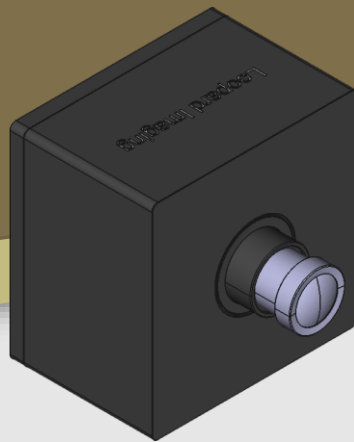




**LEOPARD**  
IMAGING

# LI-USB30-OG05B20-YUV-090H



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## INTRODUCTION

The LI-USB30-OG05B20-YUV-090H is a global shutter camera. It is equipped with OmniVision 1/2.53" CMOS 5MP global shutter image color sensor OG05B20 which features with PureCel®plus-S and Nyxel® technologies , ISP and USB3.0 controller. It has a dedicated Inbuilt high-performance Image Signal Processor (ISP) chip tuned to bring out the best-in-class image quality and color reproduction, making it adaptable to different lighting conditions. This camera outputs YUV image data.

## SPECIFICATIONS

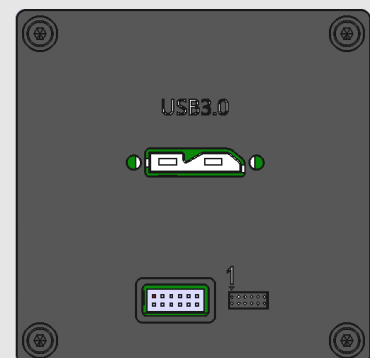
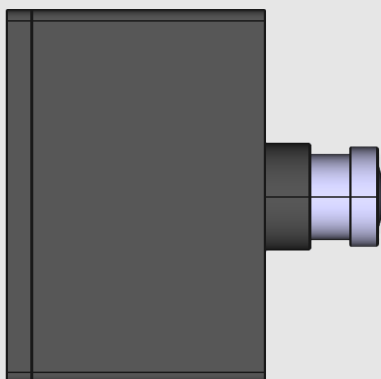
|                    |                                                  |
|--------------------|--------------------------------------------------|
| Frame Rate         | TBD                                              |
| Output Format      | YUV422                                           |
| Sensor             | OmniVision 1/2.53" CMOS 5MP image sensor OG05B20 |
| Optical Format     | 1/2.53"                                          |
| Pixel Size         | 2.2 x 2.2 $\mu\text{m}$                          |
| Color / Mono       | Color                                            |
| Shutter            | Global shutter                                   |
| Resolution         | 2592 (H) x 1944 (V) (active pixels)              |
| ISP                | Included                                         |
| USB30 Controller   | Included                                         |
| Interface          | USB 3.0 micro-B                                  |
| Power Supply Range | 5 VDC (from USB3.0 port)                         |
| Power Consumption  | TBD                                              |
| Operating Temp     | TBD                                              |
| Storage Temp       | TBD                                              |
| IP Rating          | TBD                                              |
| Weight             | TBD                                              |

## Applications

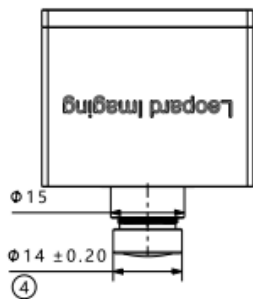
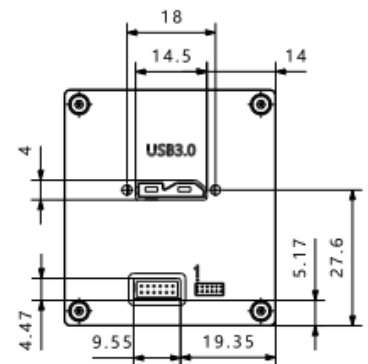
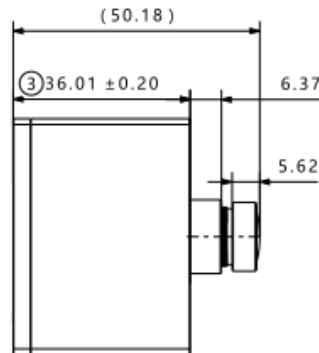
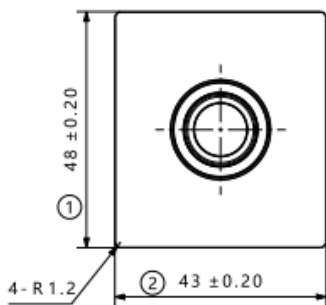
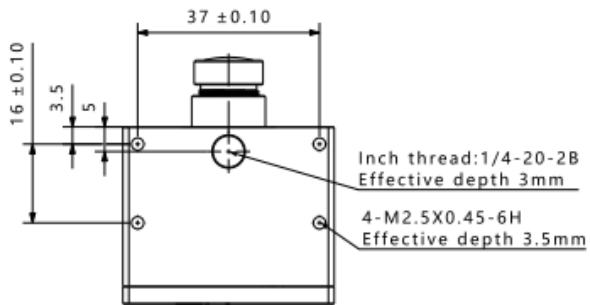
- Machine vision
- Logistics
- Industrial bar code scanning
- Robotics

