

unit : mm (±0.5)

Feature

- High Sensitivity!
- High Performance.
- 1/13" CCIQ II Color
- Ø 3.8 mm only
- 642 x 484 Pixel
- TV OUT

Specification

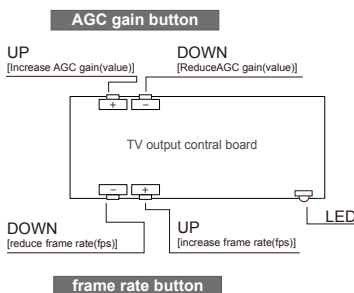
Model	MX-B13R3-90
LED Light illumination	W/O LED
Video system	NTSC / PAL
Pixel size	1.75µm
Number of effective pixels	642 X 484 (NTSC & PAL)
Image sensor	1/13" CCIQ II Color Camera
Resolution(TV Lines)	480 TV Lines
S/N Ratio	34 dB
Dynamic range	66 dB
Shutter Type	Electronic Rolling Shutter (ERS)
Sensitivity	1.2V /Lux.sec
Sensor scan mode	progressive scan
Minimum illumination	5 Lux / F2.8
Frame Rate	30 Field/sec(NTSC) , 25 Field/sec(PAL)
Horizontal sync frequency	NTSC -15.734kHz , PAL - 15.625kHz
Vertical sync frequency	NTSC - 60Hz , PAL - 50Hz
Camera consumption	0.45
Video output	1Vp-p , 75ohm composite
Built - lens	1.2mm/F 2.5
Storage temperature	-30 to 60 Degree C
Working temperature	-10 to 45 Degree C
Power source	Camera input: DC 5V
Power current	160 mA(max)



MX-B13R3-90

Order information

MODEL	Dimension	LED Light
MX-B13R3-90	(D)3.8 x 10.3 mm(sensor board) + 800+16 x 40mm(TV Output Control Board)	N/A



function	LED indicator	7	6	5	4	3	2	1
AGC gain (value)		200	150	100	80	60	40	20

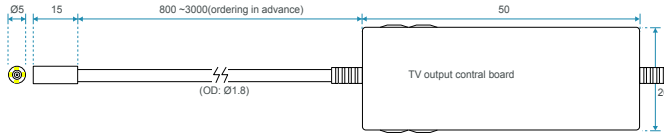
function	LED indicator	7	6	5	4	3	2	1
Frame rate (fps)		1 fps	2 fps	4 fps	6 fps	10 fps	15 fps	30 fps(NTSC) 25 fps(PAL)

◎ How to adjust "frame rate" and "AGC gain" :

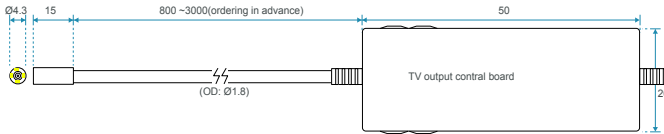
1. Press the "Up" or "Down" button to select function , according to the chart.
2. The LED indicator blinks , according to the number of time user presses the button.
3. Every function adjustment takes 5 sec.
4. AGC gain: 20 , Frame rate: 30fps(NTSC) , 25fps(PAL) is for normal endoscopy application.

- Frame rate is "1fps" , "2fps" , "4fps" , "6fps" , "10fps" , "15fps" , "30fps(NTSC) , 25fps(PAL)" , AGC gain should be set at "20" first.
- When AGC gain is at 200 , 150 , 100 , 80 , 60 , 40 , frame rate value will be different according to external environment.

MO-T13R3L-90



MO-T13R3L-50



Feature

- High Sensitivity!
- High Performance.
- 1/13" CCIQ II Color
- Ø 4.3 mm only
- 642 x 484 Pixel

Specification

unit : mm (±0.5)

Model	MO-T13R3L-90	MO-T13R3L-50
LED Light illumination	white LED x 4	
Video system	NTSC / PAL	
Pixel size	1.75µm	
Number of effective pixels	642 X 484 (NTSC & PAL)	
Image sensor	1/13" CCIQ II Color Camera	
Resolution(TV Lines)	480 TV Lines	
S/N Ratio	34 dB	
Dynamic range	66 dB	
Shutter Type	Electronic Rolling Shutter (ERS)	
Sensitivity	1.2V /Lux.sec	
Sensor scan mode	progressive scan	
Minimum illumination	5 Lux / F2.8	
Frame Rate	30 Field/sec(NTSC) , 25 Field/sec(PAL)	
Horizontal sync frequency	NTSC -15.734kHz , PAL - 15.625kHz	
Vertical sync frequency	NTSC - 60Hz , PAL - 50Hz	
Camera consumption	0.45	
Video output	1Vp-p , 75ohm composite	
Built - lens	1.2mm/F 2.5	1.498mm/F 5.0
Storage temperature	-30 to 60 Degree C	
Working temperature	-10 to 45 Degree C	
Power source	Camera input: DC 5V	
Power current	160 mA(max)	
Dimension(mm)	Ø5 x 15	Ø4.3 x 15

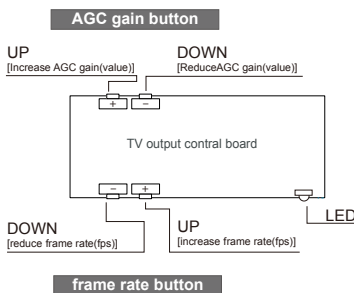


MO-T13R3L-90



MO-T13R3L-50

Order information



function	LED indicator	7	6	5	4	3	2	1
AGC gain (value)		200	150	100	80	60	40	20

function	LED indicator	7	6	5	4	3	2	1
Frame rate (fps)		1 fps	2 fps	4 fps	6 fps	10 fps	15 fps	30 fps(NTSC) 25 fps(PAL)

◎ How to adjust "frame rate" and "AGC gain" :

1. Press the "Up" or "Down" button to select function ,according to the chart.
2. The LED indicator blinks ,according to the number of time user presses the button.
3. Every function adjustment takes 5 sec.
4. AGC gain: 20 , Frame rate: 30fps(NTSC), 25fps(PAL) is for normal endoscopy application.

⚠ Frame rate is "1fps" ,"2fps" ,"4fps" ,"6fps" ,"10fps" , "15fps" ,"30fps(NTSC), 25fps(PAL)" ,AGC gain should be set at "20" first.

● When AGC gain is at 200 , 150 , 100 , 80 , 60 , 40 , frame rate value will be different according to external environment.