



**LEOPARD**  
IMAGING

# LI-IMX901C-MIPI-086H



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## INTRODUCTION

LI-IMX901C-MIPI-086H is a high resolution color MIPI-CS2 camera. It is equipped with Sony Diagonal 22.67 mm (Type 1.4) CMOS 16MP global shutter image color sensor IMX901. This camera outputs RAW image data.

## SPECIFICATIONS

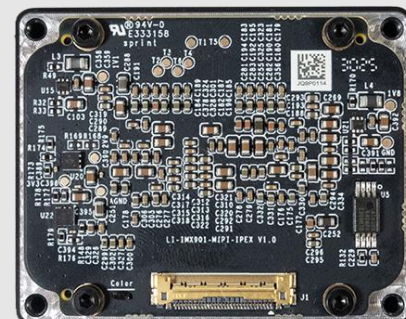
Maximum Frame Rate	12-bit: 43.8 fps @ 3-exposure HDR 10-bit: 52 fps @ 3-exposure HDR
Sensor	Sony Diagonal 22.67 mm (Type 1.4) CMOS solid-state Image Sensor
Optical Format	1.4"
Shutter Type	Global shutter
Pixel Size	2.74 $\mu\text{m}$ x 2.74 $\mu\text{m}$
Color / Mono	Color
Output Format	12-bit / 10-bit RAW data
Resolution	8016 (H) x 2048 (V) (active pixels)
HDR (High Dynamic Range)	Supported
EEROM	Included
Interface	4-lane MIPI CSI-2
Operating Temp	TBD
Storage Temp	TBD
Power Consumption	~ 1.1 W 22 fps @ 8016x2048
Weight	~ 246 g

## APPLICATIONS

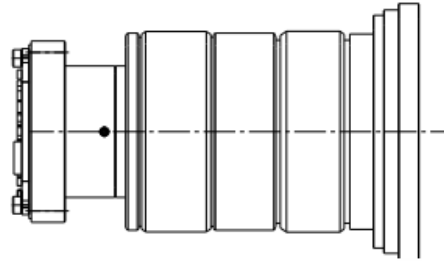
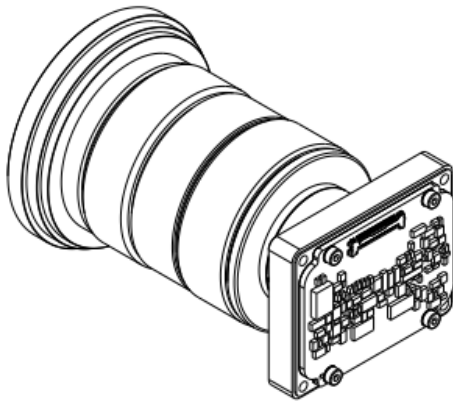
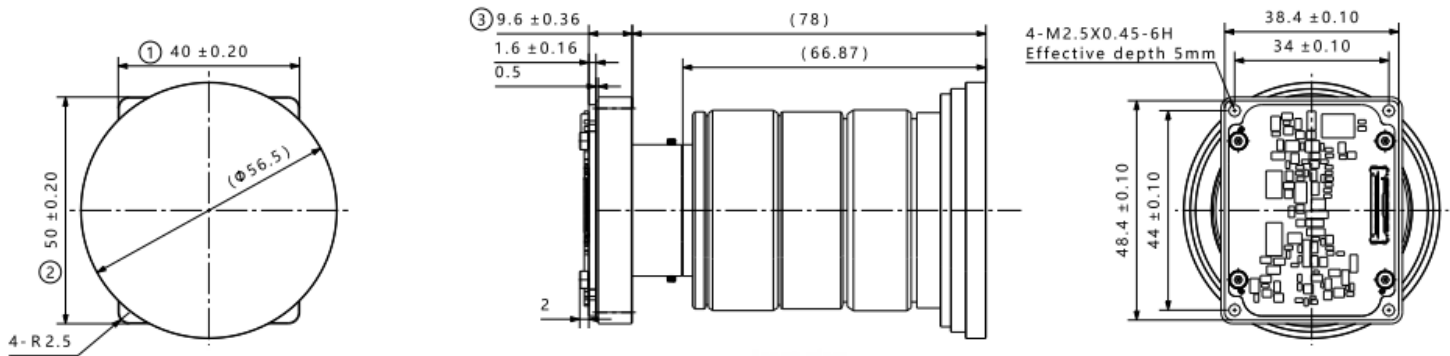
- FA
- ITS

## LENS SPECIFICATIONS

Focal Length	12 mm
Aperture, F/#	2.8 ~ 16
Field of View (FOV)	86° horizontal
IR Filter(on the holder)	650 nm IR cut filter
Lens Mount	C Mount