## Lens Specifications

|                     |                     |
|---------------------|---------------------|
| Focal Length        | 3.8 mm              |
| Aperture, F/#       | 2.6                 |
| Field of View (FOV) | 90° horizontal      |
| IR Filter           | 650nm IR cut filter |
| Lens Mount          | M12 x P0.5          |



## DIMENSIONS



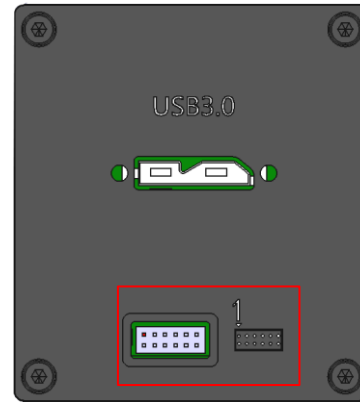
### NOTE:

- ⊗ marked are important sizes.
- Tolerances for the unmarked refer to the Tolerance table.
- All materials are compliant with RoHS requirements.
- Unit: mm

| TOLERANCE TABLE     |           |                   |           |                    |               |
|---------------------|-----------|-------------------|-----------|--------------------|---------------|
| LENGTH TOLERANCE    |           | CHAMFER TOLERANCE |           | ANGLE TOLERANCE    |               |
| Size X              | Tolerance | Size X            | Tolerance | Size X             | Tolerance     |
| $0.5 < X \leq 3$    | $\pm 0.1$ | $0.5 < X \leq 3$  | $\pm 0.2$ | $X \leq 10$        | $\pm 1^\circ$ |
| $3 < X \leq 6$      | $\pm 0.1$ | $3 < X \leq 6$    | $\pm 0.5$ | $10 < X \leq 50$   | $\pm 30'$     |
| $6 < X \leq 30$     | $\pm 0.2$ | $6 < X \leq 30$   | $\pm 1$   | $50 < X \leq 120$  | $\pm 20'$     |
| $30 < X \leq 120$   | $\pm 0.3$ | $X > 30$          | $\pm 2$   | $120 < X \leq 400$ | $\pm 10'$     |
| $120 < X \leq 400$  | $\pm 0.5$ |                   |           | $X > 400$          | $\pm 5'$      |
| $400 < X \leq 1000$ | $\pm 0.8$ |                   |           |                    |               |
| $X > 1000$          | $\pm 1.2$ |                   |           |                    |               |

## ● INTERFACE

- Part#: PZ3161212PDGFCNN070
- Number of Positions: 12
- Pitch: 1.27mm



## PINOUT DETAILS

| Pin No | Pin Name | Description                           | Pin Type | Voltage Level |
|--------|----------|---------------------------------------|----------|---------------|
| 1      | OPT_IN   | Isolated Input of optoiso             | Input    | Max 30V       |
| 2      | NC       | No connection                         | -        | -             |
| 3      | UART_TX  | Transmitting end of UART of CYUSB3014 | Output   | 3.3V          |
| 4      | UART_RX  | Receiving end of UART of CYUSB3014    | Input    | 3.3V          |
| 5      | GND      | Field Ground of optoiso               | -        | -             |
| 6      | GND      | Digital Ground                        | -        | -             |
| 7      | 5V0      | 5V power                              | Power    | 5V            |
| 8      | 3V3      | 3.3V power                            | Power    | 3.3V          |
| 9      | GPIO25   | General-purpose input/output          | Bidir    | 3.3V          |
| 10     | GPIO60   | General-purpose input/output          | Bidir    | 3.3V          |
| 11     | GPIO26   | General-purpose input/output          | Bidir    | 3.3V          |
| 12     | GPIO27   | General-purpose input/output          | Bidir    | 3.3V          |

- REVISION HISTORY

| Revision | Description    | Release Date |
|----------|----------------|--------------|
| 0.1      | Initial draft. | 04 Nov 2025  |

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