus	Input Voltage	DC 6V-12V		DC 6V-16V		DC ±6V - ±8V		
	Current Consumption	Max. 40 mA (Motor)		Max. 10 mA (Circuit)				
	Motorization Speed	Approx. 10 sec. (6V)		Approx. 2-7 sec. (Variable)(*2)				
Auto Focus	Input Voltage	-		DC8V-16V				
	Current Consumption	-		Max.50mA (Standby) / Max.150mA (Zoom or Focus on)				
Preset Function (*1)		-	2 Potentio		2 Potentio		2 Potentio	
Applicable Wavelength		430 nm - 900 nm						
Back Focal Length		37.87 mm (in air)						
Flange Back Length		17.526 mm						
Temperature Range		-10℃ ~ +50℃						
Filter Screw Size		M82.0 mm P=0.75						
Dimension (H x W x D)		92.0 x 105.0 x 221.5 mm						
Weight		1930g	1950g	2200g	2250g	2200g	2250g	

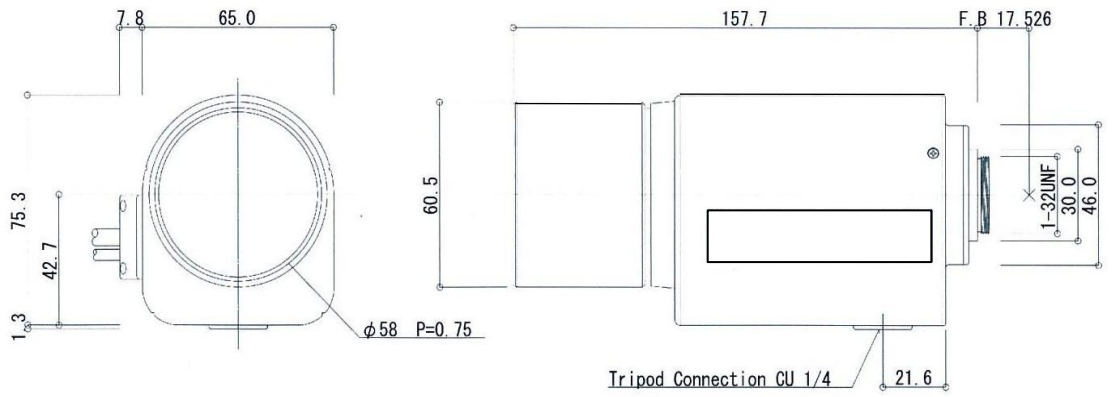
*Specifications are subject to change without notice

*1- 2 potentio - Preset on Zoom / Focus

*2- Adjustable with volume

x40 Infrared Corrected Zoom Lens (Day & Night)

Y40Z10R (10-400mm) Series - Infrared Corrected Zoom Lens



Lens Type		Auto Iris		Auto Focus (Standard)		Auto Focus (Interface)		
Model No.		Y40Z10RA	Y40Z10RAP	Y40Z10RAF	Y40Z10RAFP	Y40Z10RAF-I	Y40Z10RAFP-I	
Format Size		1/2"						
Mount		C / CS (with CS adapter)						
Focal Length		10.0 - 400.0 mm						
Max. Aperture Ratio		1 : 4.5						
Iris Range		F4.5 - 360						
Min. Object Distance		4.0 m						
Operation	Iris	Auto (Video, By Galvanometer)						
	Focus	Motorized		Auto(*3) / Motorized				
	Zoom	Motorized						
Angle of View		Wide / Tele						
	Diagonal	43.6° / 1.2°						
	Horizontal	35.5° / 0.9°						
	Vertical	27.0° / 0.7°						
Iris	Input Voltage	DC 8V-16V						
	Current Consumption	-						
	Response Speed	Approx. 3 sec.						
	Input Signal	Video Signal (VS or V)						
	Accuracy	-						
	Sensitivity Adjustment	0.5-1.0 Vp-p						
	Metering Method	Average - Peak (*2)						
Zoom	Input Voltage	DC 6V-12V		DC 6V-16V		DC ±6V - ±8V		
	Current Consumption	Max. 40 mA (Motor)		Max. 10 mA (Circuit)				
	Motorization Speed	Approx. 16 sec. (6V)		Approx. 16 sec.				
Manual Focus	Input Voltage	DC 6V-12V		DC 6V-16V		DC ±6V - ±8V		
	Current Consumption	Max. 40 mA (Motor)		Max. 10 mA (Circuit)				
	Motorization Speed	Approx. 10 sec. (6V)		Approx. 15 sec.				
Auto Focus	Input Voltage	-		DC8V-16V				
	Current Consumption	-		Max.50mA (Standby) / Max.250mA (Zoom or Focus on)				
Preset Function (*1)		-	2 Potentio		2 Potentio		2 Potentio	
Applicable Wavelength		430 nm - 900 nm						
Back Focal Length		30.58 mm (in air)						
Flange Back Length		17.526 mm						
Filter Screw Size		M58.0 mm P=0.75						
Dimension (H x W x D)		75.3 x 65.0 x 157.7 mm						
Weight		800g	830g	1000g	1030g	1000g	1030g	

*Specifications are subject to change without notice

*1- 2 potentio - Preset on Zoom / Focus

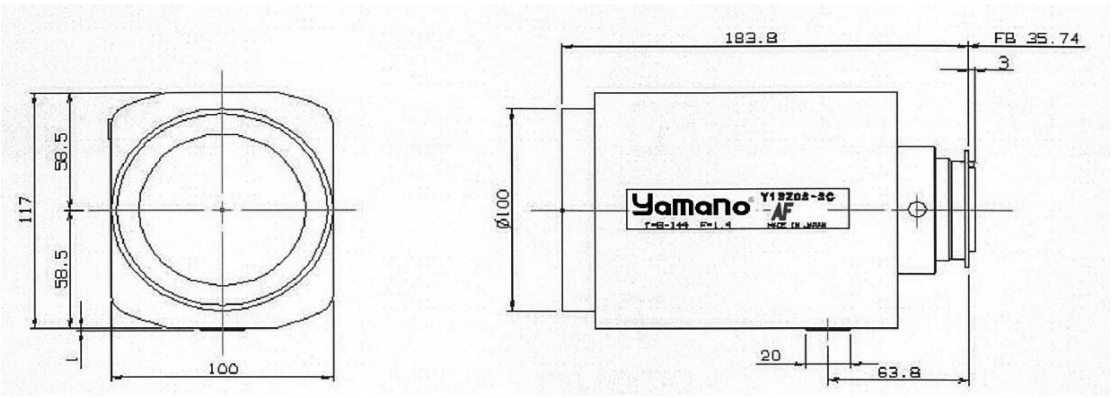
*2- Adjustable with volume

*3- Available when Auto Focus PCB Box is used.

x40 Infrared Corrected Zoom Lens (Day & Night)

x18 3CCD Zoom Lens

Y18Z08-3C (8.0-144.0mm) Series - Zoom Lens for 3CCD Camera



Lens Type		Auto Iris		Auto Focus (Standard)	Auto Focus (Interface)	
Model No.		Y18Z08-3CA	Y18Z08-3CAP	Y18Z08-3CAFP	Y18Z08-3CAFP-I	
Format Size		1/2"				
Mount		Bayonet (Select Panasonic type or Sony type)				
Focal Length		8.0 - 144.0 mm				
Max. Aperture Ratio		1 : 1.4				
Iris Range		F1.4 - 22				
Min. Object Distance		1.5 m				
Operation	Iris	Auto (DC Servo Control)				
	Focus	Motorized		Auto(*3) / Motorized		
	Zoom	Motorized				
Angle of View		Wide / Tele				
	Diagonal	53.1˚ / 3.2˚				
	Horizontal	43.0˚ / 2.5˚				
	Vertical	32.7˚ / 1.9˚				
Iris	Input Voltage	DC 11V - 13V				
	Control Voltage	6.2V (F2.8) / 3.4V (F16)				
	Response Speed	Approx. 3 sec. (Open end - Close end)				
Zoom	Input Voltage	DC 8V-12V		DC 4V-16V	DC ±4V - ±8V	
	Current Consumption	Max. 80 mA (Motor)		Max. 10 mA (Circuit)		
	Motorization Speed	Approx. 4-7 sec. (Variable)(*2)		Approx. 2-7 sec. (Variable)(*2)		
Manual Focus	Input Voltage	DC 8V-12V		DC 4V-16V	DC ±4V - ±8V	
	Current Consumption	Max. 80 mA (Motor)		Max. 10 mA (Motor)		
	Motorization Speed	Approx. 4-7 sec. (Variable)(*2)		Approx. 2-7 sec. (Variable)(*2)		
Auto Focus	Input Voltage	-		DC8V-16V		
	Current Consumption	-		Max.50mA (Standby) / Max.150mA (Zoom or Focus on)		
Preset Function (*1)		-	2 Potentio			
Applicable Wavelength		400 nm - 700 nm				
Back Focal Length		35.87 mm (in air)				
Flange Back Length		35.74 mm				
Temperature Range		-10℃ ~ +50℃				
Filter Screw Size		No Fiter Screw				
Dimension (H x W x D)		100.0 x 117.0 x 183.8 mm				
Weight		1500g	1500g	1500g	1500g	

*Specifications are subject to change without notice

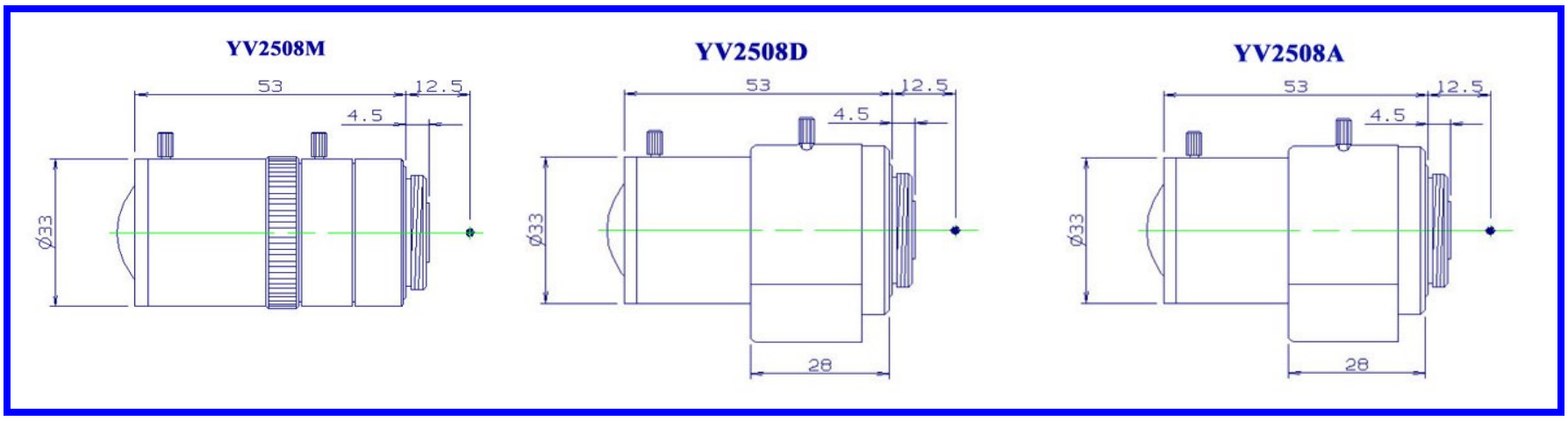
*1- 2 potentio - Preset on Zoom / Focus

*2- Adjustable with volume

*3- When the camera with accumulator function is on, Auto Focus function does not work correctly. In that case, please turn off the Auto Focus to obtain correct operation.

