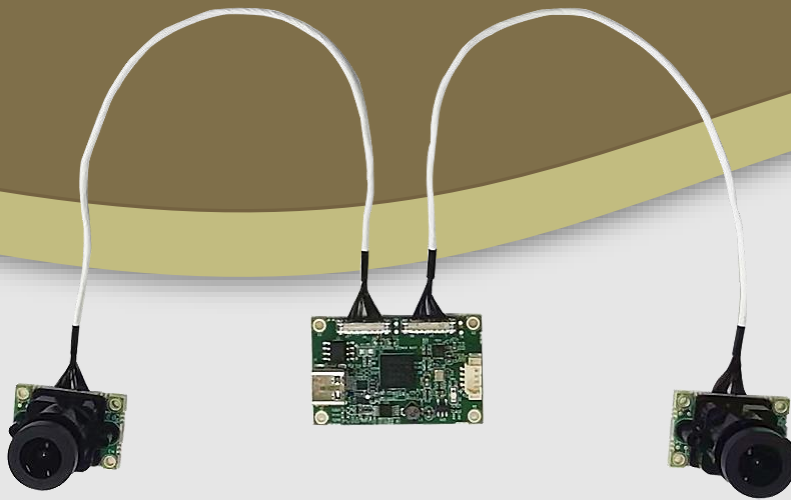




**LEOPARD**  
IMAGING

# LI-OV580-STEREO



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## TECHNICAL FEATURES

- USB 3.0 Super Speed support
- USB + 5 VDC powered device
- 3 x boards: 1 x OV580 + 2 x OV4689
- I-PEX cable Part#: FAW-1212-TX1  
Length: 200 mm
- YUV output without compression
- UVC compliant
- USB 2.0 backwards compatible
- Camera QTY: 2

**NOTE:** The distance between cameras is adjustable.

- Allows customization
- Sensor: Color CMOS 4M image sensor
- Part#: **LI-OV580-STEREO**

## Capture Direction

## LENS SPECIFICATIONS

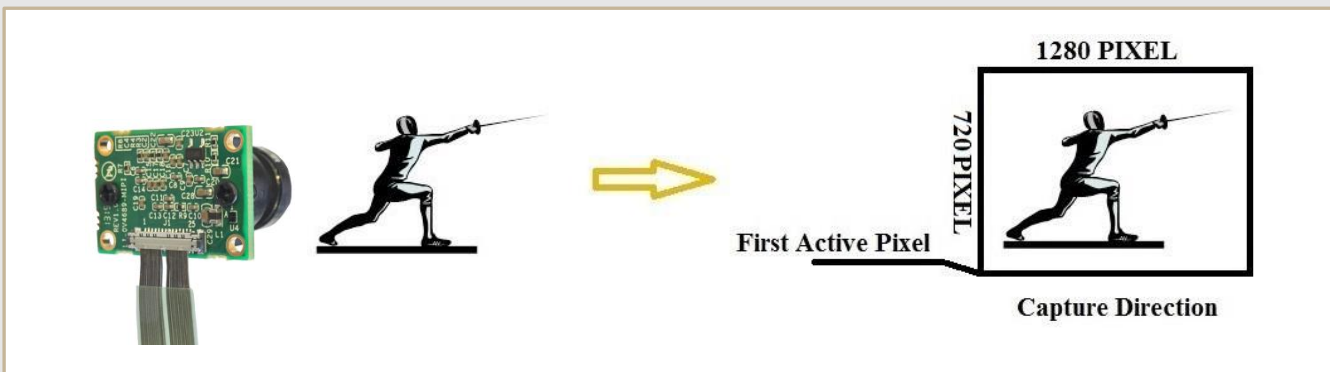
Focal Length	3.10 mm $\pm$ 5%
Aperture, F/#	2.0 $\pm$ 5%
Field of View (FOV)	113.2° diagonal
	98.0° horizontal
	58.0° vertical
TV Distortion	< -10.8%
Relative Illumination	< 82.8%
IR Filter	650 nm IR cut filter
Lens Mount	M12 x P0.5

