

MM-302B

2.2 Mega Pixel HD-SDI 30X Zoom Camera



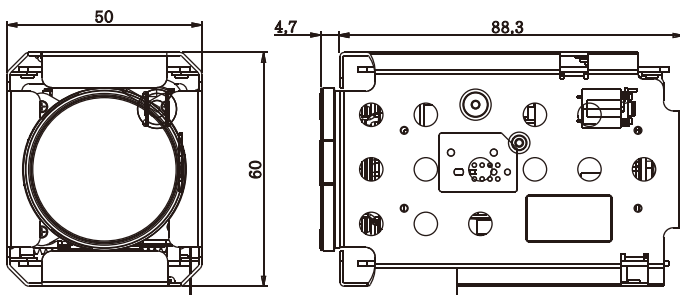
For the highest video quality and performance, MM-302B is the choice. Designed for the most demanding applications, the camera provides Full HD (1080p) coverage of large areas, great details when zooming in, and powerful motorized autofocus system. It is suitable for airports and seaports, as well as the border and traffic surveillance.

FEATURES

- 1/3" Panasonic CMOS Sensor
- Full HD Resolution: 1080p 30fps/ 720p 60fps
- 30x Optical Zoom (4.3mm~129mm) & 32x Digital Zoom
- Day & Night (ICR)
- WDR (Wide Dynamic Range)
- DNR (Digital Noise Reduction: 2D + 3D)
- Privacy Mask Function
- Intelligent Motion Detection
- Defog Function: Defogging foggy video image
- Supports VISCA, Pelco-D/P Protocol
- Video Out: HD-SDI, HDMI

DIMENSIONS

Unit : mm



Reliability and Environment Condition (30x)

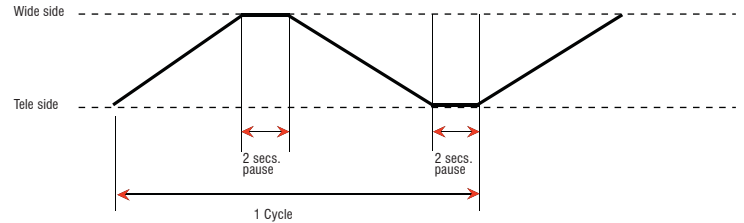
1. Life Test for Zoom

Should work after 1,000,000 cycles testing under the following condition at room temperature.

Setting : 60°C 30~40% in horizontal position

Movement condition : 960PPS 1-2 phase excitation

(Below is movement mode)



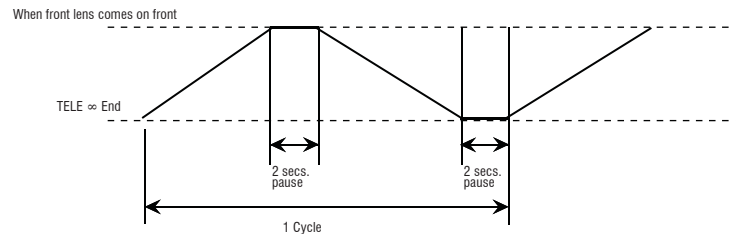
2. Life Test for Focus Operation

Should work after 2,000,000 cycles testing under the following condition at room temperature.

Setting : 60°C 30-40% in horizontal position

Movement condition : 960PPS 1-2 phase excitation

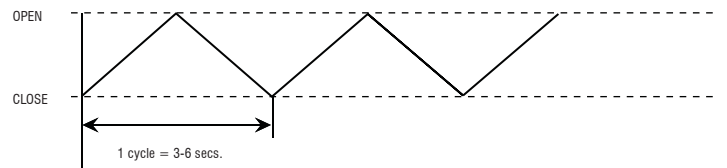
(Below is movement mode)



3. Life Test for Auto-iris

Should work after 500,000 cycles testing under the following condition at room temperature.

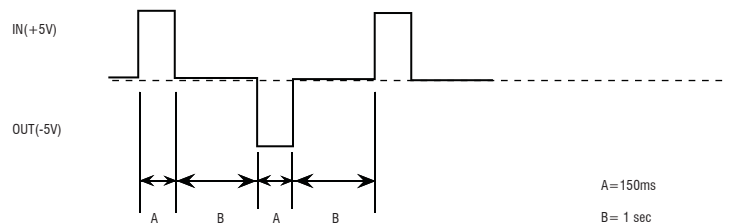
Setting : 60°C 30-40% in horizontal position



4. Life Test for IR Cut Filter

Should work after 200,000 cycles testing under the following condition at room temperature.

