

MZR501

One-dimensional red light module

The scanning angle is wide

Reliable material for itself

Improve scan quality

Small size compatible with all kinds of equipment

Low power adaptive lighting technology



Product Features

Reliable material

The high-definition glass lenses of MZR501 ensure reliable performance in all conditions. Its robust fiberglass reinforced polycarbonate body is resistant to mechanical impact and can be used from the general home environment to hard field applications

The scanning Angle is wide

Its 50-degree scan Angle is greater than any other laser scanning engine of its class, enabling it to read high-capacity bar codes in space-limited applications.

Improve scan quality

The use of short wavelength red LED lighting improves visibility. The MZR501's high definition glass lens ensures reliable performance under all conditions.

Small size compatible with all kinds of equipment

The MZR501 is only 7.5mm high, allowing for low-profile installations such as smartphones and data collectors.

Low power adaptive lighting technology

MZR501 Allow it to automatically read bar codes, whether on paper or on LCD screens such as mobile phones/tablets/and PC monitors, while maintaining very low power consumption.

MZR501

One-dimensional red light module

1 . Technical Parameter

Electrical Character

Data interface	TTL
Working voltage	DC3.3V±10%
Working current	max250mA
Interface specifications	0.5-12P FPC

Optical Property

Sensor		CCD linear sensor	
Aim at the light source		Red bar LED	
Reading Angle		Rotation angle: $\pm 50^{\circ}$; Skew angle: $\pm 65^{\circ}$; Tilt angle: $\pm 25^{\circ}$	
Max wavelength		624nm	
Scanning rate		300scans	
Visual angle	Standard	50°	
	Vertical	± 0.25	Standard value
		$\pm (1.3\sim 1.8)$	Crest value