Vari Focal Lens

YV2508 (2.5-8.0mm) Series



Lens Type		Manual	Auto Iris (Direct)	Auto Iris (Video)	
Model No.		YV2508M	YV2508D	YV2508A	
Format Size		1/3"			
Mount		CS			
Focal Length		2.5 - 8.0 mm			
Iris Range		F1.4 - 22 Close	F1.4 - 125		
Min. Object Distance		0.15 m			
Operation	Iris	Manual	Auto Iris (Direct)	Auto Iris (Video)	
	Focus	Manual			
	Zoom	Manual			
Angle of View		Wide / Tele			
	Diagonal	129.0˚ / 44.0˚			
	Horizontal	105.0˚ / 35.3˚			
	Vertical	79.6˚ / 26.5˚			
Iris	Input Voltage	-	DC 8V - 16V		
	Response Speed	-	Approx. 3 sec.		
	Input Signal	-	-	Video Signal (VS or V)	
	Accuracy	-	-	±20% at Image Signal	
	Sensitivity Adjustment	-	-	0.5-1.0 Vp-p (*1)	
	Metering Method	-	-	Average - Peak (*1)	
Applicable Wavelength		430 nm - 680 nm			
Back Focal Length		8.51 - 16.86 mm (in air)			
Flange Back Length		12.5 mm			
Temperature Range		-10℃ - +50℃			
Dimension		38 x 53 mm	45 x 53 mm		
Weight		97g	100g	105g	

*Specifications are subject to change without notice

*1- Adjustable with volume

Wiring Diagram

Wiring Diagram for Auto Iris (VIDEO)	
RED	+Vcc
White	Video
BLACK	GND

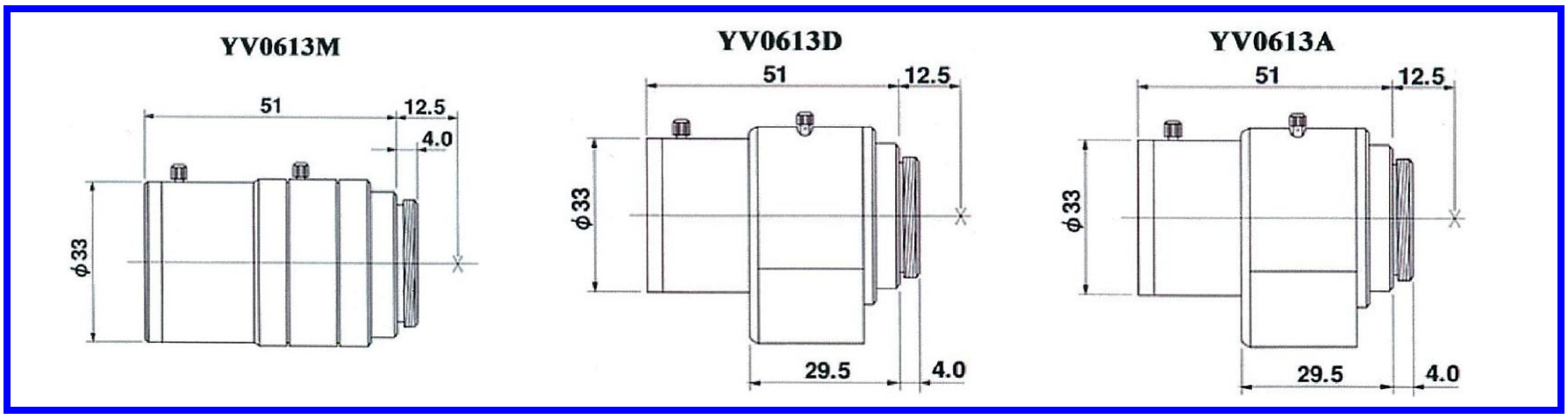
Wiring Diagram for Auto Iris (DC)		Resistance Value
WHITE	Driving Coil (+)	Drive Coil (200Ω)
GREEN	Driving Coil (-)	
RED	Damping Coil (+)	Damping Coil (700Ω)
BLACK	Damping Coil (-)	

YV2508D

YV2508A

Vari Focal Lens

YV0613 (6.0-13.0mm) Series



Lens Type		Manual	Auto Iris (Direct)	Auto Iris (Video)	
Model No.		YV0613M	YV0613D	YV0613A	
Format Size		1/3"			
Mount		CS			
Focal Length		6.0 - 13.0 mm			
Iris Range		F1.6 - 22 Close	F1.6 - 125		
Min. Object Distance		0.15 m			
Operation	Iris	Manual	Auto Iris (Direct)	Auto Iris (Video)	
	Focus	Manual			
	Zoom	Manual			
Angle of View		Wide / Tele			
	Diagonal	57.8˚ / 27.3˚			
	Horizontal	45.7˚ / 21.8˚			
	Vertical	33.9˚ / 16.4˚			
Iris	Input Voltage	-	DC 8V - 16V		
	Response Speed	-	Approx. 3 sec.		
	Input Signal	-	-	Video Signal (VS or V)	
	Accuracy	-	-	±20% at Image Signal	
	Sensitivity Adjustment	-	-	0.5-1.0 Vp-p (*1)	
	Metering Method	-	-	Average - Peak (*1)	
Applicable Wavelength		430 nm - 680 nm			
Back Focal Length		11.5 - 16.8 mm (in air)			
Flange Back Length		12.5 mm			
Temperature Range		-10℃ - +50℃			
Dimension		ϕ 33 x 51 mm	ϕ 33 x 51 mm		
Weight		86g	95g	98g	

*Specifications are subject to change without notice

*1- Adjustable with volume

Wiring Diagram

Wiring Diagram for Auto Iris (VIDEO)	
RED	+Vcc
White	Video
BLACK	GND

Wiring Diagram for Auto Iris (DC)		Resistance Value
WHITE	Driving Coil (+)	Drive Coil (200Ω)
GREEN	Driving Coil (-)	
RED	Damping Coil (+)	Damping Coil (700Ω)
BLACK	Damping Coil (-)	

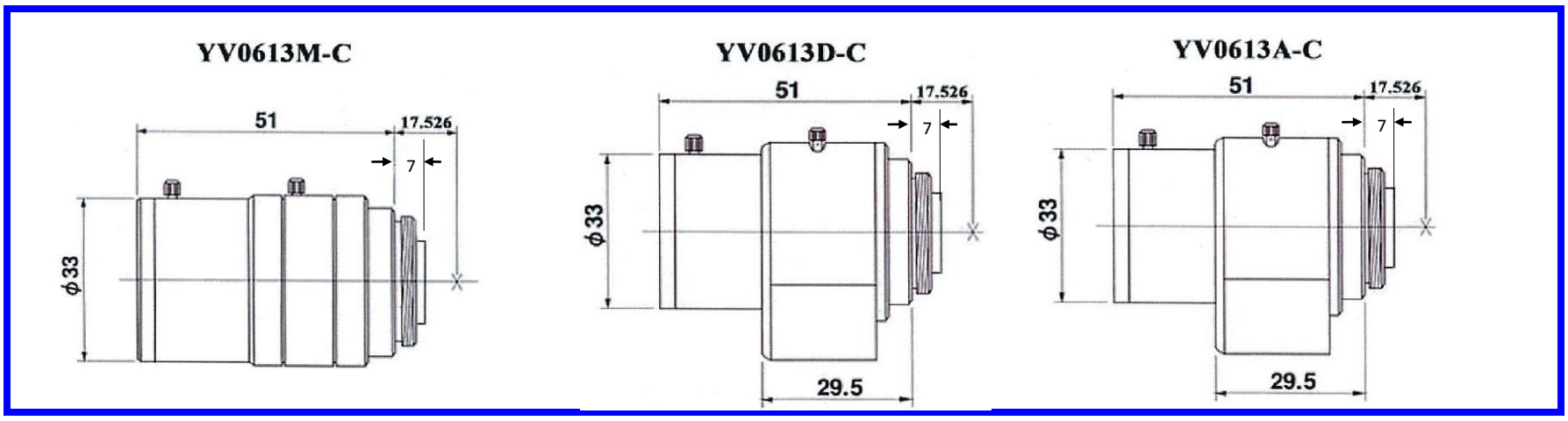
YV0613M

YV0613D

YV0613A

Vari Focal Lens

YV0613 (6.0-13.0mm) Series



Lens Type		Manual	Auto Iris (Direct)	Auto Iris (Video)	
Model No.		YV0613M-C	YV0613D-C	YV0613A-C	
Format Size		1/2"			
Mount		C			
Focal Length		6.0 - 13.0 mm			
Iris Range		F1.6 - 22 Close	F1.6 - 125		
Min. Object Distance		0.15 m			
Operation	Iris	Manual	Auto Iris (Direct)	Auto Iris (Video)	
	Focus	Manual			
	Zoom	Manual			
Angle of View		Wide / Tele			
	Diagonal	80.0˚ / 36.6˚			
	Horizontal	62.2˚ / 29.3˚			
	Vertical	45.7˚ / 21.9˚			
Iris	Input Voltage	-	DC 8V - 16V		
	Response Speed	-	Approx. 3 sec.		
	Input Signal	-	-	Video Signal (VS or V)	
	Accuracy	-	-	±20% at Image Signal	
	Sensitivity Adjustment	-	-	0.5-1.0 Vp-p (*1)	
	Metering Method	-	-	Average - Peak (*1)	
Applicable Wavelength		430 nm - 680 nm			
Back Focal Length		11.5 - 16.8 mm (in air)			
Flange Back Length		17.526 mm			
Temperature Range		-10℃ - +50℃			
Dimension		ϕ 33 x 51 mm	ϕ 33 x 51 mm		
Weight		86g	95g	98g	

*Specifications are subject to change without notice

*1- Adjustable with volume

Wiring Diagram

Wiring Diagram for Auto Iris (VIDEO)	
RED	+Vcc
White	Video
BLACK	GND

Wiring Diagram for Auto Iris (DC)		Resistance Value
WHITE	Driving Coil (+)	Drive Coil (200Ω)
GREEN	Driving Coil (-)	
RED	Damping Coil (+)	Damping Coil (700Ω)
BLACK	Damping Coil (-)	

YV0613M-C

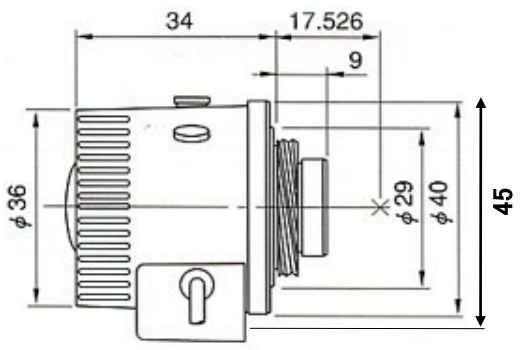
YV0613D-C

YV0613A-C

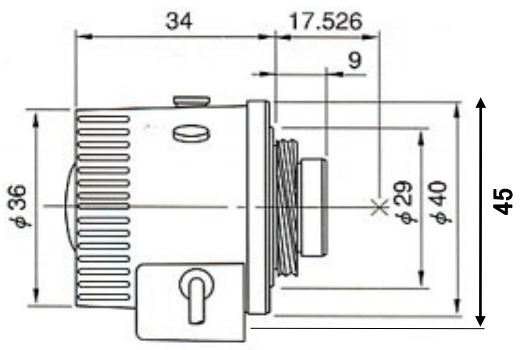
Fixed Focal Lens

Y1235 (3.5mm) Series

Y1235GSNA



Y1235GS



Lens Type		Manual	Auto Iris (Direct)		Auto Iris (Video)		
Model No.		-	Y1235GNA	Y1235GSNA	Y1235G	Y1235GS	
Format Size		-	1/2"				
Mount		-	C				
Focal Length		-	3.5 mm				
Iris Range		-	F1.4 - 64	F1.4 - 360	F1.4 - 64	F1.4 - 360	
Min. Object Distance		-	0.2 m				
Operation	Iris	-	Auto Iris (Direct)		Auto Iris (Video)		
	Focus	-	Manual				
	Zoom	-	Manual				
Angle of View		-	1/2" / 1/3"				
	Diagonal	-	112.2˚ / 84.2˚				
	Horizontal	-	95.5˚ / 69.0˚				
	Vertical	-	74.5˚ / 52.6˚				
Iris	Input Voltage	-	DC 8V - 16V				
	Response Speed	-	Approx. 3 sec.				
	Input Signal	-	-		Video Signal (VS or V)		
	Accuracy	-	-		±20% at Image Signal		
	Sensitivity Adjustment	-	-		0.5-1.0 Vp-p (*1)		
	Metering Method	-	-		Average - Peak (*1)		
Applicable Wavelength		-	430 nm - 680 nm				
Back Focal Length		-	8.87 mm (in air)				
Flange Back Length		-	17.526 mm				
Temperature Range		-	-10℃ - +50℃				
Dimension		-	45 x 34 mm				
Weight		-	80g		85g		

*Specifications are subject to change without notice

*1- Adjustable with volume

Wiring Diagram

Wiring Diagram for Auto Iris (VIDEO)	
RED	+Vcc
White	Video
BLACK	GND

Wiring Diagram for Auto Iris (DC)		Resistance Value
WHITE	Driving Coil (+)	Drive Coil (200Ω)
GREEN	Driving Coil (-)	
RED	Damping Coil (+)	Damping Coil (700Ω)
BLACK	Damping Coil (-)	

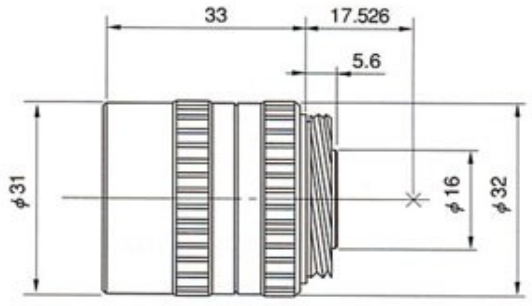
Y1235GSNA

Y1235GS (Photo : Y1235GS-CS)

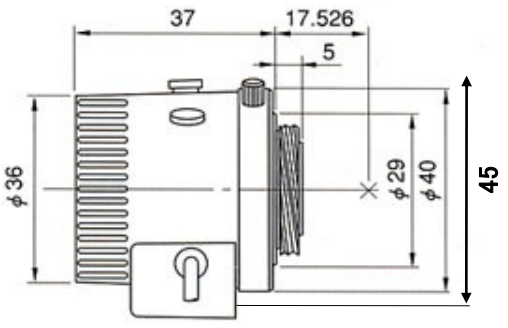
Fixed Focal Lens

Y1216 (16.0mm) Series

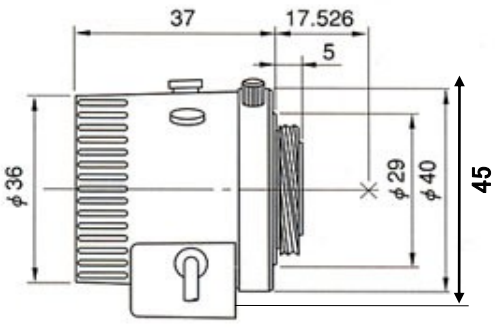
Y1216M



Y1216GSNA



Y1216GS



Lens Type		Manual	Auto Iris (Direct)		Auto Iris (Video)		
Model No.		Y1216M	Y1216GNA	Y1216GSNA	Y1216G	Y1216GS	
Format Size		1/2"					
Mount		C					
Focal Length		16.0 mm					
Iris Range		F1.4 - 22 C	F1.4 - 64	F1.4 - 360	F1.4 - 64	F1.4 - 360	
Min. Object Distance		0.50 m					
Operation	Iris	Manual	Auto Iris (Direct)		Auto Iris (Video)		
	Focus	Manual					
	Zoom	Manual					
Angle of View		1/2" / 1/3"					
	Diagonal	28.8˚ / 21.5˚					
	Horizontal	23.0˚ / 17.2˚					
	Vertical	17.2˚ / 12.9˚					
Iris	Input Voltage	-	DC 8V - 16V				
	Response Speed	-	Approx. 3 sec.				
	Input Signal	-	-		Video Signal (VS or V)		
	Accuracy	-	-		±20% at Image Signal		
	Sensitivity Adjustment	-	-		0.5-1.0 Vp-p (*1)		
	Metering Method	-	-		Average - Peak (*1)		
Applicable Wavelength		430 nm - 680 nm					
Back Focal Length		12.24 mm (in air)					
Flange Back Length		17.526 mm					
Temperature Range		-10℃ - +50℃					
Dimension		32 x 33 mm	φ 36 x 45 x 37 mm				
Weight		70g	80g		85g		

