



# LI-AR2020-MIPI-079H



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## INTRODUCTION

The LI-AR2020-MIPI-079H is a MIPI CSI-2 camera equipped with ON Semiconductor 1/1.8-inch 20 Mp CMOS sensor AR2020 which features advanced 1.4  $\mu\text{m}$  pixel stacked BSI technology and enhanced NIR response on 850 nm and 940 nm wavelength. This camera outputs 10-bit RAW data.

## SPECIFICATIONS

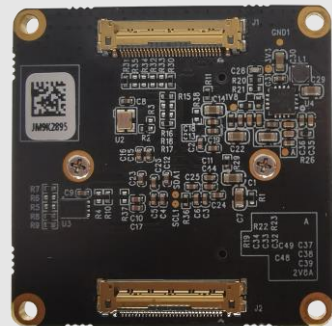
|                              |                                               |
|------------------------------|-----------------------------------------------|
| Sensor                       | ON Semiconductor 20 Mp CMOS sensor AR2020     |
| Optical Format               | 1/1.8"                                        |
| Resolution                   | 5120 (H) x 3840 (V) (active pixels)           |
| Pixel Size                   | 1.4 $\mu\text{m}$ Back Side Illuminated (BSI) |
| Output Format                | 10-bit RAW data                               |
| Frame Rate                   | 30 fps @ 5120 x 3840                          |
| ISP                          | Not included                                  |
| Color / Mono                 | Color sensor                                  |
| Interface                    | 4-lane MIPI D-PHY                             |
| xDR (Extended Dynamic Range) | Support                                       |
| Power Consumption            | Approximate 435 mW                            |
| Operating Temp               | -30°C ~ +85°C                                 |
| Storage Temp                 | -30°C ~ +85°C                                 |
| Weight                       | ~ 25 g                                        |
| Part#                        | LI-AR2020-MIPI-079H                           |

## APPLICATIONS

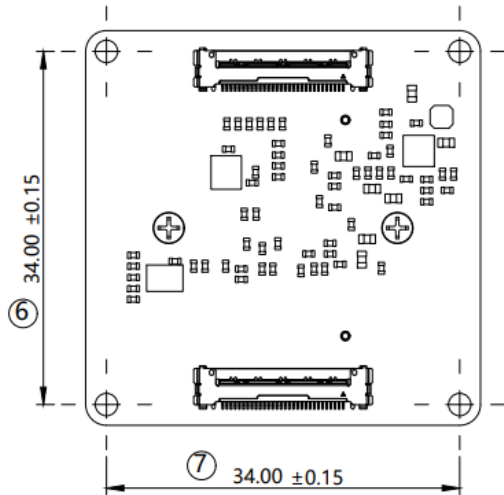
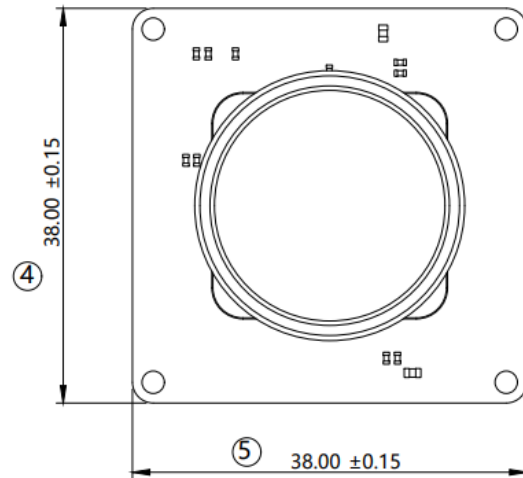
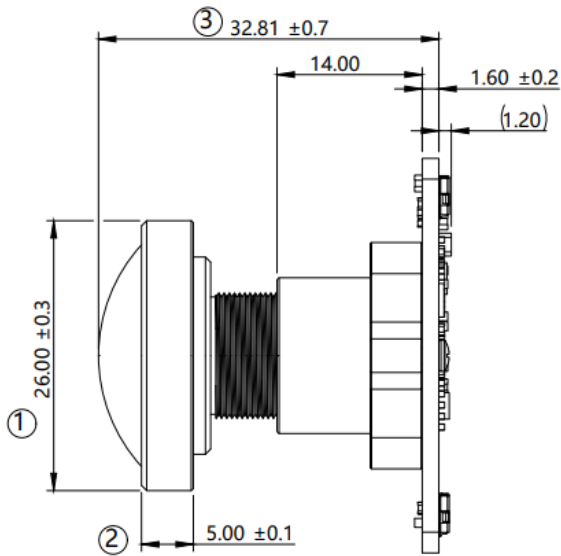
- Surveillance Camera
- Video Conferencing
- Machine Vision
- 3D and Stereo Imaging

## LENS SPECIFICATIONS

|                        |                      |
|------------------------|----------------------|
| Effective Focal Length | 4.5 mm               |
| Aperture, F/#          | 1.8                  |
| Field of View (FOV)    | 90° diagonal         |
|                        | 79° horizontal       |
|                        | 63° vertical         |
| Optical Distortion     | -2.8%                |
| Relative Illumination  | > 50%                |
| IR Filter              | 650 nm IR cut filter |
| Lens Mount             | M12 x P0.5           |



