LEOPARD IMAGING

LI-IMX901C-MIPI-076H

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INTRODUCTION

LI-IMX901C-MIPI-076H 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 µm x 2.74 µm
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

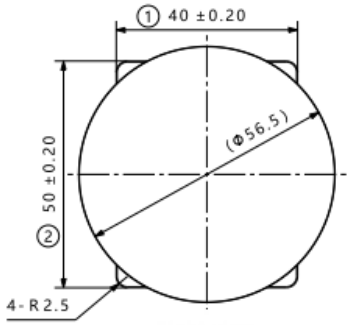
APPLICATIONS

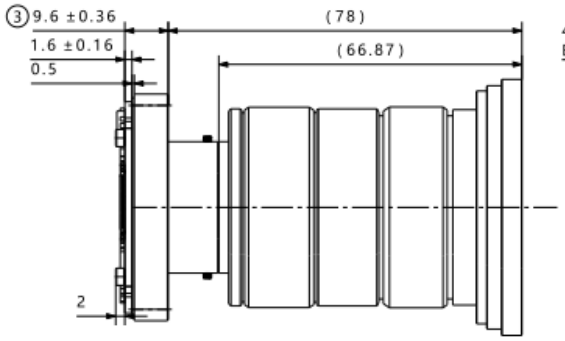
- FA
- ITS

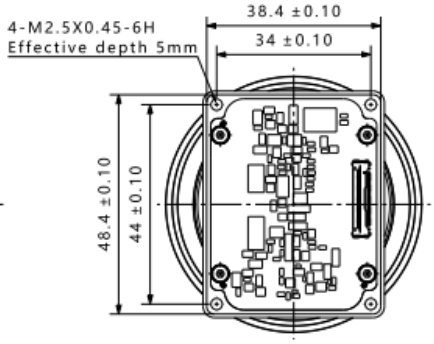
LENS SPECIFICATIONS

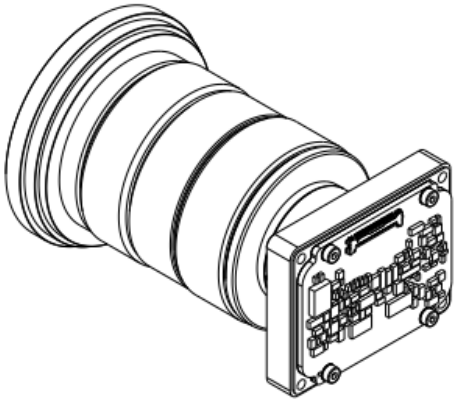
Focal Length	12 mm
Aperture, F/#	2.8 ~ 16
Field of View (FOV)	76˚ horizontal
IR Filter(on the holder)	650 nm IR cut filter
Lens Mount	C Mount

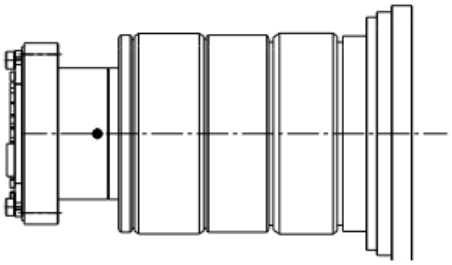
DIMENSIONS











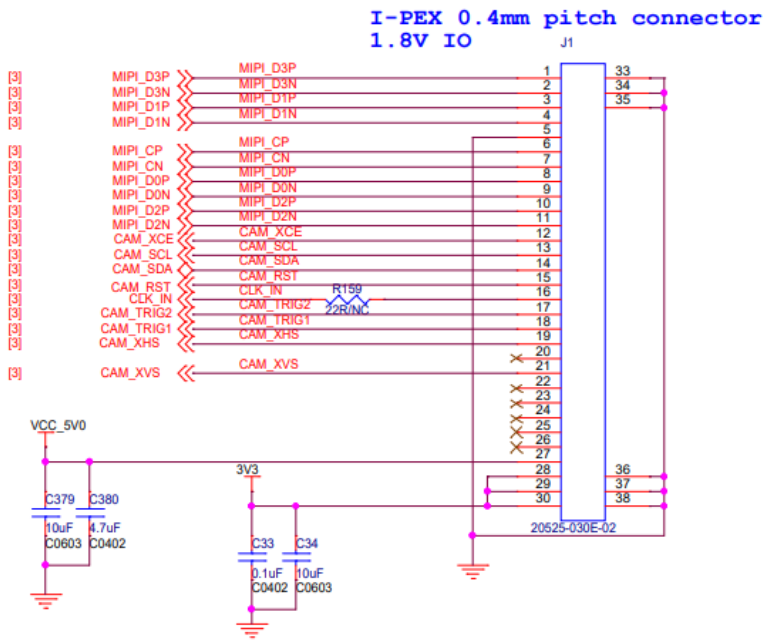
NOTE:

- ⊗ 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

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