*Specifications are subject to change without notice

*1- Adjustable with volume

Wiring Diagram

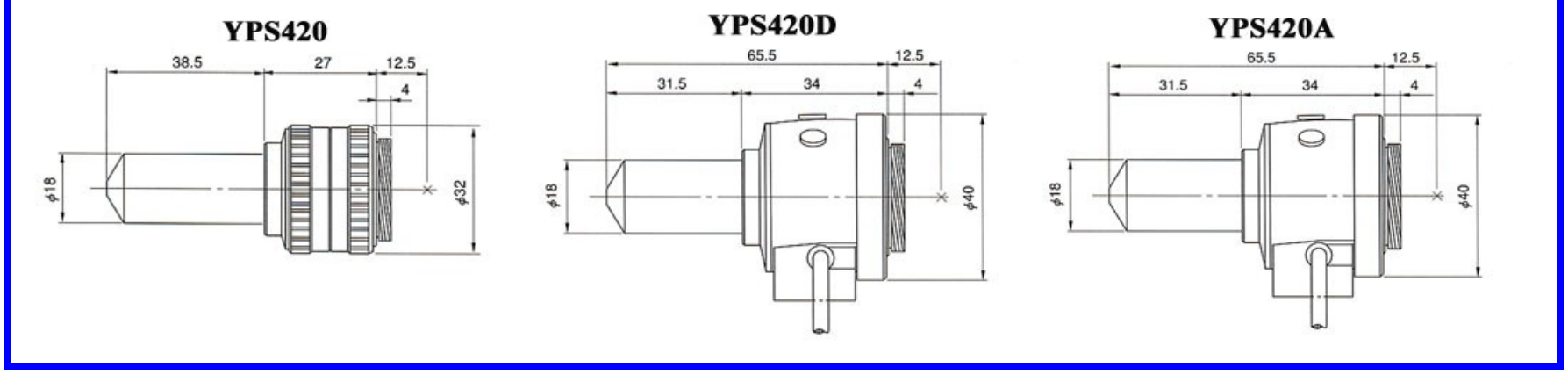
Wiring Diagram for Auto Iris (VIDEO)	
RED	+Vcc
White	Video
BLACK	GND

Wiring Diagram for Auto Iris (DC)		Resistance Value
WHITE	Driving Coil (+)	Drive Coil (200Ω)
GREEN	Driving Coil (-)	
RED	Damping Coil (+)	Damping Coil (700Ω)
BLACK	Damping Coil (-)	

Y1216GS **Y1216GSNA**

Pin Hole Lens

Pin Hole Lens (4.0mm) Series



Lens Type		Manual	Auto Iris (DC)	Auto Iris (Video)	
Model No.		YPS420	YPS420D	YPS420A	
Format Size		1/3"			
Mount		CS			
Focal Length		4.0 mm			
Iris Range		F2.0 - 22 Close	F2.0 - 64		
Min. Object Distance		0.3 m			
Operation	Iris	Manual	Auto Iris (Direct)	Auto Iris (Video)	
	Focus	Manual			
	Zoom	-			
Angle of View	Diagonal	75.9˚			
	Horizontal	63.1˚			
	Vertical	49.1˚			
Iris	Input Voltage	-	-	DC 8V～16V	
	Response Speed	-	-	Approx. 3 sec.	
	Input Signal	-	-	Video Signal (VS or V)	
	Accuracy	-	-	±20% at Image Signal	
	Sensitivity Adjustment	-	-	0.5-1.0 Vp-p (*1)	
	Metering Method	-	-	Average - Peak (*1)	
Applicable Wavelength		430 nm - 680 nm			
Back Focal Length		9.19 mm (in air)			
Flange Back Length		12.5 mm			
Temperature Range		-10℃ - +50℃			
Dimension		32 x 65.5 mm	43 x 65.5 mm		
Weight		150g	170g	180g	

*Specifications are subject to change without notice

*1- Adjustable with volume

Wiring Diagram

Wiring Diagram for Auto Iris (VIDEO)	
RED	+Vcc
White	Video
BLACK	GND

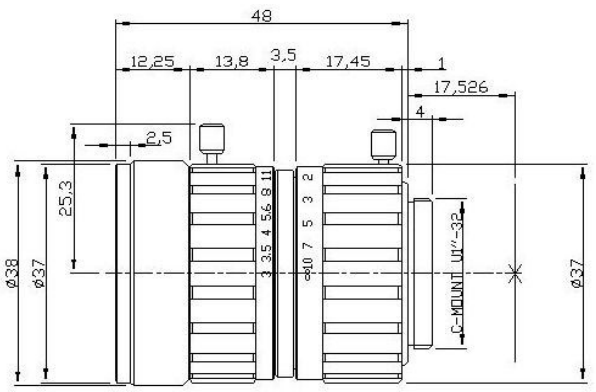
Wiring Diagram for Auto Iris (DC)		Resistance Value
WHITE	Driving Coil (+)	Drive Coil (200Ω)
GREEN	Driving Coil (-)	
RED	Damping Coil (+)	Damping Coil (700Ω)
BLACK	Damping Coil (-)	

YPS620A (Discontinued Product)

YPS620L (Discontinued Product) **YPS420** **YPS420A**

10 Mega Pixel Lens

10 Mega Pixel Lens (16.0mm)



Model No.		Y2316M10MPX				
Format Size		2/3"				
Mount		C				
Focal Length		16 mm				
Max. Aperture Ratio		1 : 2.8				
Iris Range		F2.8 - F22				
Min. Object Distance		0.35 m - ∞ (Best Condition : 0.5 - 1.5 m)				
Operation	Iris	Manual with Lock Screw				
	Focus	Manual with Lock Screw				
Angle of View	Diagonal	37.88˚				
	Horizontal	30.71°				
	Vertical	23.27°				
Applicable Wavelength		435nm - 656nm				
Resolution (at Image side)		2.4μm (*1) (For the camera of which pixel size is 2.4μm at minimum) (Whole Area)				
Resolution (at Object side)	WD=1.5m	0.23mm (Field of View :825mm×618mm)				
	WD=0.5m	0.077mm (Field of View :275mm×206mm)				
Optical Distortion		≦ 0.1%				
Others	WD	1.5m	0.7m	0.5m	0.35m	
	NA	0.0019	0.004	0.0055	0.0078	
	Magnification	0.0106	0.0225	0.0313	0.0443	
Flange Back Length		17.526 mm				
Filter Screw Size		ϕ 34.0mm P=0.5mm				
Dimension		φ 36.0 x 48.0 mm				
Weight		104g				
Temperature Range		-10℃ - +50℃				

*Specifications are subject to change without notice

Notes:

- For 2/3" 5 - 10 Mega Pixel CCD Camera (For the camera of which pixel size is 2.4μm at minimum)
- Use with camera of which total thickness of the color filter and the image sensor protecting glass (BK7) is 1.7±0.5mm.

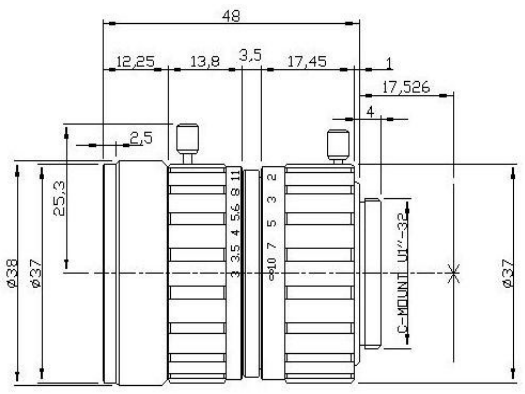
*1-As a special order, 2.0μm is available.

The World's First 10 Mega Pixel Lens for FA Machine Vision !

- **For 2/3" CCD Camera**
- **For 5 Mega ～10 Mega Pixel Camera**
- **Resolution ＝2.4μm covered entire wavelength of visible light**
- **Easy to Use Design with Locking screw**
- **Improvement of detection accuracy by low distortion less than 0.1% at entire area 0.35m ～ ∞**
- **Compact & Lightweight（ Approx. 100g ）**

5 Mega Pixel Lens

5 Mega Pixel Lens (16.0mm) Series



Model No.		Y2316M05MPX				
Format Size		2/3"				
Mount		C				
Focal Length		16 mm				
Max. Aperture Ratio		1 : 2.8				
Iris Range		F2.8 - F22				
Min. Object Distance		0.35 m - ∞ (Best Condition : 0.5 - 1.5 m)				
Operation	Iris	Manual with Lock Screw				
	Focus	Manual with Lock Screw				
Angle of View	Diagonal	37.88˚				
	Horizontal	30.71°				
	Vertical	23.27°				
Applicable Wavelength		435nm - 656nm				
Resolution (at Image side)		3.4μm (For the camera of which pixel size is 3.4μm at minimum) (Whole Area)				
Resolution (at Object side)	WD=1.5m	0.320mm (Field of View :825mm×618mm)				
	WD=0.5m	0.107mm (Field of View :275mm×206mm)				
Optical Distortion		≦ 0.1%				
Others	WD	1.5m	0.7m	0.5m	0.35m	
	NA	0.0019	0.004	0.0055	0.0078	
	Magnification	0.0106	0.0225	0.0313	0.0443	
Flange Back Length		17.526 mm				
Filter Screw Size		ϕ 34.0mm P=0.5mm				
Dimension		φ 36.0 x 48.0 mm				
Weight		104g				
Temperature Range		-10℃ - +50℃				

*Specifications are subject to change without notice

Notes:

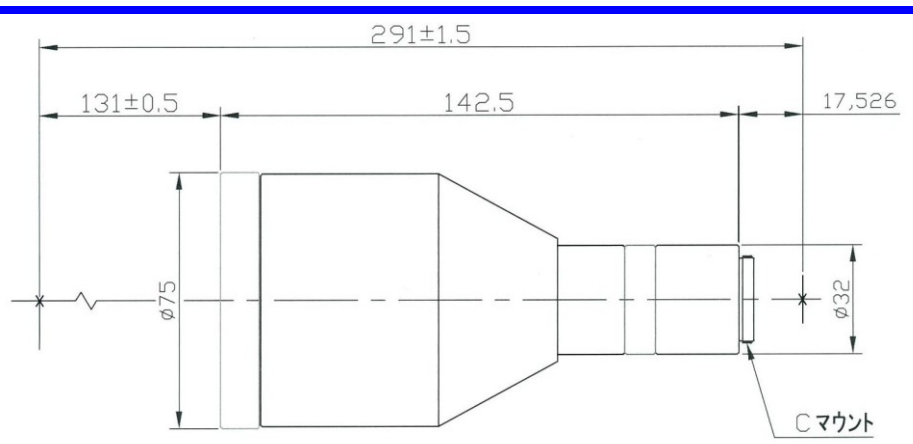
- For 2/3" 5 Mega Pixel CCD (For the camera of which pixel size is 3.4μm at minimum)
- Use with camera of which total thickness of the color filter and the image sensor protecting glass (BK7) is 1.7±0.5mm.

