

## LVM-GD



### SYSTEM INTRODUCTION :

By detecting the width, position and continuity of the glue , the glue detection system realizes the online monitoring and defect warning of the glue quality. The system collects the glue image in real time, analyzes the characteristics of the glue in the image, judges the quality of the glue , and finally feeds the detection results to the robot.

### SYSTEM FEATURES:

- Main functions: online monitoring of the glue quality, detecting the position, width and continuity of the glue
- System time-consuming: real-time detection in the rubber gun work, do not occupy the production beat
- Analyze data: store images and data, provide data reports for process analysis and quality tracing
- Practical application: for the glue quality testing in automobile production

### FLOW OF WORK:

- The measured piece is evenly irradiated with LED light source to obtain the characteristics of the gule
- The three cameras shoot 360° without dead angle, and obtain the complete and continuous glue image information
- The position information and gray level information of the glue are obtained by image processing
- Use the teaching information to judge the continuity, width and position of the glue to be tested

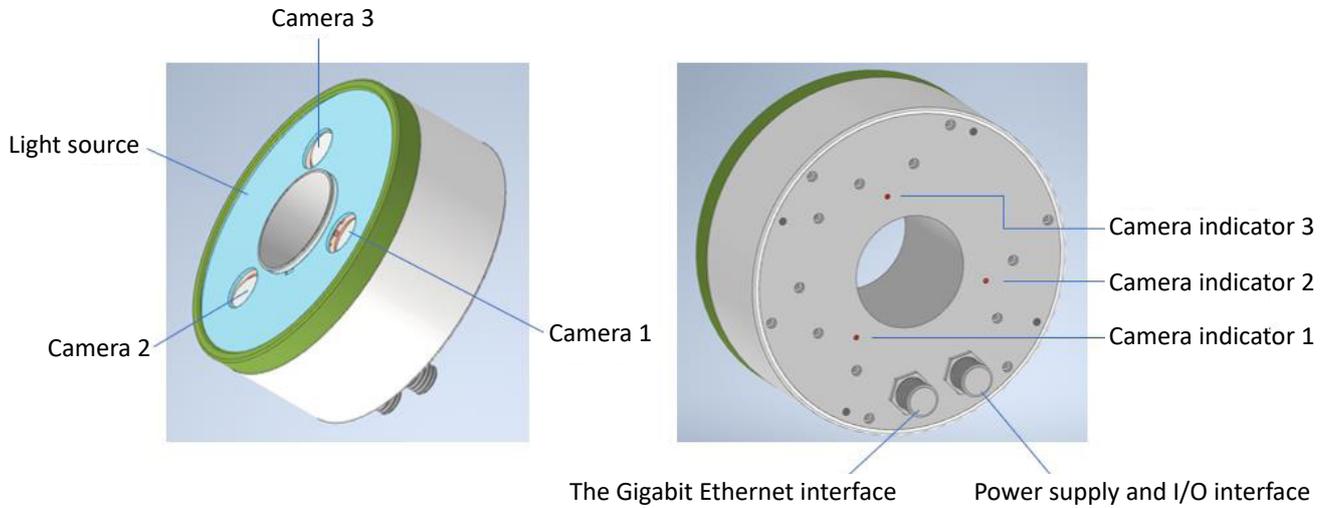
### PRODUCT DATA

<b>SINGLE CAMERA PIXEL</b>	1440*1080	<b>INSTALLATION DISTANCE (MM)</b>	140±10
<b>SINGLE-CAMERA VIEW *1 (MM)</b>	Upper 85, lower 94, waist 68	<b>RESOLUTION (MM/ PIXEL)</b>	0.07
<b>DETECTION ACCURACY*2 (MM)</b>	≥ 0.2	<b>FRAME RATE (FPS)</b>	≤ 24

\*1 : Corresponding to the field of vision with the installation distance of 140mm. Due to the tilt of the camera for installation, the field of vision on the detection plane is isosceles trapezoid

\*2: The detection accuracy will change due to the different background and light exposure

LVM-GD



HARDWARE CONFIGURATION

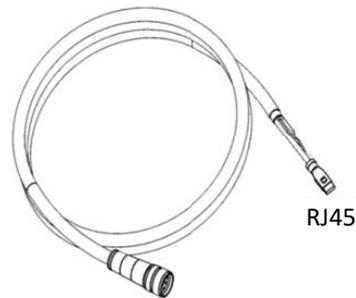
<b>CAMERAS 1, 2, AND 3</b>	imaging	<b>LIGHT SOURCE</b>	Provide lighting, support for white, red, green, blue 4 colors
<b>THE GIGABIT ETHERNET INTERFACE</b>	8 pin male, connected to Ethernet, transmit control signals and images	<b>POWER SUPPLY AND I/O INTERFACE</b>	8 pin female, receive power DC 24V and camera trigger digital signal
<b>CAMERA 1,2, AND 3 INDICATORS</b>	Normal power and communication when the light (blue), communication abnormal red		

Power supply and I/O cable



8 pin, M12 male

The Gigabit Ethernet cable



8 pin, M12 female

SENSOR CABLES:

The sensor uses two kinds of cables: power supply and I/O cable, Gigabit Ethernet cable. The power supply and I/O cable can transmit DC 24V power and receive digital camera trigger signals. The Gigabit Ethernet cable is used to transmit the sensor software control signals and images.

LVM-GD

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POWER SUPPLY AND I/O CABLE:

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COLOR	INPUT/OUTPUT	EXPLANATION
Brown	/	DC 24V+
Blue	/	DC 0V
White	Input	The camera trigger signal
Black (white light)	Input	White light source control signal
Black (red light)	Input	Red light source control signal
Black (green light)	Input	Green light source control signal
Black (blue light)	Input	Blue light source control signal

GIGABIT ETHERNET CABLE:

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COLOR	INPUT/OUTPUT	EXPLANATION
Black RJ45	/	Gigabit Ethernet interface