## BOM

#	Items	QTY
1	LI-OV580-STEREO REV1.1	1
2	LI-OV4689-MIPI	2
3	FAW-1212-TX1 cables	2
4	USB 3.0 cable	1

## SDK SUPPORTED

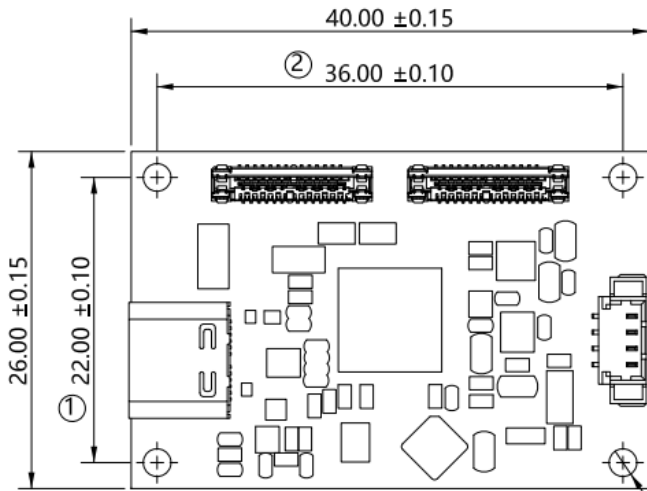
- Camera Tool Source Code in C#
- Capture & Display



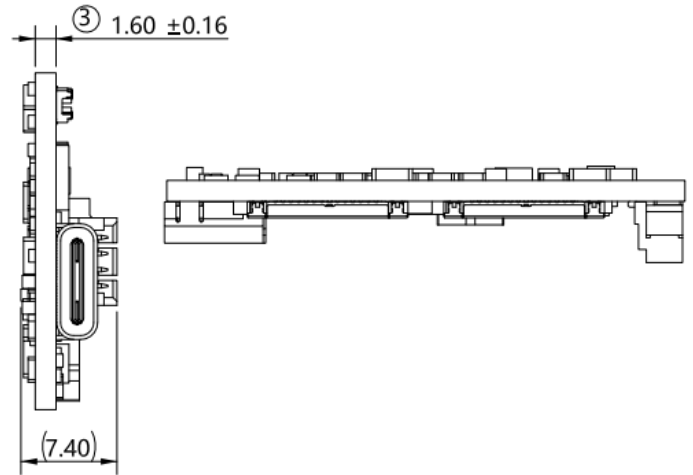
## KEY SPECIFICATIONS

General Behavior	
Video Resolution @ Frame Rate	4416 x 1242 (2 x 2208 x 1242) @ 15 fps (Crop mode) 3840 x 1080 (2 x 1920 x 1080) @ 30 fps (Crop mode) 2560 x 720 (2 x 1280 x 720) @ 60 fps (Binning mode) 1344 x 376 (2 x 672 x 376) @ 100 fps (Binning mode)
Sensitivity	1900 mV / Lux-sec
Interface (Optical)	
IR Filter	650 nm IR cut filter
Sensor	OmniVision color CMOS 4M image sensor OV4689
Optical Format	1/3"
Resolution	2688 (H) x 1520 (V) (active pixels)
Pixel Size	2.0 x 2.0 $\mu\text{m}$
Lens Mount	M12 x P0.5
Interface (Electrical)	
Interface	USB 3.0
Supply Voltage	USB 3.0 + 5 VDC power source
Power Consumption	Approximately 295 mA @ 5 VDC
Interface (Mechanical)	
Sizes	OV580: 40.0 (L) x 26.0 (W) mm OV4689: 26.0 (L) x 18.0 (W) mm
Weight (with Lens)	~ 31 g
Adjustment	
Manual	Brightness, Contrast, Hue, Saturation, Sharpness, White Balance (Default Auto), Gain, Exposure (Default Auto)
Auto	White Balance, Exposure
Environmental	
Operation Temp	0°C ~ +50°C
Storage Temp	-20°C ~ +80°C