5 Mega Pixel Lens for FA Machine Vision

- **For 2/3" CCD Camera**
- **For 5 Mega Pixel Camera**
- **Resolution ＝3.4μm covered entire wavelength of visible light**
- **Easy to Use Design with Locking screw**
- **Improvement of detection accuracy by low distortion less than 0.1% at entire area 0.35m ～ ∞**
- **Compact & Lightweight（ Approx. 100g ）**

5 Mega Telecentric Lens

5 Mega Telecentric Lens



Model No.	YSI-1
Format Size	2/3"
Mount	C
Magnification	0.19±2 %
NA	0.022
Iris	Available (NA Flexible)
Resolution (at Object side)	17 μm
Resolution (at Image side)	3.3 μm （150 lp/mm）（Center ～ Periphery ）
Working Distance	131.0±0.5 mm
Optical Distortion	≦ 0.02 %
Image Circle	φ 11.5
Telecentric Error	≦ 0.14°
Depth of Field	±0.7 mm
Applicable Wavelength	White color LED Light Source
Peripheral Brightness	93%
Exit Pupil	42.2mm (front from Focal plane)
Field of View	46.32(H) x 34.7(V) mm
Lens Body Length	142.5 mm
Total Length of Lens	291.0±1.5 mm

*Specifications are subject to change without notice

Specialist in Custom Development,

Yamano® Presents

High Performance & High Quality Telecentric Lens

Model # YSI-1

***2/3", 5 Mega pixels CCD camera**

***Magnification : 0.19±2 %**

***NA : 0.022**

***Low Distortion : ≦0.02%（Optical）**

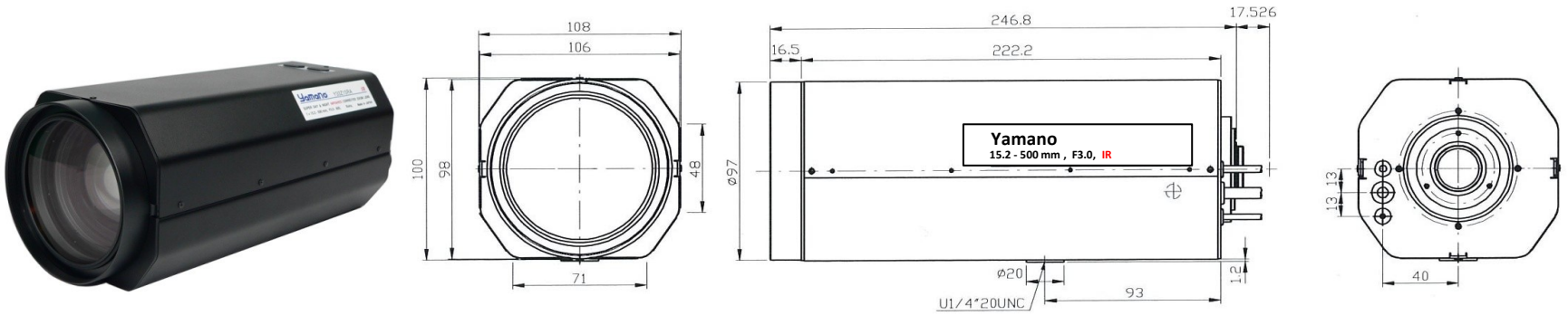
***Resolution (Image Side) :150 lp/mm(Whole Area)**

***Mount :C Mount**

x33 Infrared Corrected Zoom Lens (Day & Night)

Y33Z15R (15.2-500.0mm)Series - Infrared Corrected Zoom Lens

*** visible cut filter on/off function in option**



Drawing: Y33Z15RAF Model

Lens Type		3 Motors			Auto Iris		Auto Focus (Standard)		Auto Focus (Interface)	
Model No.		Y33Z15RM	Y33Z15RMP	Y33Z15RMIP	Y33Z15RA	Y33Z15RAP	Y33Z15RAF	Y33Z15RAFP	Y33Z15RAF-I	Y33Z15RAFP-I
Format Size		1/2"								
Mount		C / CS (with CS adapter)								
Focal Length		15.2 - 500.0 mm								
Max. Aperture Ratio		1 : 3.0								
Iris Range		F3.0 - 800								
Min. Object Distance		4.0 m								
Operation	Iris	Motorized			Auto (Video Drive) (*1)					
	Focus	Motorized					Auto(*4) / Motorized			
	Zoom	Motorized								
Angle of View		Wide / Tele								
	Diagonal	28.86° / 0.92°								
	Horizontal	23.42° / 0.74°								
	Vertical	17.74° / 0.55°								
Iris	Input Voltage	DC 8V-12V			DC 8.5V-16V		DC 8V-16V			
	Current Consumption	Max. 40 mA (Motor)			Max. 40 mA (Motor)					
	Response Speed	Approx. 10 sec.			Approx. 10 sec.					
	Input Signal	-			Video Signal (VS or V)					
	Accuracy	-			±15% at Image Signal					
	Sensitivity Adjustment	-			0.5-1.0 Vp-p (*2)					
	Metering Method	-			Average - Peak (*2)					
Zoom	Input Voltage	DC 8V-12V					DC 4V-16V		DC ±4V - ±8V	
	Current Consumption	Max. 80 mA (Motor)					Max. 10 mA (Circuit)			
	Motorization Speed	Approx. 5 -7 sec. (Variable)(*2)					Approx. 5-7 sec. (Variable)(*2)			
Manual Focus	Input Voltage	DC 8V-12V					DC 4V-16V		DC ±4V - ±8V	
	Current Consumption	Max. 80 mA (Motor)					Max. 10 mA (Circuit)			
	Motorization Speed	Approx. 12 sec. (Variable)(*2)					Approx. 12 sec. (Variable)(*2)			
Auto Focus	Input Voltage	-					DC8V-16V			
	Current Consumption	-					Max.50mA (Standby) / Max.200mA (Zoom or Focus on)			
Preset Function (*3)		-	2 Potentio	3 Potentio	-	2 Potentio	-	2 Potentio	-	2 Potentio
Applicable Wavelength		430 nm - 950 nm								
Back Focal Length		41.48 mm (in air)								
Flange Back Length		17.526 mm								
Filter Screw Size		M95.0 mm P=1.0								
Dimension (V x H x D)		108.0 x 100.0 x 246.8 mm								
Weight(Approximately)		2.7kg	2.7kg	2.7kg	2.7kg	2.7kg	2.7kg	2.7kg	2.7kg	2.7kg

*Specifications are subject to change without notice

*1- Manual override (Manual / Auto Iris) available

*2- Adjustable with volume

*3- There are 2 types of preset:

2 potentio - Preset on Zoom / Focus

3 potentio - Preset on Zoom / Focus / Iris

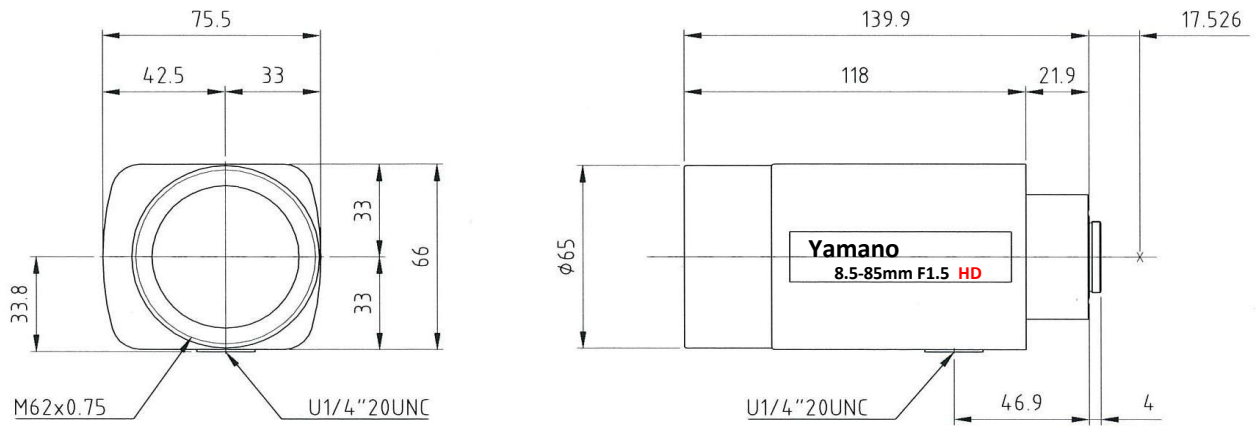
*4- When the camera with accumulator function is on, Auto Focus function does not work correctly. In that case, please turn off the Auto Focus to obtain correct operation.

x33 Infrared Corrected Zoom Lens (Day & Night)

High Definition Zoom Lens

Y10Z85HD (8.5-85.0mm)Series - High Definition Zoom Lens（2 Mega）

No Picture



Lens Type		3 Motors			Auto Iris		Auto Focus（Standard）		Auto Focus（Interface）	
Model No.		Y10Z85HDM	Y10Z85HDMP	Y10Z85HDMIP	Y10Z85HDA	Y10Z85HDAP	Y10Z85HDAF	Y10Z85HDAFP	Y10Z85HDAF-I	Y10Z85HDAFP-I
Format Size		1/2"								
Mount		C / CS (with CS adapter)								
Focal Length		8.5 - 85.0 mm								
Max. Aperture Ratio		1 : 1.5								
Iris Range		F1.5 - 360								
Min. Object Distance		2.0 m								
Operation	Iris	Motorized			Auto（Video Drive）(*1)					
	Focus	Motorized					Auto(*4) / Motorized			
	Zoom	Motorized								
Angle of View		Wide / Tele								
	Diagonal	53.7˚ / 5.4˚								
	Horizontal	41.5˚ / 4.3˚								
	Vertical	31.3˚ / 3.3˚								
Iris	Input Voltage	DC 8V-12V			DC 8.5V-16V		DC 8V-16V			
	Current Consumption	Max. 40 mA (Motor)			Max. 40 mA (Motor)					
	Response Speed	Approx. 3 sec.			Approx. 3 sec.					
	Input Signal	-			Video Signal (VS or V)					
	Accuracy	-			±15% at Image Signal					
	Sensitivity Adjustment	-			0.5-1.0 Vp-p (*2)					
	Metering Method	-			Average - Peak (*2)					
Zoom	Input Voltage	DC 8V-12V					DC 4V-16V		DC ±4V - ±8V	
	Current Consumption	Max. 80 mA（Motor）					Max. 10 mA (Circuit)			
	Motorization Speed	Approx. 4-7 sec. (Variable)(*2)					Approx. 2-7 sec. (Variable)(*2)			
Manual Focus	Input Voltage	DC 8V-12V					DC 4V-16V		DC ±4V - ±8V	
	Current Consumption	Max. 80 mA（Motor）					Max. 10 mA (Circuit)			
	Motorization Speed	Approx. 4-7 sec. (Variable)(*2)					Approx. 2-7 sec. (Variable)(*2)			
Auto Focus	Input Voltage	-					DC8V-16V			
	Current Consumption	-					Max.50mA (Standby) / Max.150mA (Zoom or Focus on)			
Preset Function (*3)		-	2 Potentio	3 Potentio	-	2 Potentio	-	2 Potentio	-	2 Potentio
Applicable Wavelength		420 nm - 680 nm								
Back Focal Length		14.10 mm (in air)								
Flange Back Length		17.526 mm								
Temperature Range		-10℃ ~ +50℃								
Filter Screw Size		M62.0 mm P=0.75								
Dimension (V x H x D)		66 x 75.5 x 139.9 mm								
Weight		735g	715g	750g	740g	750g	745g	755g	745g	755g

*Specifications are subject to change without notice

*1- Manual override (Manual / Auto Iris) available

*2- Adjustable with volume

*3- There are 2 types of preset:

2 potentio - Preset on Zoom / Focus

3 potentio - Preset on Zoom / Focus / Iris

*4- When the camera with accumulator function is on, Auto Focus function does not work correctly. In that case, please turn off the Auto Focus to obtain correct operation.

High Definition Zoom Lens

Others

FA Customized Lens

We develop and manufacture the following lenses for FA.

- **LC glass substrate Inspection Equipment**
- **SMT Placement Equipment**
- **fθ Lens**
- **Line Sensor**
- **Telecentric Lens**
- **FA Zoom Lens**
- **Other Special Optical Lens**

If you wish there was such a lens…….

We develop and manufacture lenses to be customized to your developed equipment/machine.
Also, we provide a free consultation on the combination of camera/lens/illumination as your usage.
Adding value to your existing equipment is extremely important keys to elicit high camera performance from the lens.
First thing to feel free to contact us by phone or email !

Quotation

We provide a free consultation if your request is possible development.
In cases where the quotation needs for pre-designed is subject to fee, but
we are able to provide free approximate estimate.

For Details/Inquiries

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Tel: 81-42-769-9272
Fax : 81-42-769-5115
E-mail : info@yamano-optical.co.jp
Website : www.yamano-optical.co.jp/english/

Model List (Fixed & Varifocal)

Mega Pixel Lens

Model	Pixel	Focal Length (mm)	Format	Mount	Iris Range	Iris	Focus	Angle (V x H x D)	M.O.D. (m)	Dimension (mm)	Weight (g)	Rohs	Remarks
Y2316M10MPX	10 Mega	16.0	2/3"	C	F2.8-22	Manual	Manual	23.2°x 30.7°x 37.8°	0.35	ϕ36 x 48	104	○	New
Y2316M05MPX	5 .0Mega	16.0	2/3"	C	F2.8-22	Manual	Manual	23.2°x 30.7°x 37.8°	0.35	ϕ36 x 48	104	○	New
Y2325M01MPX	1.4 Mega	25.0	2/3"	C	F1.4-16	Manual	Manual	15.1°x 20.1°	0.25	ϕ29 x 31.5	45	○	
Y2335M01MPX	1.4 Mega	35.0	2/3"	C	F2.0-22	Manual	Manual	10.5°x 14.3°	0.25	ϕ29 x 38.5	55	○	
Y2350M01MPX	1.4 Mega	50.0	2/3"	C	F2.8-22	Manual	Manual	7.5°x 10.0°	0.50	ϕ29 x 38.5	55	○	
Y2308M02MPX	2.0Mega	8.0	2/3"	C	F1.4-16	Manual	Manual	43.9°x 56.5°	0.10	ϕ34 x 41	83	○	
Y2312M02MPX	2.0Mega	12.0	2/3"	C	F1.4-16	Manual	Manual	26.2°x 38.3°	0.15	ϕ34 x 37	75	○	
Y2316M02MPX	2.0Mega	16.0	2/3"	C	F1.4-16	Manual	Manual	22.7°x 30.0°	0.20	ϕ33 x 36.5	81	○	
Y2325M02MPX	2.0Mega	25.0	2/3"	C	F1.4-16	Manual	Manual	14.8°x 19.6°	0.20	ϕ33 x 39.5	89	○	
Y2335M02MPX	2.0Mega	35.0	2/3"	C	F2.0-16	Manual	Manual	10.8°x 14.4°	0.20	ϕ34 x 36.5	69	○	
Y2350M02MPX	2.0Mega	50.0	2/3"	C	F2.8-22	Manual	Manual	7.2°x 9.6°	0.20	ϕ34 x 55	92	○	

*Specification are subject to change without notice.