Setting : 60°C 30-40% in horizontal position



SPECIFICATIONS

MM-302B	
Image Sensor	1/3" Panasonic CMOS Sensor
Total Pixels	2,010(H) x 1,108(V), 2.2M Pixels
Active pixels	1,944(H) x 1,092(V), 2.1M Pixels
Scanning system	Progressive Scan
Sync. System	Internal
Resolution	Digital ; 1920x1080p(1080p/30fps) , 1280x720p(720p/60fps) Analog : 700TVL
Min. illumination	Color : 0.5 lux , BW : 0.1lux Color DSS : 0.002 lux , BW DSS : 0.001 lux
Video Output	HD : HD-SDI/HDMI Analog SD : VBS(without WDR)
S/N Ratio	more than 50dB (AGC off)
Lens type	X30 Day & Night Zoom Lens
Zoom Ratio	Optical x30, Digital x32 Zoom
Focal Length	f = 4.3 mm ~ 129.0 mm
Aperture Ratio	F1.6 (wide) ~ F4.7 (tele)
Focus	Mode / Distance / Lens Refresh / E.Zoom
Mode	Auto / One Push / Manual
Distance	0.1 / 0.5 / 0.8 / 1.0 / 3.0 / 6.0 / 10.0 m
Lens Refresh	Off / 1 ~ 10Day
E.Zoom	Off / MAX x2 ~ x32
Exposure	AUTO / IRIS.P / SHUT.P / MANUAL
Gain Control (AGC)	Off / On
Shutter Speed	1/30(25) ~ 1/60,000 sec
Iris	0 ~ 20
Digital Slow Shutter (DSS)	Off / Max x2 ~ x4
Flickerless	Off / On
Brightness	0 ~ 20
WDR/BLC	OFF / WDR / BLC
Day&Night	Auto / Day / Night / Ext
White Balance	AUTO / One Push / Manual / Indoor / Outdoor
Image	HLC / DNR / Mirror / Sharpness / ACE / Freeze
HLC	Off / On
DNR	Auto / Off / Low / Middle / High
Mirror	Off / H / V / H&V
Sharpness	0 ~ 10
Model	MM-202
ACE	Off / On
Freeze	Off / On
Privacy Mask	Off / 24 positions
Motion Detection	Off / 4 positions
Defect DET	Off / On
Defog	Off / On
System	NTSC / PAL
HD Format	1080P / 720P
Comm	Baud Rate : 2400 / 4800 / 9600 / 19200 / 38400 / 57600 / 115200 Protocol : VISCA / Pelco-D / Pelco- P / Update
Default	Off / On
Disp Sel (Off / On)	ID / Title / Zoom Ratio
Language	English
Power Source	9V to 15V DC
Power Consumption	500mA
Power Input	Connector
Video Output	Connector
Storage Temperature	-20℃ ~ +60℃ (Humidity : 20%RH ~ 95%RH)
Operating Temperature	-5℃ ~ +60℃ (Humidity : 20%RH ~ 80%RH)
External Dimension	50(W) x 60(H) x 88(D)
Weight	270g

*Design and specifications are subject to be changed without notice.

Pin Assignmnet

J204

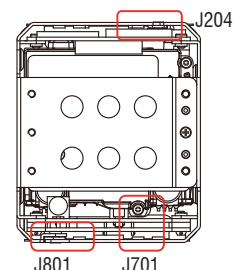
Pin No.	Name	I/O	Description
1	GND	-	Ground
2	TxD	Output	CMOS 5V (Low: Max 0.1 V, High: min 4.4 V)
3	RxD	Input	CMOS 5V (Low: MAX 0.8 V, High: min 2.0 V)
4	NC	-	NC
5	GND	-	Ground
6	NC	-	NC
7	GND	-	Ground
8	ADKEY	Input	OSD Control key
9	NC	-	NC
10	D/N-IN	Input	External Day and Night (Active Low)
11	NC	-	NC
12	MD-OUT	Output	Motion Detection output signal level
13	485-DIR	Output	Control the RS-485 communication direction.
14	F/W_SEL	Input	Contact to GND
15	GND	-	Ground
16	+5V	Output	Use the communication(RS-232 or 485) IC and LED control only.(Max 100mA)
17	GND	-	Ground
18	VBS-OUT	Output	CVBS Output(Without WDR)
19	GND	-	Ground
20	DC- IN	Input	DC 9 ~ 15V (Recommended : 9V or 12V)
21	DC- IN	Input	
22	DC- IN	Input	
23	DC- IN	Input	
24	DC- IN	Input	
Ref	24 Pin FFC Connector : 05002HR-24J05(Yeonho)		

J801

Pin No.	Name	I/O	Description
1	DATA2+	Output	HDMI Channel 2 positive output
2	DATA2-	Output	HDMI Channel 2 negative output
3	DATA1+	Output	HDMI Channel 1 positive output
4	DATA1-	Output	HDMI Channel 1 negative output
5	DATA0+	Output	HDMI Channel 0 positive output
6	DATA0-	Output	HDMI Channel 0 negative output
7	CLOCK+	Output	HDMI Clock Channel positive output
8	CLOCK-	Output	HDMI Clock Channel negative output
9	GND	-	Ground
10	SCL	I/O	Serial Clock
11	SDA	I/O	Serial Data
12	GND	-	Ground
13	HPD	Input	Hot Plug Detection
14	GND	-	Ground
15	+5V_HDMI	Output	+5V power
16	+5V_HDMI	Output	+5V power
17	+5V_HDMI	Output	+5V power
18	GND	-	Ground
19	GND	-	Ground
20	GND	-	Ground
Ref	20 Pin IDC Connector : USL00-20L-C(KEL Cop)		