## DIMENSIONS



TOLERANCE TABLE

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

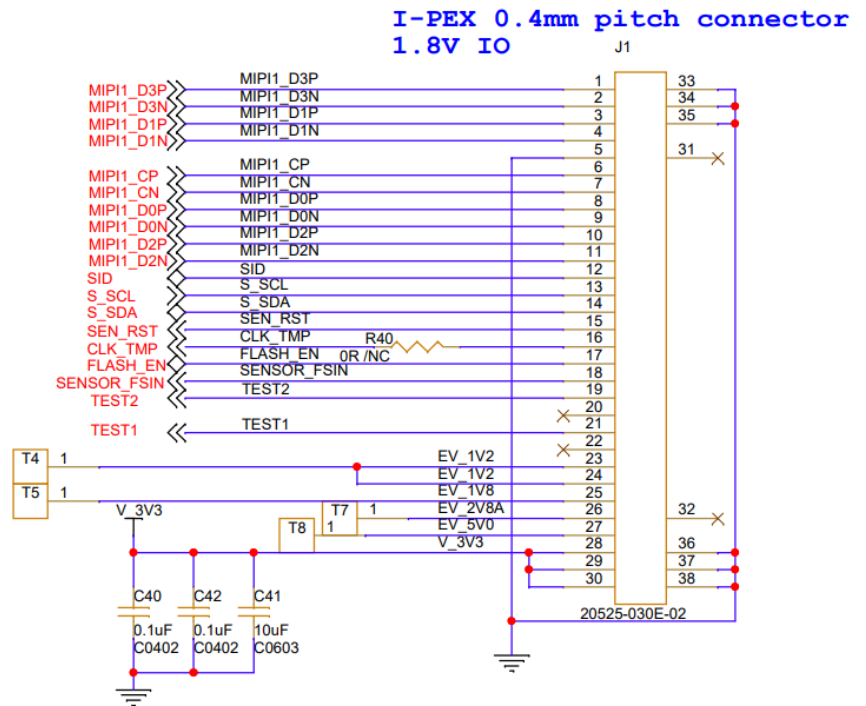
### NOTE:

- ⊗ marked are important sizes.
- Tolerances for the unmarked – refer to the Tolerance table.

Unit: mm

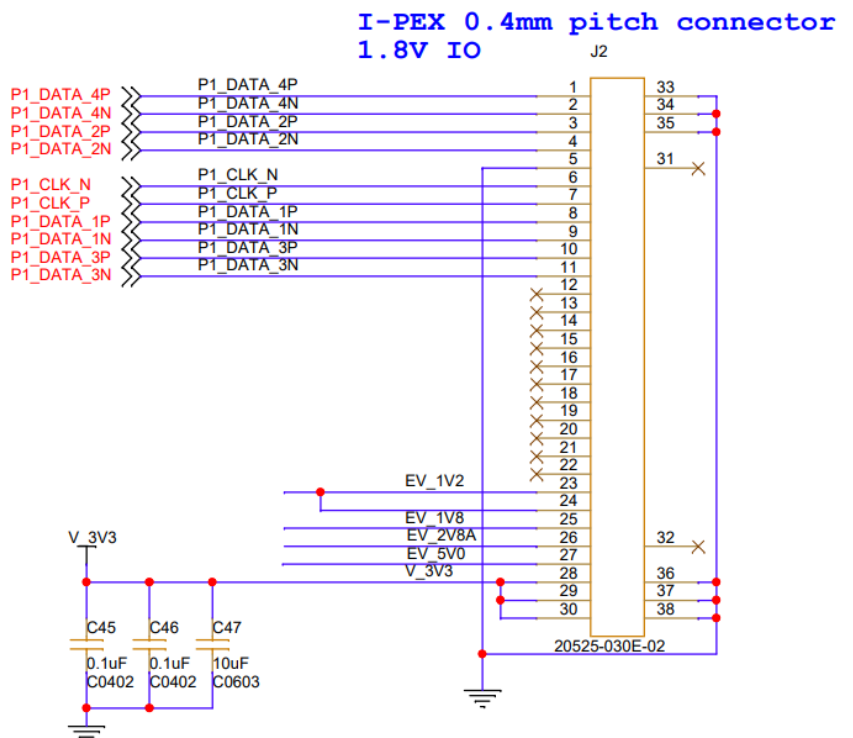
## ● INTERFACE J1

- Connector Part#: 20525-030E-02
- Number of Positions: 30
- Pitch: 0.4 mm
- Mating I-PEX Cable: FAW-1233
- Sensor I2C Address: 0x6C (8-bit)
- External Power Supply: 3.3V
- 2.8V, 1.8V, 1.05V are generated from board.



## ● INTERFACE J2 (Not Used)

- Connector Part#: 20525-030E-02
- Number of Positions: 30
- Pitch: 0.4 mm
- Mating I-PEX Cable: FAW-1233



## ● REVISION HISTORY

| Revision | Description    | Release Date |
|----------|----------------|--------------|
| 1.0      | First release. | 28 Jul 2023  |

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