Fixed Focal Lens - Manual Iris Used inside the building with the light on 24 hours

Model	Mgn.	Focal Length (mm)	Format	Mount	Iris Range	Iris	Focus	Angle (V x H x D)	M.O.D. (m)	Dimension (mm)	Weight (g)	Rohs	Remarks
Y1328M-S	x1	2.8	1/3"	CS	F1.3-C	Manual	Manual	71.7° x 92.0°	0.10	ϕ30 x 33.7	35	○	
Y1304M-S	x1	4.0	1/3"	CS	F1.2-22C	Manual	Manual	53.4° x 70.7°	0.10	ϕ30 x 33.7	35	○	
Y1308M-S	x1	8.0	1/3"	CS	F1.2-C	Manual	Manual	27.7° x 37.5°	0.10	ϕ30 x 33.7	35	○	
Y1212M-S2	x1	12.0	1/2"	C	F1.4-C	Manual	Manual	22.6°x 29.8°	0.30	ϕ32.8 x 37	65	○	
Y1216M	x1	16.0	1/2"	C	F1.4-22C	Manual	Manual	17°x 23°x 28°	0.50	ϕ32 x 33	70	○	
Y1216M-CS	x1	16.0	1/2"	CS	F1.4-22C	Manual	Manual	17°x 23°x 28°	0.50	ϕ32 x 38	75	○	
Y1225M-CS-S	x1	25.0	1"	CS	F1.4-C	Manual	Manual	21.7° x 28.7°	0.50	36.5 x 36.7	70	○	

*Specification are subject to change without notice.

Fixed Focal Lens - Auto Iris (Direct Drive) Used for outside the building where the brightness vary

Model	Mgn.	Focal Length (mm)	Format	Mount	Iris Range	Iris	Focus	Angle (V x H x D)	M.O.D. (m)	Dimension (mm)	Weight (g)	Rohs	Remarks
Y1328GSNA-S	x1	2.8	1/3"	CS	F1.3-360	AI (Direct)	Manual	71.7° x 92.0°	0.10	44.5 x 31.7	35	○	
Y1235GNA	x1	3.5	1/2"	C	F1.4-64	AI (Direct)	Manual	74°x 95°x 112°	0.20	ϕ36 x 45 x 34	80	○	
Y1235GSNA	x1	3.5	1/2"	C	F1.4-360	AI (Direct)	Manual	74°x 95°x 112°	0.20	ϕ36 x 45 x 34	80	○	
Y1235GNA-CS	x1	3.5	1/2"	CS	F1.4-64	AI (Direct)	Manual	74°x 95°x 112°	0.20	ϕ36 x 45 x 39	85	○	
Y1235GSNA-CS	x1	3.5	1/2"	CS	F1.4-360	AI (Direct)	Manual	74°x 95°x 112°	0.20	ϕ36 x 45 x 39	85	○	
Y1304GSNA-S	x1	4.0	1/3"	CS	F1.2-360	AI (Direct)	Manual	53.4° x 70.7°	0.20	45.0 x 31.7	35	○	
Y1206GSNA-S	x1	6.0	1/2"	C	F1.4-360	AI (Direct)	Manual	43.6° x 56.1°	0.20	51.0 x 37.0	55	○	
Y1308GSNA-S	x1	8.0	1/3"	CS	F1.2-360	AI (Direct)	Manual	27.7° x 37.5°	0.10	44.5 x 31.7	35	○	
Y1212GSNA-S	x1	12.0	1/2"	C	F1.4-360	AI (Direct)	Manual	22.6° x 29.8°	0.30	51.0 x 37.0	55	○	
Y1216GNA	x1	16.0	1/2"	C	F1.4-64	AI (Direct)	Manual	17°x 23°x 28°	0.50	ϕ36 x 45 x 37	80	○	
Y1216GSNA	x1	16.0	1/2"	C	F1.4-360	AI (Direct)	Manual	17°x 23°x 28°	0.50	ϕ36 x 45 x 37	80	○	
Y1216GNA-CS	x1	16.0	1/2"	CS	F1.4-64	AI (Direct)	Manual	17°x 23°x 28°	0.50	ϕ36 x 45 x 42	85	○	
Y1216GSNA-CS	x1	16.0	1/2"	CS	F1.4-360	AI (Direct)	Manual	17°x 23°x 28°	0.50	ϕ36 x 45 x 42	85	○	

*Specification are subject to change without notice.

Fixed Focal Lens - Auto Iris (Video Drive) Used for outside the building where the brightness vary

Model	Mgn.	Focal Length (mm)	Format	Mount	Iris Range	Iris	Focus	Angle (V x H x D)	M.O.D. (m)	Dimension (mm)	Weight (g)	Rohs	Remarks
Y1328GS-S	x1	2.8	1/3"	CS	F1.3-360	AI (Video)	Manual	71.7° x 92.0°	0.20	51.0 x 35.5	50	○	
Y1235G	x1	3.5	1/2"	C	F1.4-64	AI (Video)	Manual	74°x 95°x 112°	0.20	ϕ36 x 45 x 34	85	×	
Y1235GS	x1	3.5	1/2"	C	F1.4-360	AI (Video)	Manual	74°x 95°x 112°	0.20	ϕ36 x 45 x 34	85	×	
Y1235G-CS	x1	3.5	1/2"	CS	F1.4-64	AI (Video)	Manual	74°x 95°x 112°	0.20	ϕ36 x 45 x 39	90	×	
Y1235GS-CS	x1	3.5	1/2"	CS	F1.4-360	AI (Video)	Manual	74°x 95°x 112°	0.20	ϕ36 x 45 x 39	90	×	
Y1304GS-S	x1	4.0	1/3"	CS	F1.2-360	AI (Video)	Manual	53.4° x 70.7°	0.20	51.0 x 36.1	50	○	
Y1206GS-S	x1	6.0	1/2"	C	F1.4-360	AI (Video)	Manual	43.6° x 56.1°	0.20	51.0 x 37.0	55	○	
Y1308GS-S	x1	8.0	1/3"	CS	F1.2-360	AI (Video)	Manual	27.7° x 37.5°	0.20	51.0 x 41.6	50	○	
Y1212GS-S	x1	12.0	1/2"	C	F1.4-360	AI (Video)	Manual	22.6° x 29.8°	0.30	51.0 x 37.0	60	○	
Y1216G	x1	16.0	1/2"	C	F1.4-64	AI (Video)	Manual	17°x 23°x 28°	0.50	ϕ36 x 45 x 37	85	×	
Y1216GS	x1	16.0	1/2"	C	F1.4-360	AI (Video)	Manual	17°x 23°x 28°	0.50	ϕ36 x 45 x 37	85	×	
Y1216G-CS	x1	16.0	1/2"	CS	F1.4-64	AI (Video)	Manual	17°x 23°x 28°	0.50	ϕ36 x 45 x 42	90	×	
Y1216GS-CS	x1	16.0	1/2"	CS	F1.4-360	AI (Video)	Manual	17°x 23°x 28°	0.50	ϕ36 x 45 x 42	90	×	

*Specification are subject to change without notice.

Pin Hole Lens

Model	Mgn.	Focal Length (mm)	Format	Mount	Iris Range	Iris	Focus	Angle (V x H x D)	M.O.D. (m)	Dimension (mm)	Weight (g)	Rohs	Remarks
YPS420	x1	4.0	1/3"	CS	F2.0-22C	Manual	Manual	49°x 63°x 75°	0.30	32.0 x 65.5	150	○	
YPS420D	x1	4.0	1/3"	CS	F2.0-64	AI (Direct)	Manual	49°x 63°x 75°	0.30	43.0 x 65.5	170	○	
YPS420A	x1	4.0	1/3"	CS	F2.0-64	AI (Video)	Manual	49°x 63°x 75°	0.30	43.0 x 65.5	180	×	

*Specification are subject to change without notice.

Vari Focal Lens - Manual Iris

Model	Mgn.	Focal Length (mm)	Format	Mount	Iris Range	Iris	Focus	Angle (V x H x D) at Wide	M.O.D. (m)	Dimension (mm)	Weight (g)	Rohs	Remarks
YV2508M	x3.2	2.5-8.0	1/3"	CS	F1.4-22C	Manual	Manual	79°x 105°x 129°	0.15	ϕ33 x 53	97	○	
YV2510M	x4	2.5-10.0	1/3"	CS	F1.4-22C	Manual	Manual	79°x 105°x 130°	0.30	ϕ48 x 60	81	○	Aspherical
YV2511RM	x4.4	2.5-11.0	1/3"	CS	F1.4-C	Manual	Manual	79°x 105°x 130°	0.30	ϕ48 x 60	80	○	
YV2810RM1MPX	x3.5	2.8-10.0	1/3"	CS	F1.4-C	Manual	Manual	72°x 99°x 128°	1.30	ϕ48 x 66.6	125	○	Infrared, 1.4 Mega
YV3308RM	x2.4	3.3-8.0	1/3"	CS	F1.4-22C	Manual	Manual	54°x 68°x 81°	0.30	ϕ33 x 43.3	36	○	
YV4509M2MPX	x2	4.5-9.0	1/2"	C	F1.6-C	Manual	Manual	58°x 78°x 98°	0.50	ϕ48 x 62.5	125	○	2 mega
YV0550M	x10	5.0-50.0	1/3"	CS	F1.3-C	Manual	Manual	40°x 53°x 66°	0.30	ϕ39.5 x 55.5	88	○	Aspherical
YV0555M	x11	5.0-55.0	1/3"	CS	F1.4-C	Manual	Manual	40°x 53°	0.30	ϕ42 x 48 x 64	90	○	
YV0555RM	x11	5.0-55.0	1/3"	CS	F1.4-360	Manual	Manual	40°x 53°	0.30-0.80	ϕ42 x 48 x 64	90	○	Infrared,
YV0560M	x12	5.0-60.0	1/3"	CS	F1.6-22C	Manual	Manual	40°x 53°x 63°	0.30	ϕ39.5 x 62.5	115	○	
YV0613M-C	x2.1	6.0-13.0	1/2"	C	F1.6-22C	Manual	Manual	33°x 45°x 57°	0.15	ϕ33 x 51	86	○	
YV0613M	x2.1	6.0-13.0	1/3"	CS	F1.6-22C	Manual	Manual	33°x 45°x 57°	0.15	ϕ33 x 51	86	○	

*Specification are subject to change without notice.

Vari Focal Lens - Auto Iris (Direct Drive)

Model	Mgn.	Focal Length (mm)	Format	Mount	Iris Range	Iris	Focus	Angle (V x H x D) at Wide	M.O.D. (m)	Dimension (mm)	Weight (g)	Rohs	Remarks
YV2508D	x3.2	2.5-8.0	1/3"	CS	F1.4-125	AI (Direct)	Manual	79°x 105°x 129°	0.15	ϕ33 x 43.5 x 53	100	○	
YV2510D	x4	2.5-10.0	1/3"	CS	F1.4-360	AI (Direct)	Manual	79°x 105°x 130°	0.30	ϕ48 x 50.5 x 60	79	○	Aspherical
YV2511RD	x4.4	2.5-11.0	1/3"	CS	F1.4-360	AI (Direct)	Manual	79°x 105°x 130°	0.30	ϕ48 x 50.5 x 60	78	○	Infrared, Aspherical
YV2712RD	x4.4	2.7-12.0	1/3"	CS	F1.2-360	AI (Direct)	Manual	72°x 97°	0.30	ϕ39 x 50 x 57	72	○	Infrared, Aspherical
YV2810RD1MPX	x3.5	2.8-10.0	1/3"	CS	F1.4-360	AI (Direct)	Manual	72°x 99°x 128°	1.30	ϕ42 x 50.5 x 66.6	120	○	Infrared, 1.4 Mega
YV2812RD	x4.2	2.8-12.0	1/3"	CS	F1.3-360	AI (Direct)	Manual	70°x 93°x 115°	0.30	ϕ35.5 x 40.75 x 41.6	10	○	Infrared
YV0308RD	x2.6	3.0-8.0	1/3"	CS	F0.95-360	AI (Direct)	Manual	68°x 94°	0.30	ϕ38 x 48 x 49.7	64	○	Infrared, Aspherical
YV0308RD-2	x2.6	3.0-8.0	1/3"	CS	F1.2-360	AI (Direct)	Manual	68°x 94°	0.30	ϕ38 x 42.8 x 46	63	○	Infrared
YV3308D	x2.4	3.3-8.0	1/3"	CS	F1.4-360	AI (Direct)	Manual	54°x 68°x 81°	0.30	ϕ39 x 45 x 43.3	47	○	
YV4509D2MPX	x2	4.5-9.0	1/2"	C	F1.6-360	AI (Direct)	Manual	58°x 78°x 98°	0.50	ϕ42 x 55 x 62.5	125	○	2 Mega
YV0550D	x10	5.0-50.0	1/3"	CS	F1.3-360	AI (Direct)	Manual	40°x 53°x 66°	0.30	ϕ39.5 x 54.9 x 55.5	96	○	Aspherical
YV0555D	x11	5.0-55.0	1/3"	CS	F1.4-360	AI (Direct)	Manual	40°x 53°	0.30-0.80	ϕ42 x 48 x 64	93	○	
YV0555RD	x11	5.0-55.0	1/3"	CS	F1.4-360	AI (Direct)	Manual	40°x 53°	0.30-0.80	ϕ42 x 48 x 64	93	○	Infrared,
YV0560D	x12	5.0-60.0	1/3"	CS	F1.6-360	AI (Direct)	Manual	40°x 53°x 63°	0.30	ϕ40 x 47 x 62.5	123	○	
YV0613D-C	x2.1	6.0-13.0	1/2"	C	F1.6-125	AI (Direct)	Manual	33°x 45°x 57°	0.15	ϕ33 x 50.2 x 51	95	○	
YV0613D	x2.1	6.0-13.0	1/3"	CS	F1.6-125	AI (Direct)	Manual	33°x 45°x 57°	0.15	ϕ33 x 50.2 x 51	95	○	
YV1016D	x12	10.0-120.0	1/2"	C	F1.6-360	AI (Direct)	Manual	26°x 34°x 43°	0.30	ϕ55 x 64 x 122	300	○	
YV1012D	x12	10.0-120.0	1/2"	C	F1.6-360	AI (Direct)	Manual	26°x 34°x 42°	1.50	ϕ55.0 x 64.3 x 123.2	350	○	
YV1012RD	x12	10.0-120.0	1/2"	C	F1.6-360	AI (Direct)	Manual	26°x 34°x 42°	1.50	ϕ55.0 x 64.3 x 123.2	370	○	Infrared,
YV1618D	x10	16.0-160.0	1/2"	C	F1.8-360	AI (Direct)	Manual	16.7°x 22.4°x 28.3°	0.30	ϕ75 x 77.5 x 175	730	○	

*Specification are subject to change without notice.