J701

Pin No.	Name	I/O	Description
1	SDO	Output	HD-SDI Output
2	GND	-	Ground
Ref	MCX Jack - Right Angle Plug PCB Mount : J03-18-601 (Ju Young Tech)		



MM-302

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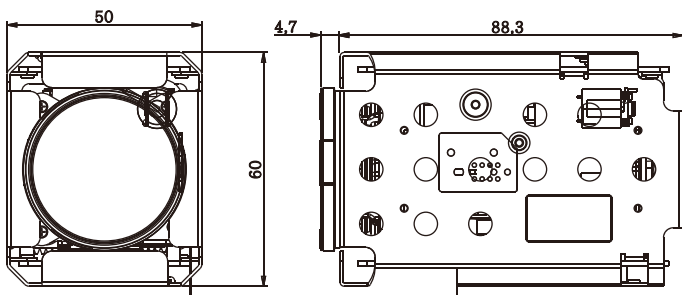
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- Video Out: LVDS

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Unit : mm



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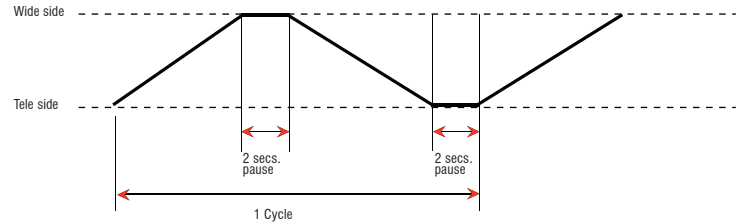
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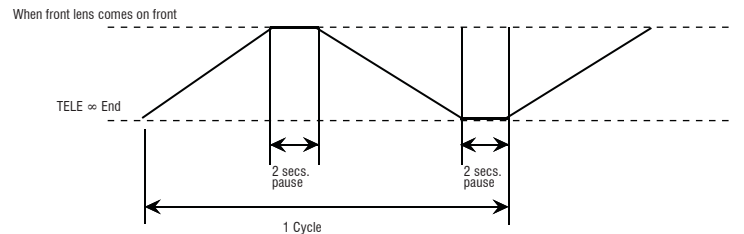
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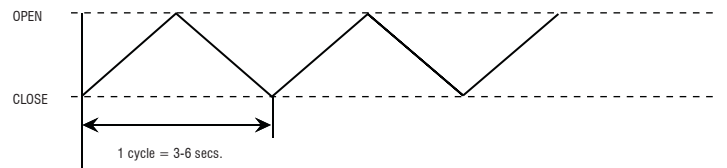
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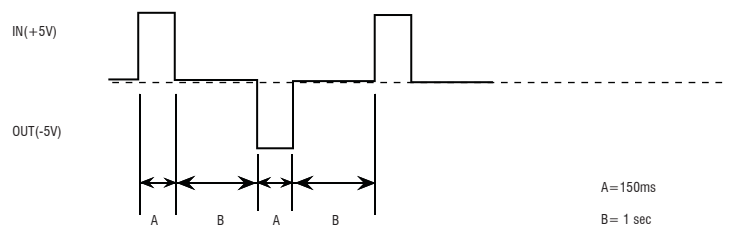
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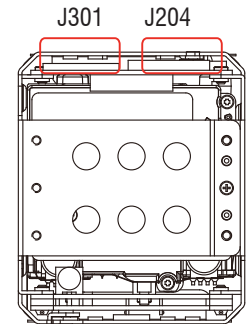
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Default	Off / On
Display	Disp Sel / Set Title
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Language	English
Power Source	9V to 15V DC
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External Dimension	50(W) x 60(H) x 88(D)
Weight	270g

Pin Assignmnet

J301

Pin No.	Name	Pin No.	Name
1	TXOUT3+	21	GND
2	TXOUT3-	22	GND
3	TXCLKOUT+	23	GND
4	TXCLKOUT-	24	GND
5	TXOUT2+	25	NC
6	TXOUT2-	26	NC
7	TXOUT1+	27	VBS-OUT
8	TXOUT1-	28	NC
9	TXOUT0+	29	NC
10	TXOUT0-	30	NC
11	GND		
12	TxD CMOS 5 V		
13	RxD		
14	DC 12V		
15	DC 12V		
16	DC 12V		
17	DC 12V		
18	DC 12V		
19	GND		
20	GND		
Ref	USL00-30L-C (KEL Cop.)		



J204

Pin No.	Name	Pin No.	Name
1	GND	21	DC 12V
2	TxD	22	DC 12V
3	RxD	23	DC 12V
4	NC	24	DC 12V
5	GND		
6	NC		
7	GND		
8	ADKEY		
9	NC		
10	D/N-IN		
11	NC		
12	MD-OUT		
13	485-DIR		
14	F/W_SEL		
15	GND		
16	+5V		
17	GND		
18	VBS-OUT		
19	GND		
20	DC 12V		
Ref	046240024006800+ (Kyocera-elco)		

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