## LI-OV580-STEREO DIMENSIONS



4-Ø 2.15



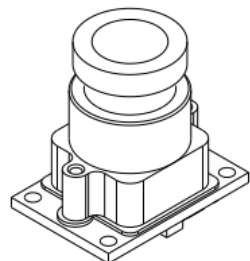
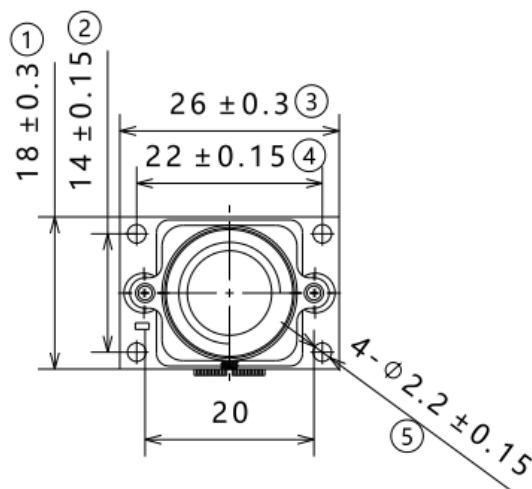
TOLERANCE TABLE					
LENGTH TOLERANCE		CHAMFER TOLERANCE		ANGLE TOLERANCE	
Size X	Tolerance	Size X	Tolerance	Size X	Tolerance
05 < X ≤ 3	±0.1	05 < X ≤ 3	±0.2	X ≤ 10	±1°
3 < X ≤ 6	±0.1	3 < X ≤ 6	±0.5	10 < X ≤ 50	±30'
6 < X ≤ 30	±0.2	6 < X ≤ 30	±1	50 < X ≤ 120	±20'
30 < X ≤ 120	±0.3	X > 30	±2	120 < X ≤ 400	±10'
120 < X ≤ 400	±0.5			X > 400	±5'
400 < X ≤ 1000	±0.8				
X > 1000	±1.2				

### NOTE:

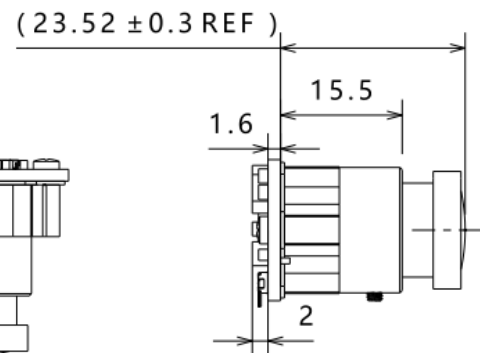
- ⊗ marked are important sizes.
- Tolerances for others unmarked refer to the Tolerance table.
- All materials are compliant with requirement.

Unit: mm

## LI-OV4689-MIPI DIMENSIONS



M12X0.5



### NOTE:

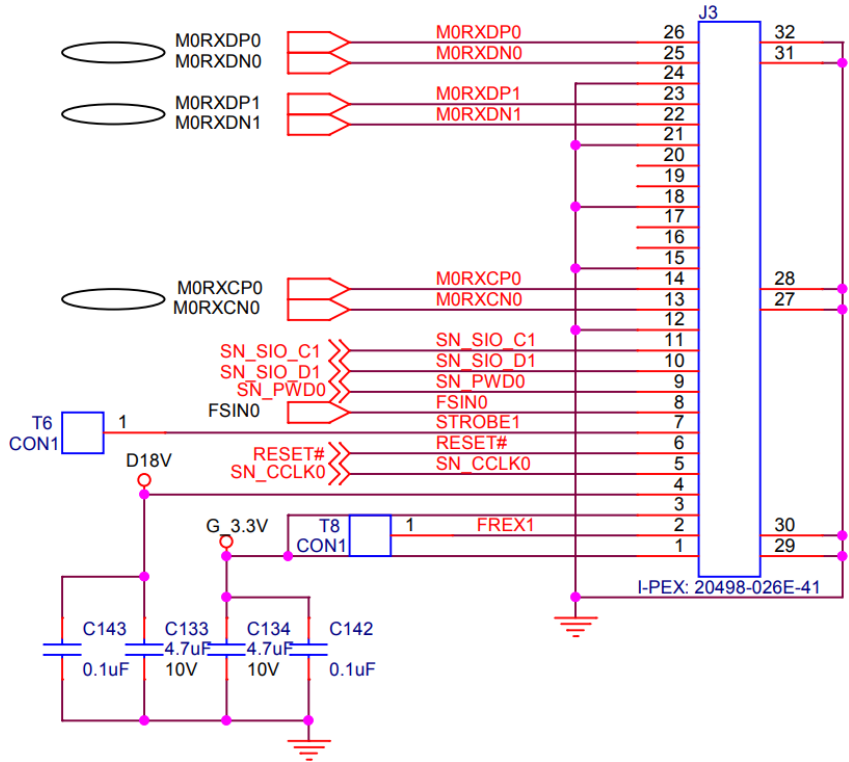
- ⊗ marked are important sizes.
- Tolerances for others unmarked are ± 0.3 mm.
- All materials are compliant with requirement.