Vari Focal Lens - Auto Iris (Video Drive)

Model	Mgn.	Focal Length (mm)	Format	Mount	Iris Range	Iris	Focus	Angle (V x H x D) at Wide	M.O.D. (m)	Dimension (mm)	Weight (g)	Rohs	Remarks
YV2508A	x3.2	2.5-8.0	1/3"	CS	F1.4-125	AI (Video)	Manual	79°x 105°x 129°	0.15	ϕ33 x 43.5 x 53	105	×	
YV2510A	x4	2.5-10.0	1/3"	CS	F1.4-360	AI (Video)	Manual	79°x 105°x 130°	0.30	ϕ48 x 50.5 x 60	81	○	Aspherical
YV2511RA	x4.4	2.5-11.0	1/3"	CS	F1.4-360	AI (Video)	Manual	79°x 105°x 130°	0.30	ϕ48 x 50.5 x 60	81	○	Infrared, Aspherical
YV2712RA	x4.4	2.7-12.0	1/3"	CS	F1.2-360	AI (Video)	Manual	72°x 97°	0.30	ϕ39 x 50 x 57	72	○	Infrared, Aspherical
YV0308RA	x2.6	3.0-8.0	1/3"	CS	F1.2-360	AI (Video)	Manual	92.5°x 68.5°	0.20	ϕ36 x 46 x 46	65	○	Infrared
YV0308RA-2	x2.6	3.0-8.0	1/3"	CS	F0.95-360	AI (Video)	Manual	94.3°x 68.9°	0.30	ϕ38 x 48.5 x 49.7	74	○	Infrared, Aspherical
YV0550A	x10	5.0-50.0	1/3"	CS	F1.3-360	AI (Video)	Manual	40°x 53°x 66°	0.30	ϕ39.5 x 54.9 x 55.5	93	○	Aspherical
YV0560A	x12	5.0-60.0	1/3"	CS	F1.6-360	AI (Video)	Manual	40°x 53°x 63°	0.30	ϕ40 x 47 x 62.5	125	○	
YV0613A-C	x2.1	6.0-13.0	1/2"	C	F1.6-125	AI (Video)	Manual	33°x 45°x 57°	0.15	ϕ33 x 50.2 x 51	98	×	
YV0613A	x2.1	6.0-13.0	1/3"	CS	F1.6-125	AI (Video)	Manual	33°x 45°x 57°	0.15	ϕ33 x 50.2 x 51	98	×	

*Specification are subject to change without notice.

○- Rohs Compliant

× - not Rohs Compliant

Model List (Fixed & Varifocal)

Model List (Zoom Lens)

