

MM-208

1080p 60fps 20x Zoom Module



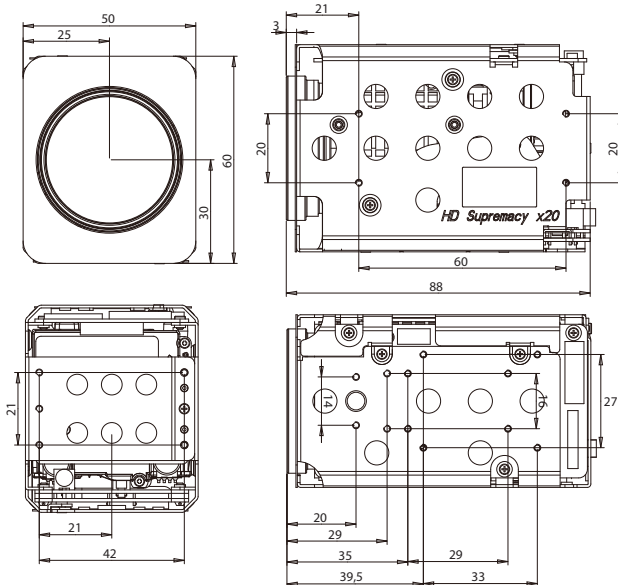
MAESTRO ZOOM

FEATURES

- 1/3" 2MP 60fps Panasonic CMOS sensor
- 1080p 60fps/30fps, 720p 60fps
- 20x Optical Zoom(4.7mm~94mm) & 32x Digital Zoom
- Day & Night(ICR)
- Real-time True WDR
- Digital Noise Reduction(2D+3D)
- Gyro EIS(Electronic Image Stabilizer)
- Privacy Mask Function
- High Light Compensation
- Intelligent Motion Detection
- Defog Function
- Supports VISCA, Pelco-D/P Protocol
- Video Out : LVDS, EX-SDI, 960H

DIMENSIONS

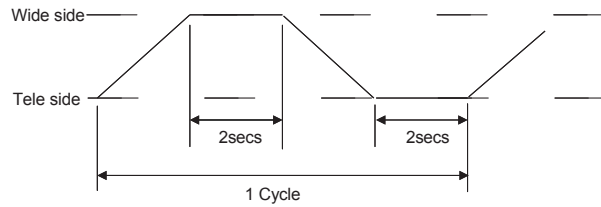
Unit : mm



Reliability and Environment Condition(20x)

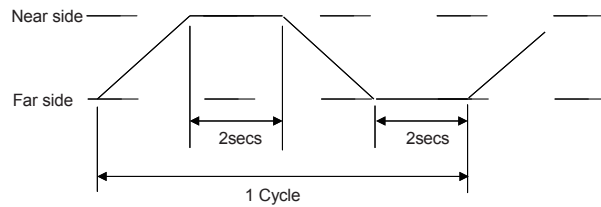
1.Zoom

- (1) Zoom operation cycle : 1,000,000 cycles
- (2) Operation condition : See below
- (3) Test condition : Normal temperature



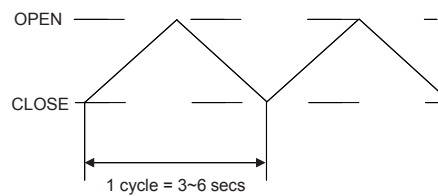
2.Focus

- (1) Focus operation cycle : 2,000,000cycles
- (2) Operation condition : See below
- (3) Test condition : Normal temperature



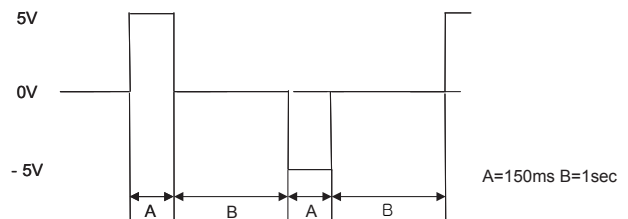
3. Auto-IRIS

- (1) Auto-iris operation cycle: 500,000 cycles
- (2) Operation condition : See below
- (3) Test condition : Normal temperature



4. IRCF

- (1) IRCF operation cycle: 20,000cycles
- (2) Operation condition : See below
- (3) Test condition : Normal temperature