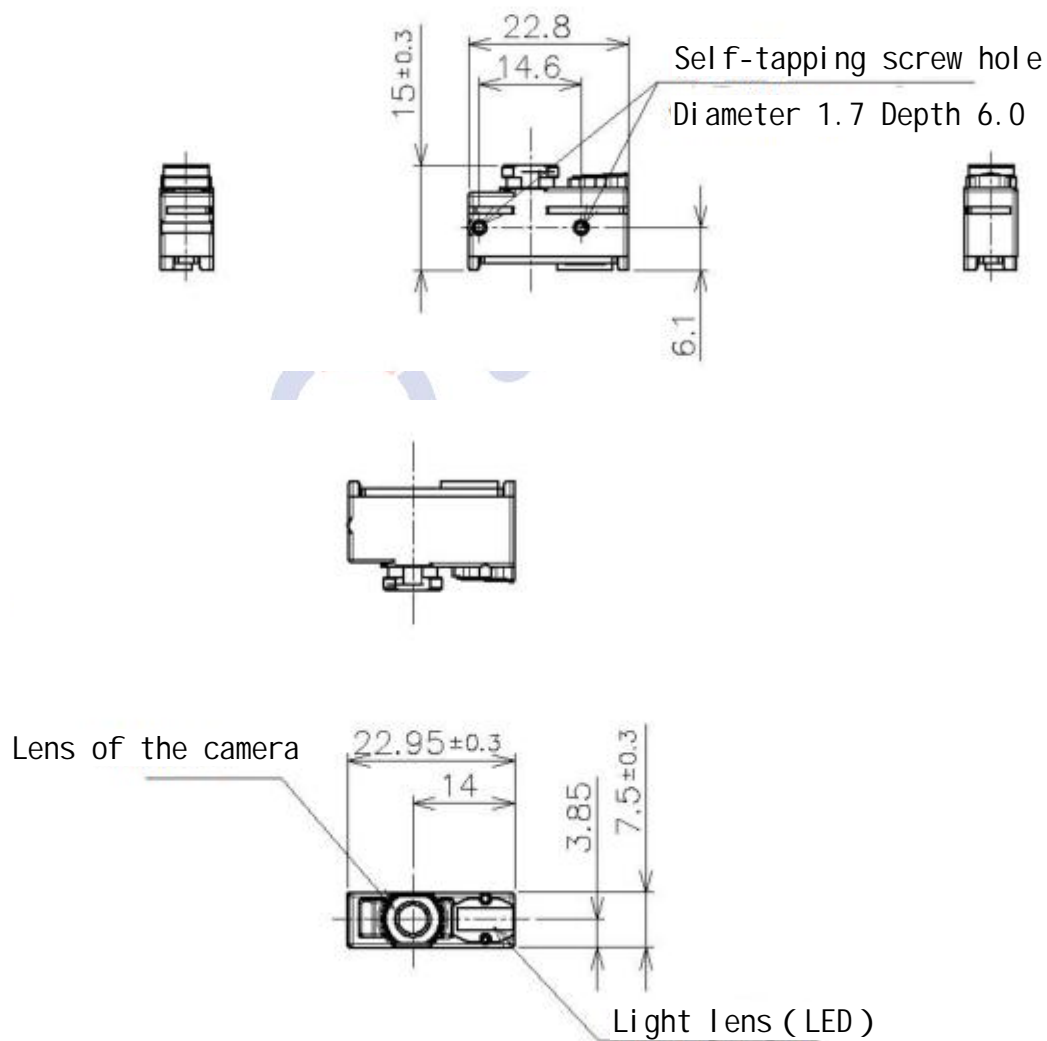
Physical Characteristics

Size	22.8mm x 15.0mm x 7.5mm(L*W*H)
Weight	2.4g

Environmental Character

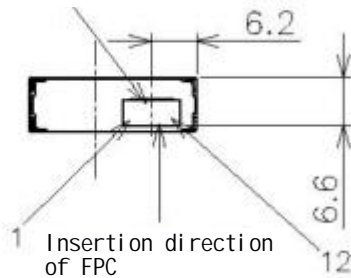
Temperature	-20° - 60°C
Humidity	5% - 95%
Light resistance	Incandescent lamp 4000lx, fluorescent lamp 4000lx, sunlight 100000lx
Seismic ability	180cm multiple drops on concrete floor without any fault

2. Product Size



3. Definition of PIN

Interface connector
(12-pin)



Pin name	Pin number	I/O	Instruction
Trigger	1	I	Trigger input, CMOS, logic level: low=trigger
Wake	2	I	Wake up input, CMOS, logic level: low=wake up
Decode LED	3	O	LED output, CMOS logic level: Low=LED is on
Buzzer	4	O	The buzzer controls the pulse output. CMOS logic level: low = buzzer on
Power Down	5	O	Low power output, CMOS logic level: high = low power state
RTS	6	O	Request to send, CMOS logic level
CTS	7	I/O	Clear the send, CMOS logic level
Txd	8	O	Serial data output, CMOS logic level
Rxd	9	I/O	Serial data input, CMOS logic level
GND	10	—	Landing
VDD	11	I	Power supply: DC 3.0 ~3.6 v
Boot	12	I	Start signal input, CMOS, logic level: high = normal operation

4. Angle of scan

Rotate around the Z axis

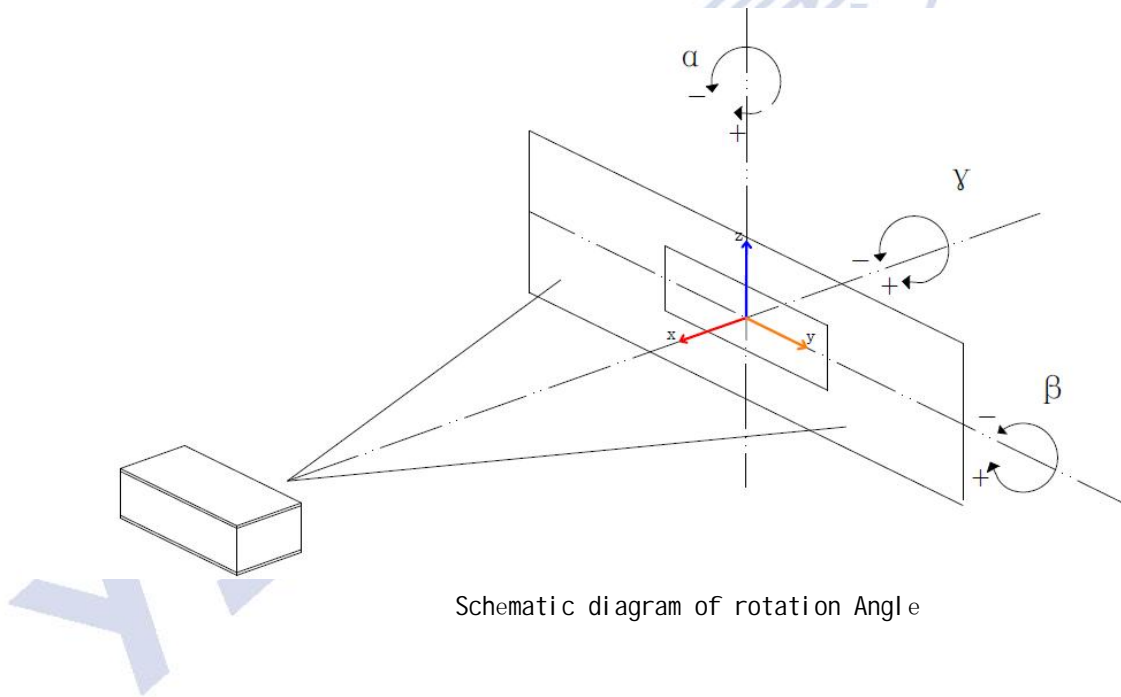
$$\alpha = \pm 50^\circ$$

Rotate around the Y axis

$$\beta = \pm 65^\circ$$

Rotate around the X axis

$$\gamma = \pm 25^\circ$$



Schematic diagram of rotation Angle

5. Read the depth of field

Resolution ratio	Symbol	PCS	Blank space	Count
1.0mm	Code39	0.9	20mm	1
0.5mm	Code39	0.9	10mm	4
0.6mm	EAN -13	0.9	10mm	13
0.25mm	Code39	0.9	5mm	9
0.127mm	Code39	0.9	7mm	4

No further notice will be given if the specifications are changed