Zoom Lens

Model	Mgn.	Focal Length (mm)	Format	Mount	Iris Range	Iris	Focus	Angle (V x H x D) at Wide	M.O.D. (m)	Dimension (mm)	Weight (g)	Rohs	Remarks
Y10Z06M	x10	6.0-60.0	1/3"	CS	F1.2-360	Motorized	Motorized	33.4°x 44.6°x 57.4°	1.50	66 x 75.5 x 108.5	650	○	
Y10Z06MP	x10	6.0-60.0	1/3"	CS	F1.2-360	Motorized	Motorized	33.4°x 44.6°x 57.4°	1.50	66 x 75.5 x 108.5	680	○	Preset
Y10Z06MIP	x10	6.0-60.0	1/3"	CS	F1.2-360	Motorized	Motorized	33.4°x 44.6°x 57.4°	1.50	66 x 75.5 x 108.5	695	○	Preset (zoom/focus/iris)
Y10Z06A	x10	6.0-60.0	1/3"	CS	F1.2-360	AI (Video)	Motorized	33.4°x 44.6°x 57.4°	1.50	66 x 75.5 x 108.5	700	○	
Y10Z06AP	x10	6.0-60.0	1/3"	CS	F1.2-360	AI (Video)	Motorized	33.4°x 44.6°x 57.4°	1.50	66 x 75.5 x 108.5	730	○	Preset
Y10Z06AF	x10	6.0-60.0	1/3"	CS	F1.2-360	AI (Video)	Auto Focus	33.4°x 44.6°x 57.4°	1.50	66 x 75.5 x 108.5	720	○	Auto Focus
Y10Z06AF-I	x10	6.0-60.0	1/3"	CS	F1.2-360	AI (Video)	Auto Focus	33.4°x 44.6°x 57.4°	1.50	66 x 75.5 x 108.5	720	○	Auto Focus
Y10Z06AFP	x10	6.0-60.0	1/3"	CS	F1.2-360	AI (Video)	Auto Focus	33.4°x 44.6°x 57.4°	1.50	66 x 75.5 x 108.5	750	○	Auto Focus, Preset
Y10Z06AFP-I	x10	6.0-60.0	1/3"	CS	F1.2-360	AI (Video)	Auto Focus	33.4°x 44.6°x 57.4°	1.50	66 x 75.5 x 108.5	750	○	Auto Focus, Preset
Y10Z08M	x10	8.0-80.0	1/2"	C	F1.4-360	Motorized	Motorized	34.5°x 45.8°x 57.4°	1.50	66 x 75.5 x 108.5	650	○	
Y10Z08MP	x10	8.0-80.0	1/2"	C	F1.4-360	Motorized	Motorized	34.5°x 45.8°x 57.4°	1.50	66 x 75.5 x 108.5	680	○	Preset
Y10Z08MIP	x10	8.0-80.0	1/2"	C	F1.4-360	Motorized	Motorized	34.5°x 45.8°x 57.4°	1.50	66 x 75.5 x 108.5	695	○	Preset (zoom/focus/iris)
Y10Z08A	x10	8.0-80.0	1/2"	C	F1.4-360	AI (Video)	Motorized	34.5°x 45.8°x 57.4°	1.50	66 x 75.5 x 108.5	700	○	
Y10Z08AP	x10	8.0-80.0	1/2"	C	F1.4-360	AI (Video)	Motorized	34.5°x 45.8°x 57.4°	1.50	66 x 75.5 x 108.5	730	○	Preset
Y10Z08AF	x10	8.0-80.0	1/2"	C	F1.4-360	AI (Video)	Auto Focus	34.5°x 45.8°x 57.4°	1.50	66 x 75.5 x 108.5	720	○	Auto Focus
Y10Z08AF-I	x10	8.0-80.0	1/2"	C	F1.4-360	AI (Video)	Auto Focus	34.5°x 45.8°x 57.4°	1.50	66 x 75.5 x 108.5	720	○	Auto Focus
Y10Z08AFP	x10	8.0-80.0	1/2"	C	F1.4-360	AI (Video)	Auto Focus	34.5°x 45.8°x 57.4°	1.50	66 x 75.5 x 108.5	750	○	Auto Focus, Preset
Y10Z08AFP-I	x10	8.0-80.0	1/2"	C	F1.4-360	AI (Video)	Auto Focus	34.5°x 45.8°x 57.4°	1.50	66 x 75.5 x 108.5	750	○	Auto Focus, Preset
Y10Z85RM	x10	8.5-85.0	1/2"	C	F1.5-360	Motorized	Motorized	31.3°x 41.5°x 53.7°	1.50	66 x 75.5 x 134.8	750	○	Infrared
Y10Z85RMP	x10	8.5-85.0	1/2"	C	F1.5-360	Motorized	Motorized	31.3°x 41.5°x 53.7°	1.50	66 x 75.5 x 134.8	800	○	Infrared, Preset
Y10Z85RMIP	x10	8.5-85.0	1/2"	C	F1.5-360	Motorized	Motorized	31.3°x 41.5°x 53.7°	1.50	66 x 75.5 x 134.8	800	○	Infrared, Preset (zoom/focus/iris)
Y10Z85RA	x10	8.5-85.0	1/2"	C	F1.5-360	AI (Video)	Motorized	31.3°x 41.5°x 53.7°	1.50	66 x 75.5 x 134.8	850	○	Infrared
Y10Z85RAP	x10	8.5-85.0	1/2"	C	F1.5-360	AI (Video)	Motorized	31.3°x 41.5°x 53.7°	1.50	66 x 75.5 x 134.8	900	○	Infrared, Preset
Y10Z85RAF	x10	8.5-85.0	1/2"	C	F1.5-360	AI (Video)	Auto Focus	31.3°x 41.5°x 53.7°	1.50	66 x 75.5 x 134.8	850	○	Infrared, Auto Focus
Y10Z85RAF-I	x10	8.5-85.0	1/2"	C	F1.5-360	AI (Video)	Auto Focus	31.3°x 41.5°x 53.7°	1.50	66 x 75.5 x 134.8	850	○	Infrared, Auto Focus
Y10Z85RAFP	x10	8.5-85.0	1/2"	C	F1.5-360	AI (Video)	Auto Focus	31.3°x 41.5°x 53.7°	1.50	66 x 75.5 x 134.8	900	○	Infrared, Auto Focus, Preset
Y10Z85RAFP-I	x10	8.5-85.0	1/2"	C	F1.5-360	AI (Video)	Auto Focus	31.3°x 41.5°x 53.7°	1.50	66 x 75.5 x 134.8	900	○	Infrared, Auto Focus, Preset
Y10Z85HDM	x10	8.5-85.0	1/2"	C	F1.5-360	Motorized	Motorized	31.3°x 41.5°x 53.7°	2.00	66 x 75.5 x 139.9	750	○	2 Mega
Y10Z85HDMP	x10	8.5-85.0	1/2"	C	F1.5-360	Motorized	Motorized	31.3°x 41.5°x 53.7°	2.00	66 x 75.5 x 139.9	800	○	2 Mega, Preset
Y10Z85HDMIP	x10	8.5-85.0	1/2"	C	F1.5-360	Motorized	Motorized	31.3°x 41.5°x 53.7°	2.00	66 x 75.5 x 139.9	800	○	2 Mega, Preset (zoom/focus/iris)
Y10Z85HDA	x10	8.5-85.0	1/2"	C	F1.5-360	AI (Video)	Motorized	31.3°x 41.5°x 53.7°	2.00	66 x 75.5 x 139.9	850	○	2 Mega
Y10Z85HDAP	x10	8.5-85.0	1/2"	C	F1.5-360	AI (Video)	Motorized	31.3°x 41.5°x 53.7°	2.00	66 x 75.5 x 139.9	900	○	2 Mega
Y10Z85HDAF	x10	8.5-85.0	1/2"	C	F1.5-360	AI (Video)	Auto Focus	31.3°x 41.5°x 53.7°	2.00	66 x 75.5 x 139.9	850	○	2 Mega, Auto Focus
Y10Z85HDAF-I	x10	8.5-85.0	1/2"	C	F1.5-360	AI (Video)	Auto Focus	31.3°x 41.5°x 53.7°	2.00	66 x 75.5 x 139.9	850	○	2 Mega, Auto Focus
Y10Z85HDAFP	x10	8.5-85.0	1/2"	C	F1.5-360	AI (Video)	Auto Focus	31.3°x 41.5°x 53.7°	2.00	66 x 75.5 x 139.9	900	○	2 Mega, Auto Focus, Preset
Y10Z85HDAFP-I	x10	8.5-85.0	1/2"	C	F1.5-360	AI (Video)	Auto Focus	31.3°x 41.5°x 53.7°	2.00	66 x 75.5 x 139.9	900	○	2 Mega, Auto Focus, Preset
Y15Z75M	x15	7.5-112.5	1/2"	C	F1.6-360	Motorized	Motorized	35.7°x 46.8°x 57.1°	1.50	66 x 75.5 x 127	750	○	
Y15Z75MP	x15	7.5-112.5	1/2"	C	F1.6-360	Motorized	Motorized	35.7°x 46.8°x 57.1°	1.50	66 x 75.5 x 127	780	○	
Y15Z75MIP	x15	7.5-112.5	1/2"	C	F1.6-360	Motorized	Motorized	35.7°x 46.8°x 57.1°	1.50	66 x 75.5 x 127	795	○	Preset (zoom/focus/iris)
Y15Z75A	x15	7.5-112.5	1/2"	C	F1.6-360	AI (Video)	Motorized	35.7°x 46.8°x 57.1°	1.50	66 x 75.5 x 127	800	○	
Y15Z75AP	x15	7.5-112.5	1/2"	C	F1.6-360	AI (Video)	Motorized	35.7°x 46.8°x 57.1°	1.50	66 x 75.5 x 127	830	○	Preset
Y15Z75AF	x15	7.5-112.5	1/2"	C	F1.6-360	AI (Video)	Auto Focus	35.7°x 46.8°x 57.1°	1.50	66 x 75.5 x 127	820	○	Auto Focus
Y15Z75AF-I	x15	7.5-112.5	1/2"	C	F1.6-360	AI (Video)	Auto Focus	35.7°x 46.8°x 57.1°	1.50	66 x 75.5 x 127	820	○	Auto Focus
Y15Z75AFP	x15	7.5-112.5	1/2"	C	F1.6-360	AI (Video)	Auto Focus	35.7°x 46.8°x 57.1°	1.50	66 x 75.5 x 127	850	○	Auto Focus, Preset
Y15Z75AFP-I	x15	7.5-112.5	1/2"	C	F1.6-360	AI (Video)	Auto Focus	35.7°x 46.8°x 57.1°	1.50	66 x 75.5 x 127	850	○	Auto Focus, Preset
Y18Z86RM	x18	8.6-154.0	1/2"	C	F2.5-360	Motorized	Motorized	30.8°x 40.6°x 48.9°	2.00	66 x 75.5 x 154.5	800	○	Infrared
Y18Z86RMP	x18	8.6-154.0	1/2"	C	F2.5-360	Motorized	Motorized	30.8°x 40.6°x 48.9°	2.00	66 x 75.5 x 154.5	830	○	Infrared, Preset
Y18Z86RMIP	x18	8.6-154.0	1/2"	C	F2.5-360	Motorized	Motorized	30.8°x 40.6°x 48.9°	2.00	66 x 75.5 x 154.5	830	○	Infrared, Preset (zoom/focus/iris)
Y18Z86RA	x18	8.6-154.0	1/2"	C	F2.5-360	AI (Video)	Motorized	30.8°x 40.6°x 48.9°	2.00	66 x 75.5 x 154.5	850	○	Infrared
Y18Z86RAP	x18	8.6-154.0	1/2"	C	F2.5-360	AI (Video)	Motorized	30.8°x 40.6°x 48.9°	2.00	66 x 75.5 x 154.5	880	○	Infrared, Preset
Y18Z86RAF	x18	8.6-154.0	1/2"	C	F2.5-360	AI (Video)	Auto Focus	30.8°x 40.6°x 48.9°	2.00	66 x 75.5 x 154.5	870	○	Infrared, Auto Focus
Y18Z86RAF-I	x18	8.6-154.0	1/2"	C	F2.5-360	AI (Video)	Auto Focus	30.8°x 40.6°x 48.9°	2.00	66 x 75.5 x 154.5	870	○	Infrared, Auto Focus
Y18Z86RAFP	x18	8.6-154.0	1/2"	C	F2.5-360	AI (Video)	Auto Focus	30.8°x 40.6°x 48.9°	2.00	66 x 75.5 x 154.5	900	○	Infrared, Auto Focus, Preset
Y18Z86RAFP-I	x18	8.6-154.0	1/2"	C	F2.5-360	AI (Video)	Auto Focus	30.8°x 40.6°x 48.9°	2.00	66 x 75.5 x 154.5	900	○	Infrared, Auto Focus, Preset
Y20Z10M	x20	10.0-200.0	1/2"	C	F2.4-360	Motorized	Motorized	26.4°x 37.8°x 42.4°	1.80	66 x 75.5 x 154.5	850	○	
Y20Z10MP	x20	10.0-200.0	1/2"	C	F2.4-360	Motorized	Motorized	26.4°x 37.8°x 42.4°	1.80	66 x 75.5 x 154.5	880	○	Preset
Y20Z10MIP	x20	10.0-200.0	1/2"	C	F2.4-360	Motorized	Motorized	26.4°x 37.8°x 42.4°	1.80	66 x 75.5 x 154.5	895	○	Preset (zoom/focus/iris)
Y20Z10A	x20	10.0-200.0	1/2"	C	F2.4-360	AI (Video)	Motorized	26.4°x 37.8°x 42.4°	1.80	66 x 75.5 x 154.5	900	○	
Y20Z10AP	x20	10.0-200.0	1/2"	C	F2.4-360	AI (Video)	Motorized	26.4°x 37.8°x 42.4°	1.80	66 x 75.5 x 154.5	930	○	
Y20Z10AF	x20	10.0-200.0	1/2"	C	F2.4-360	AI (Video)	Auto Focus	26.4°x 37.8°x 42.4°	1.80	66 x 75.5 x 154.5	920	○	Auto Focus
Y20Z10AF-I	x20	10.0-200.0	1/2"	C	F2.4-360	AI (Video)	Auto Focus	26.4°x 37.8°x 42.4°	1.80	66 x 75.5 x 154.5	920	○	Auto Focus
Y20Z10AFP	x20	10.0-200.0	1/2"	C	F2.4-360	AI (Video)	Auto Focus	26.4°x 37.8°x 42.4°	1.80	66 x 75.5 x 154.5	950	○	Auto Focus, Preset
Y20Z10AFP-I	x20	10.0-200.0	1/2"	C	F2.4-360	AI (Video)	Auto Focus	26.4°x 37.8°x 42.4°	1.80	66 x 75.5 x 154.5	950	○	Auto Focus, Preset
Y20Z15M	x20	15.0-300.0	1/2"	C	F3.6-360	Motorized	Motorized	17.7°x 23.4°x 29.2°	2.50	66 x 75.5 x 154.5	850	○	
Y20Z15MP	x20	15.0-300.0	1/2"	C	F3.6-360	Motorized	Motorized	17.7°x 23.4°x 29.2°	2.50	66 x 75.5 x 154.5	880	○	Preset
Y20Z15MIP	x20	15.0-300.0	1/2"	C	F3.6-360	Motorized	Motorized	17.7°x 23.4°x 29.2°	2.50	66 x 75.5 x 154.5	895	○	Preset (zoom/focus/iris)
Y20Z15A	x20	15.0-300.0	1/2"	C	F3.6-360	AI (Video)	Motorized	17.7°x 23.4°x 29.2°	2.50	66 x 75.5 x 154.5	900	○	
Y20Z15AP	x20	15.0-300.0	1/2"	C	F3.6-360	AI (Video)	Motorized	17.7°x 23.4°x 29.2°	2.50	66 x 75.5 x 154.5	930	○	Preset
Y20Z15AF	x20	15.0-300.0	1/2"	C	F3.6-360	AI (Video)	Auto Focus	17.7°x 23.4°x 29.2°	2.50	66 x 75.5 x 154.5	920	○	Auto Focus
Y20Z15AF-I	x20	15.0-300.0	1/2"	C	F3.6-360	AI (Video)	Auto Focus	17.7°x 23.4°x 29.2°	2.50	66 x 75.5 x 154.5	920	○	Auto Focus
Y20Z15AFP	x20	15.0-300.0	1/2"	C	F3.6-360	AI (Video)	Auto Focus	17.7°x 23.4°x 29.2°	2.50	66 x 75.5 x 154.5	950	○	Auto Focus, Preset
Y20Z15AFP-I	x20	15.0-300.0	1/2"	C	F3.6-360	AI (Video)	Auto Focus	17.7°x 23.4°x 29.2°	2.50	66 x 75.5 x 154.5	950	○	Auto Focus, Preset
Y30Z10A	x30	10.0-300.0	1/2"	C	F2.8-360	AI (Video)	Motorized	27.0°x 35.5°x 43.6°	3.00	92 x 105 x 210	1930	○	-
Y30Z10AP	x30	10.0-300.0	1/2"	C	F2.8-3.6	AI (Video)	Motorized	27.0°x 35.5°x 43.6°	3.00	92 x 105 x 210	1960	○	Preset
Y30Z10RA	x30	10.0-300.0	1/2"	C	F2.8-360	AI (Video)	Motorized	27.0°x 35.5°x 43.6°	3.00	92 x 105 x 221.5	1930	○	Infrared
Y30Z10RAP	x30	10.0-300.0	1/2"	C	F2.8-360	AI (Video)	Motorized	27.0°x 35.5°x 43.6°	3.00	92 x 105 x 221.5	1960	○	Infrared, Preset
Y30Z10RAF	x30	10.0-300.0	1/2"	C	F2.8-360	AI (Video)	Auto Focus	27.0°x 35.5°x 43.6°	3.00	92 x 105 x 221.5	1930	○	Infrared, Auto Focus
Y30Z10RAFP	x30	10.0-300.0	1/2"	C	F2.8-360	AI (Video)	Auto Focus	27.0°x 35.5°x 43.6°	3.00	92 x 105 x 221.5	1960	○	Infrared, Auto Focus, Preset
Y33Z10A	x33	10.0-330.0	1/2"	C	F1.5-560	AI (Video)	Motorized	26.5°x 35.0°x 43.3°	2.90	125 x 122 x 260.5	3000	○	
Y33Z10AP	x33	10.0-330.0	1/2"	C	F1.5-560	AI (Video)	Motorized	26.5°x 35.0°x 43.3°	2.90	125 x 122 x 260.5	3000	○	Preset
Y33Z10AF	x33	10.0-330.0	1/2"	C	F1.5-560	AI (Video)	Motorized	26.5°x 35.0°x 43.3°	2.90	125 x 122 x 260.5	3000	○	-
Y33Z10AFP	x33	10.0-330.0	1/2"	C	F1.5-560	AI (Video)	Motorized	26.5°x 35.0°x 43.3°	2.90	125 x 122 x 260.5	3000	○	-
Y33Z15RM	X33	15.2-500.0	1/2"	C	F3.0-360	Motorized	Motorized	17.7°x 23.4°x 28.8°	3.00	108 x 100 x 246.8	-	○	
Y33Z15RMP	X33	15.2-500.0	1/2"	C	F3.0-360	Motorized	Motorized	17.7°x 23.4°x 28.8°	3.00	108 x 100 x 246.8	-	○	Preset
Y33Z15RMIP	X33	15.2-500.0	1/2"	C	F3.0-360	Motorized	Motorized	17.7°x 23.4°x 28.8°	3.00	108 x 100 x 246.8	-	○	Preset (zoom/focus/iris)
Y33Z15RA	X33	15.2-500.0	1/2"	C	F3.0-360	AI (Video)	Motorized	17.7°x 23.4°x 28.8°	3.00	108 x 100 x 246.8	-	○	
Y33Z15RAP	X33	15.2-500.0	1/2"	C	F3.0-360	AI (Video)	Motorized	17.7°x 23.4°x 28.8°	3.00	108 x 100 x 246.8	-	○	
Y33Z15RAF	X33	15.2-500.0	1/2"	C	F3.0-360	AI (Video)	Auto Focus	17.7°x 23.4°x 28.8°	3.00	108 x 100 x 246.8	-	○	Auto Focus
Y33Z15RAF-I	X33	15.2-500.0	1/2"	C	F3.0-360	AI (Video)	Auto Focus	17.7°x 23.4°x 28.8°	3.00	108 x 100 x 246.8	-	○	Auto Focus
Y33Z15RAFP	X33	15.2-500.0	1/2"	C	F3.0-360	AI (Video)	Auto Focus	17.7°x 23.4°x 28.8°	3.00	108 x 100 x 246.8	-	○	Auto Focus, Preset
Y33Z15RAFP-I	X33	15.2-500.0	1/2"	C	F3.0-360	AI (Video)	Auto Focus	17.7°x 23.4°x 28.8°	3.00	108 x 100 x 246.8	-	○	Auto Focus, Preset
Y40Z10RA	x40	10.0-400.0	1/2"	C	F4.5-360	AI (Video)	Motorized	27.0°x 35.5°x 43.6°	4.00	75.3 x 65 x 157.7	800	○	Infrared
Y40Z10RAP	x40	10.0-400.0	1/2"	C	F4.5-360	AI (Video)	Motorized	27.0°x 35.5°x 43.6°	4.00	75.3 x 65 x 157.7	830	○	Infrared, Preset
Y40Z10RAF	x40	10.0-400.0	1/2"	C	F4.5-360	AI (Video)	Auto Focus	27.0°x 35.5°x 43.6°	4.00	75.3 x 65 x 157.7	1000	○	Infrared, Auto Focus
Y40Z10RAFP	x40	10.0-400.0	1/2"	C	F4.5-360	AI (Video)	Auto Focus	27.0°x 35.5°x 43.6°	4.00	75.3 x 65 x 157.7	1030	○	Infrared, Auto Focus, Preset
Y50Z10MP	x50	10.0-500.0	1/2"	C	F4.0-360	Motorized	Motorized	27.0°x 35.5°x 43.6°	4.00	106 x 124 x300.5	3200	○	Preset
Y50Z10AP	x50	10.0-500.0	1/2"	C	F4.0-360	AI (Video)	Motorized	27.0°x 35.5°x 43.6°	4.00	106 x 124 x300.5	3200	○	Preset

(Auto Iris (A) and Auto Focus (AF) lenses have manual override iris(/M) after each model number as option.)