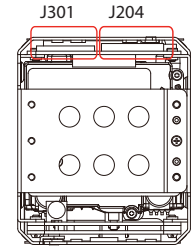
SPECIFICATIONS

MM-208				
Image Sensor	1/3" Panasonic CMOS Sensor			
Total Pixels	1956 (H) x 1266 (V) = 2.48M Pixels			
Active Pixels	1944 (H) x 1092 (V) = 2.12M Pixels			
Scanning System	Progressive Scan			
Sync. System	Internal			
Resolution	Digital ; 1080p/60(50)fps, 1080p/30(25)fps, 720p/60(50)fps, 720p/30(25)fps 960H(Over 800 TVL)			
Min. Illumination	Color : 0.5 lux , BW : 0.1lux, Color DSS : 0.002 lux , BW DSS : 0.001 lux			
Video Output	HD : Digital(LVDS), EX-SDI Analog SD : VBS(without WDR)			
S/N Ratio	more than 50dB (AGC off)			
Lens Type	20x Day & Night Zoom Lens			
Zoom Ratio	Optical 20x, Digital 32x Zoom			
Focal Length	f = 4.7 mm ~ 94.0 mm			
Aperture Ratio	F1.6 (wide) ~ F3.5 (tele)			
Angle Of View(D, H, V)	Wide	62.7°	55.4°	32.6°
	Tele	3.3°	2.9°	1.6°
Focus	Mode / Distance / Zoom Speed / Lens Refresh / E.Zoom			
Mode	Auto / One Push / Manual			
Distance	0.1 / 1.0 / 3.0 / 6.0 / 10.0 m			
Lens Refresh	One Push / 1 ~ 10Day			
Digital Zoom	Off / MAX 2x ~ 32x			
Exposure	AUTO / IRIS.P / SHUT.P / MANUAL			
Gain Control(AGC)	Off / On			
Shutter Speed	1/30(25) ~ 1/30,000 sec			
Iris	0 ~ 20			
Digital Slow Shutter(DSS)	Off / 2x / 4x(8x : 60 or 50 fps mode only)			
Brightness	0 ~ 20			
WDR/BLC	OFF / WDR / BLC			
Day&Night	Auto / Day / Night / Ext-in			
White Balance	Auto / One Push / Manual / Indoor / Outdoor			
HLC	Off / On / Night Only			
DNR	Auto / Off / Low / Middle / High			
Mirror	Off / H / V / H&V			
Sharpness	0 ~ 10			
ACE	Off / Low / Middle / High			
Defog	Off / On(Auto / Manual)			
Privacy Mask	Off / 24 positions			
Motion Detection	Off / 3 positions			
Defect Detection	One Push			
System	NTSC / PAL			
HD Format	1080p/30(25)fps / 1080p/60(50)fps / 720p/30(25)fps / 720p/60(50)fps			
Communication	Baud Rate : 2400 / 4800 / 9600 / 19200 / 38400 / 57600 / 115200 Protocol : VISCA / Pelco-D / Pelco- P / Update			
Language	English / Simplified Chinese / Traditional Chinese / Japanese			
Power Source	9V to 15V DC			
Power Consumption	500mA			
Power Input	Connector			
Video Output	Connector			
Storage Temperature	-20 °C ~ +60 °C (Humidity : 20%RH ~ 95%RH)			
Operating Temperature	-5 °C ~ +60 °C (Humidity : 20%RH ~ 80%RH)			
Dimensions	50(W) x 60(H) x 88(D)			
Weight	260g			

Pin Assignment

J301	
1	TXOUT3+
2	TXOUT3-
3	TXCLKOUT+
4	TXCLKOUT-
5	TXOUT2+
6	TXOUT2-
7	TXOUT1+
8	TXOUT1-
9	TXOUT0+
10	TXOUT0-
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
21	TXOUT7+
22	TXOUT7-
23	TXOUT6+
24	TXOUT6-
25	EXSDI+
26	EXSDI-
27	TXOUT5+
28	TXOUT5-
29	TXOUT4+
30	TXOUT4-

Ref USL00-30L-C (KEL Cop.)



J204	
1	GND
2	TxD
3	RxD
4	NC
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
21	DC 12V
22	DC 12V
23	DC 12V
24	DC 12V

Ref 05002HR-24J05 (YEONHO)

* Design and specifications are subject to change without notice.