Unit: mm

# OV580 INTERFACES

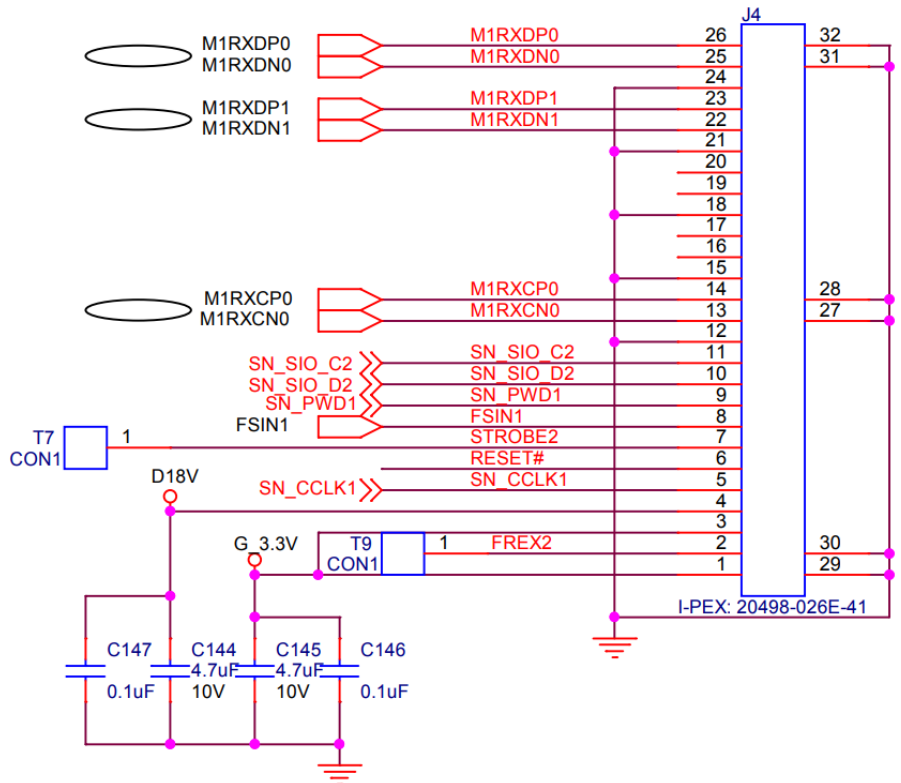
## Interface J3

- Part#: 20498-026E-41
- Number of Positions: 26
- Shell Plating: Sn
- Vacuum Clip: With



## Interface J4

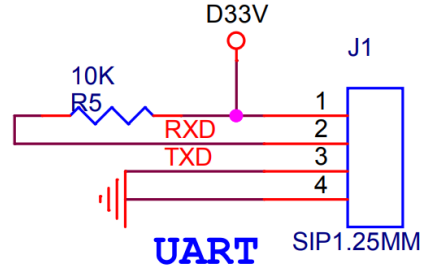
- Part#: 20498-026E-41
- Number of Positions: 26
- Shell Plating: Sn
- Vacuum Clip: With