*Specification are subject to change without notice.

Make To Order (Minimum Order Quantity = 100pcs)

Model	Mgn.	Focal Length (mm)	Format	Mount	Iris Range	Iris	Focus	Angle (V x H x D)	M.O.D. (m)	Dimension (mm)	Weight (g)	Rohs	Remarks
Y18Z08-3CA	x18	8.0-144.0	1/2"	Bayonet	F1.4-F22	AI (Servo)	Motorized	32.8°x 43.3°x 53.4°	1.50	117 x 100 x 183.8	1450	×	3CCD, Preset
Y18Z08-3CAP	x18	8.0-144.0	1/2"	Bayonet	F1.4-F22	AI (Servo)	Motorized	32.8°x 43.3°x 53.4°	1.50	117 x 100 x 183.8	1480	×	3CCD, Preset
Y18Z08-3CAFP	x18	8.0-144.0	1/2"	Bayonet	F1.4-F22	AI (Servo)	Auto Focus	32.8°x 43.3°x 53.4°	1.50	117 x 100 x 183.8	1500	×	3CCD, Auto Focus, Preset

*Specification are subject to change without notice.

○- Rohs Compliant

× - not Rohs Compliant

AI : Auto Iris

Video : Video Drive

Servo : Servo Style

Model List (Zoom Lens)

Model List (Discontinued)

Discontinued Model (Available on request with order of more than 500pcs)

Model	Mgn.	Focal Length (mm)	Format	Mount	Iris Range	Iris	Focus	Angle (V x H x D)	M.O.D. (m)	Dimension (mm)	Weight (g)	Rohs	Remarks
Y1328M	x1	2.8	1/3"	CS	F1.3-22C	Manual	Manual	71°x 92°x 114°	0.20	ϕ34 x 37	70	○	
Y1328GNA	x1	2.8	1/3"	CS	F1.3-64	AI (Direct)	Manual	71°x 92°x 114°	0.20	ϕ40 x 45 x 34	75	○	
Y1328GSNA	x1	2.8	1/3"	CS	F1.3-360	AI (Direct)	Manual	71°x 92°x 114°	0.20	ϕ40 x 45 x 34	75	○	
Y1328G	x1	2.8	1/3"	CS	F1.3-64	AI (Video)	Manual	71°x 92°x 114°	0.20	ϕ40 x 45 x 34	75	×	
Y1328GS	x1	2.8	1/3"	CS	F1.3-360	AI (Video)	Manual	71°x 92°x 114°	0.20	ϕ40 x 45 x 34	75	×	
Y1235GNA	x1	3.5	1/2"	C	F1.4-64	AI (Direct)	Manual	74°x 95°x 112°	0.20	ϕ40 x 45 x 34	75	○	
Y1235GSNA	x1	3.5	1/2"	C	F1.4-360	AI (Direct)	Manual	74°x 95°x 112°	0.20	ϕ40 x 45 x 34	75	○	
Y1235GNA-CS	x1	3.5	1/2"	CS	F1.4-64	AI (Direct)	Manual	74°x 95°x 112°	0.20	ϕ40 x 45 x 39	76	○	
Y1235GSNA-CS	x1	3.5	1/2"	CS	F1.4-360	AI (Direct)	Manual	74°x 95°x 112°	0.20	ϕ40 x 45 x 39	76	○	
Y1235G	x1	3.5	1/2"	C	F1.4-64	AI (Video)	Manual	74°x 95°x 112°	0.20	ϕ40 x 45 x 34	75	×	
Y1235GS	x1	3.5	1/2"	C	F1.4-360	AI (Video)	Manual	74°x 95°x 112°	0.20	ϕ40 x 45 x 34	75	×	
Y1235G-CS	x1	3.5	1/2"	CS	F1.4-64	AI (Video)	Manual	74°x 95°x 112°	0.20	ϕ40 x 45 x 39	76	×	
Y1235GS-CS	x1	3.5	1/2"	CS	F1.4-360	AI (Video)	Manual	74°x 95°x 112°	0.20	ϕ40 x 45 x 39	76	×	
Y1304M	x1	4.0	1/3"	CS	F1.2-22C	Manual	Manual	50°x 64°x 77°	0.20	ϕ32 x 33	60	○	
Y1304GNA	x1	4.0	1/3"	CS	F1.2-64	AI (Direct)	Manual	50°x 64°x 77°	0.20	ϕ40 x 45 x 37	75	○	
Y1304GSNA	x1	4.0	1/3"	CS	F1.2-360	AI (Direct)	Manual	50°x 64°x 77°	0.20	ϕ40 x 45 x 37	75	○	
Y1304G	x1	4.0	1/3"	CS	F1.2-64	AI (Video)	Manual	50°x 64°x 77°	0.20	ϕ40 x 45 x 37	75	×	
Y1304GS	x1	4.0	1/3"	CS	F1.2-360	AI (Video)	Manual	50°x 64°x 77°	0.20	ϕ40 x 45 x 37	75	×	
Y1308M	x1	8.0	1/3"	CS	F1.3-22C	Manual	Manual	25°x 34°x 43°	0.20	ϕ32 x 27	50	○	
Y1308G	x1	8.0	1/3"	CS	F1.3-64	AI (Video)	Manual	25°x 34°x 43°	0.20	ϕ40 x 45 x 37	70	○	
Y1308GS	x1	8.0	1/3"	CS	F1.3-360	AI (Video)	Manual	25°x 34°x 43°	0.20	ϕ40 x 45 x 37	70	○	
Y1308GNA	x1	8.0	1/3"	CS	F1.3-64	AI (Direct)	Manual	25°x 34°x 43°	0.20	ϕ40 x 45 x 37	70	○	
Y1308GSNA	x1	8.0	1/3"	CS	F1.3-360	AI (Direct)	Manual	25°x 34°x 43°	0.20	ϕ40 x 45 x 37	70	○	
Y1206M	x1	6.0	1/2"	C	F1.4-22C	Manual	Manual	44°x 58°x 70°	0.20	ϕ32 x 36	70	○	
Y1206M-CS	x1	6.0	1/2"	CS	F1.4-22C	Manual	Manual	44°x 58°x 70°	0.20	ϕ32 x 36	70	○	
Y1206M-S	x1	6.0	1/2"	C	F1.2-C	Manual	Manual	56.1°x 43.6°	0.20	ϕ42 x 40.2	65	○	
Y1206GNA	x1	6.0	1/2"	C	F1.4-64	AI (Direct)	Manual	44°x 58°x 70°	0.20	ϕ40 x 45 x 37	70	○	
Y1206GSNA	x1	6.0	1/2"	C	F1.4-360	AI (Direct)	Manual	44°x 58°x 70°	0.20	ϕ40 x 45 x 37	70	○	
Y1206GNA-CS	x1	6.0	1/2"	CS	F1.4-64	AI (Direct)	Manual	44°x 58°x 70°	0.20	ϕ40 x 45 x 42	71	○	
Y1206GSNA-CS	x1	6.0	1/2"	CS	F1.4-360	AI (Direct)	Manual	44°x 58°x 70°	0.20	ϕ40 x 45 x 42	71	○	
Y1206G	x1	6.0	1/2"	C	F1.4-64	AI (Video)	Manual	44°x 58°x 70°	0.20	ϕ40 x 45 x 37	70	×	
Y1206GS	x1	6.0	1/2"	C	F1.4-360	AI (Video)	Manual	44°x 58°x 70°	0.20	ϕ40 x 45 x 37	70	×	
Y1206G-CS	x1	6.0	1/2"	CS	F1.4-64	AI (Video)	Manual	44°x 58°x 70°	0.20	ϕ40 x 45 x 42	71	×	
Y1206GS-CS	x1	6.0	1/2"	CS	F1.4-360	AI (Video)	Manual	44°x 58°x 70°	0.20	ϕ40 x 45 x 42	71	×	
Y1212M	x1	12.0	1/2"	C	F1.4-22C	Manual	Manual	22°x 30°x 38°	0.20	ϕ32 x 33	60	○	
Y1212M-CS	x1	12.0	1/2"	CS	F1.4-22C	Manual	Manual	22°x 30°x 38°	0.20	ϕ32 x 33	60	○	
Y1212GNA	x1	12.0	1/2"	C	F1.4-64	AI (Direct)	Manual	22°x 30°x 38°	0.20	ϕ40 x 45 x 37	70	○	
Y1212GSNA	x1	12.0	1/2"	C	F1.4-360	AI (Direct)	Manual	22°x 30°x 38°	0.20	ϕ40 x 45 x 37	70	○	
Y1212GNA-CS	x1	12.0	1/2"	CS	F1.4-64	AI (Direct)	Manual	22°x 30°x 38°	0.20	ϕ40 x 45 x 42	71	○	
Y1212GSNA-CS	x1	12.0	1/2"	CS	F1.4-360	AI (Direct)	Manual	22°x 30°x 38°	0.20	ϕ40 x 45 x 42	71	○	
Y1212G	x1	12.0	1/2"	C	F1.4-64	AI (Video)	Manual	22°x 30°x 38°	0.20	ϕ40 x 45 x 37	70	×	
Y1212GS	x1	12.0	1/2"	C	F1.4-360	AI (Video)	Manual	22°x 30°x 38°	0.20	ϕ40 x 45 x 37	70	×	
Y1212G-CS	x1	12.0	1/2"	CS	F1.4-64	AI (Video)	Manual	22°x 30°x 38°	0.20	ϕ40 x 45 x 42	71	×	
Y1212GS-CS	x1	12.0	1/2"	CS	F1.4-360	AI (Video)	Manual	22°x 30°x 38°	0.20	ϕ40 x 45 x 42	71	×	
Y1225M	x1	25.0	1/2"	C	F1.8-22C	Manual	Manual	11°x 14°x 18°	1.00	ϕ32 x 33	65	○	
Y1225M-CS	x1	25.0	1/2"	CS	F1.8-22C	Manual	Manual	11°x 14°x 18°	1.00	ϕ32 x 33	65	○	
Y1225G	x1	25.0	1/2"	C	F1.8-64	AI (Video)	Manual	11°x 14°x 18°	1.00	ϕ40 x 45 x 37	65	×	
Y1225GS	x1	25.0	1/2"	C	F1.8-360	AI (Video)	Manual	11°x 14°x 18°	1.00	ϕ40 x 45 x 37	65	×	
Y1225G-CS	x1	25.0	1/2"	CS	F1.8-64	AI (Video)	Manual	11°x 14°x 18°	1.00	ϕ40 x 45 x 42	66	×	
Y1225GS-CS	x1	25.0	1/2"	CS	F1.8-360	AI (Video)	Manual	11°x 14°x 18°	1.00	ϕ40 x 45 x 42	66	×	
Y1225GNA	x1	25.0	1/2"	C	F1.8-64	AI (Direct)	Manual	11°x 14°x 18°	1.00	ϕ40 x 45 x 37	65	○	
Y1225GSNA	x1	25.0	1/2"	C	F1.8-360	AI (Direct)	Manual	11°x 14°x 18°	1.00	ϕ40 x 45 x 37	65	○	
Y1225GNA-CS	x1	25.0	1/2"	CS	F1.8-64	AI (Direct)	Manual	11°x 14°x 18°	1.00	ϕ40 x 45 x 42	66	○	
Y1225GSNA-CS	x1	25.0	1/2"	CS	F1.8-360	AI (Direct)	Manual	11°x 14°x 18°	1.00	ϕ40 x 45 x 42	66	○	
YV2508RM	x3.2	2.5-8.0	1/3"	CS	F1.4-22C	Manual	Manual	79°x 105°x 129°	0.15	ϕ33 x 53	97	○	Infrared
YV2508RD	x3.2	2.5-8.0	1/3"	CS	F1.4-125	AI (Direct)	Manual	79°x 105°x 129°	0.15	ϕ33 x 43.5 x 53	100	○	Infrared
YV2508RA	x3.2	2.5-8.0	1/3"	CS	F1.4-125	AI (Video)	Manual	79°x 105°x 129°	0.15	ϕ33 x 43.5 x 53	105	×	Infrared

* Available on request with order of more than 500pcs. (Lead time --- 5 months)

*Specification are subject to change without notice.

○- Rohs Compliant

× - not Rohs Compliant

Model List (Discontinued)

YAMANO OPTICAL HIGH QUALITY CCTV LENS

COMPANY PROFILE

Company Name : YAMANO OPTICAL CO., LTD.
Founded : July, 1982

Main Products :
Auto Focus Zoom Lens
IR Zoom Lens
Zoom Lens for Panasonic 3CCD Camera
Fixed Focal Lens
Vari-Focal Lens
Pinhole Lens
Customized Zoom Lens
10 Mega Pixel Zoom Lens
FA Lens for Machine Vision

Export : U.S.A, Canada, Mexico, Uruguay
U.K., Germany, Norway, Belgium, Netherlands, Italy, Russia, Malta,
France, Israel, Saudi Arabia, Kuwait, India, Pakistan, South Afria,
China, Korea, Taiwan, Australia, Philippines, Thailand, Vietnam,

ISO Certified : June, 2006 ISO9001:2000
October, 2007 ISO14001:2004

EMS 523241 FM 504654

YAMANO HISTORY

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URL http://www.yamano-optical.co.jp/english/

YAMANO OPTICAL HIGH QUALITY CCTV LENS