## DIMENSIONS



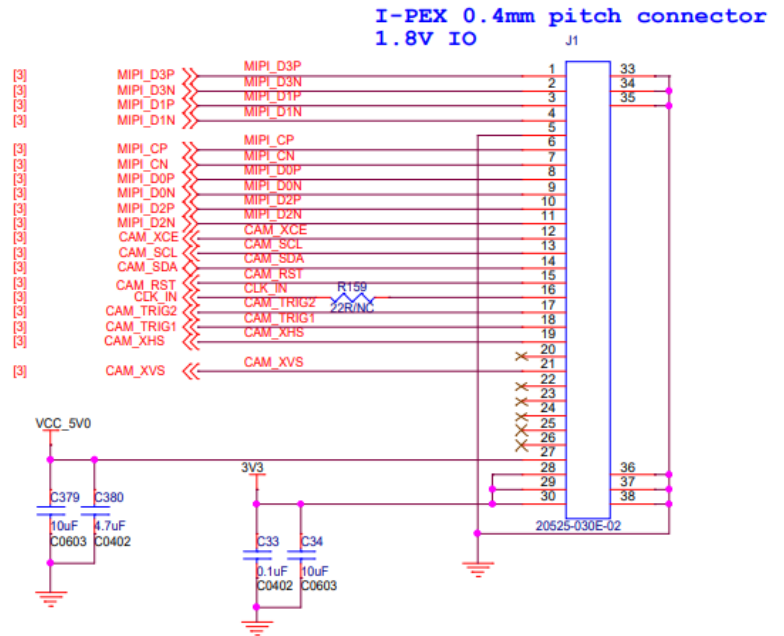
### NOTE:

- ⊗ 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 ≤ 3	±0.1	0.5 < 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				

## INTERFACE J4

- Connector Part#: 20525-030E-02
- Number of Positions: 30
- Pitch: 0.4 mm
- Mating I-PEX Cable: FAW-1233
- Sensor I2C Address: 0x36 (7-bit)
- External Power Supply: 3V3, 5V0



## PINOUT DETAILS

Pin No	Signal Name	Pin Type	Description	Voltage Level
1	MIPI1_D3P	OUTPUT	MIPI Clock Data3 Differential Pair +	MIPI DPHY
2	MIPI1_D3N	OUTPUT	MIPI Clock Data3 Differential Pair -	MIPI DPHY
3	MIPI1_D1P	OUTPUT	MIPI Clock Data1 Differential Pair +	MIPI DPHY
4	MIPI1_D1N	OUTPUT	MIPI Clock Data1 Differential Pair -	MIPI DPHY
5	GND	POWER	Ground signal for digital and analog	-
6	MIPI1_CP	OUTPUT	MIPI Clock Lane Differential Pair +	MIPI DPHY
7	MIPI1_CN	OUTPUT	MIPI Clock Lane Differential Pair -	MIPI DPHY
8	MIPI1_D0P	OUTPUT	MIPI Clock Data0 Differential Pair +	MIPI DPHY
9	MIPI1_D0N	OUTPUT	MIPI Clock Data0 Differential Pair -	MIPI DPHY
10	MIPI1_D2P	OUTPUT	MIPI Clock Data2 Differential Pair +	MIPI DPHY
11	MIPI1_D2N	OUTPUT	MIPI Clock Data2 Differential Pair -	MIPI DPHY
12	CAM_XCE	INPUT	Fixed to High when using I2C	1.8V
13	CAM_SCL	INPUT	1.8V IO Camera I2C SCL signal (Pulled up to 1.8V with 1k)	1.8V

Pin No	Signal Name	Pin Type	Description	Voltage Level
14	CAM_SDA	I/O	1.8V IO Camera I2C SDA signal (Pulled up to 1.8V with 1k)	1.8V
15	CAM_RST	INPUT	1.8V IO camera reset signal (Pulled up to 1.8V with 4.7k)	1.8V
16	CLK_IN	INPUT	Reserved CLK for camera	1.8V
17	XTRG2	INPUT	Reserved Trigger signal 2	1.8V
18	XTRIG1	INPUT	Trigger signal 1	1.8V
19	XHS	I/O	Horizontal sync signal (Pulled up to 1.8V with 10k)	1.8V
20	-	-	-	-
21	XVS	I/O	Vertical sync signal (Pulled up to 1.8V with 10k)	1.8V
22	-	-	-	-
23	-	-	-	-
24	-	-	-	-
25	-	-	-	-
26	-	-	-	-
27	VCC_5V0	POWER	5V power supply	5V
28	VCC_3V3	POWER	3.3V digital power supply	3.3V
29	VCC_3V3	POWER	3.3V digital power supply	3.3V
30	VCC_3V3	POWER	3.3V digital power supply	3.3V

## ● REVISION HISTORY

Revision	Description	Release Date
0.1	Initial draft.	13 Nov 2025
0.2	Part number correction: Updated from LI-IMX901C-MIPI-076H to LI-IMX901C-MIPI-086H.	19 May 2026

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