# OV580 INTERFACES

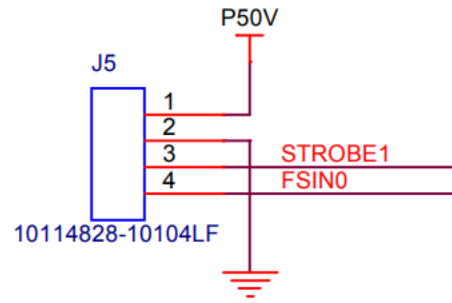
## Interface J1

- Number of Positions: 4
- Pitch: 1.25 mm



## Interface J5 (UART)

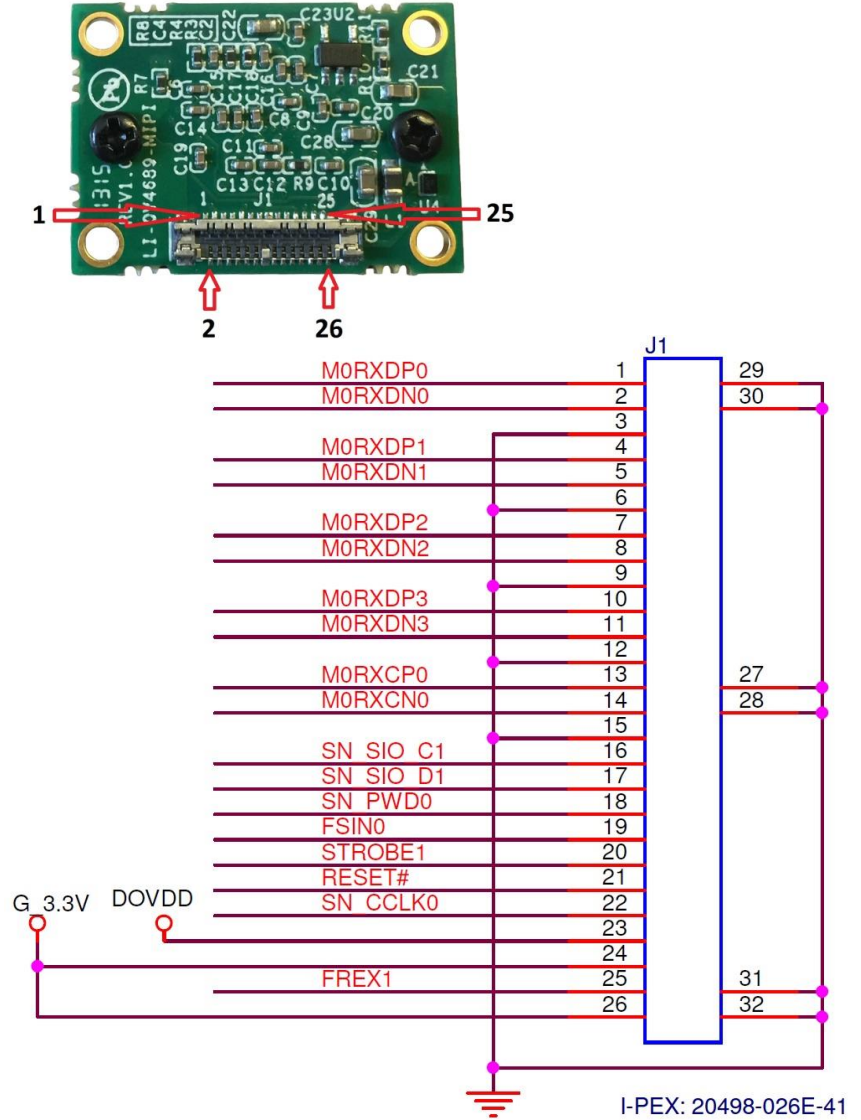
- Part#: 10114828-10104LF
- Number of Positions: 4
- Pitch: 1.25 mm



# OV4689 INTERFACE

## Interface J1

- Connector Part#: 20498-026E-41
- Number of Positions: 26
- Shell Plating: Sn
- Vacuum Clip: With



## ● REVISION HISTORY

Revision	Description	Release Date
0.1	Initial draft.	25 Dec 2020
0.2	Replaced lens YC-155N with SC3120B and updated related product images and 2D dimensions.	11 Apr 2022
0.3	Updated 2D dimensions.	14 May 2024

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