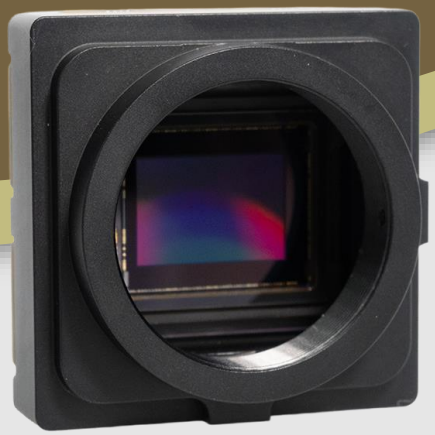
LEOPARD IMAGING

LI-IMX492-MIPI-TFL-NL



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INTRODUCTION

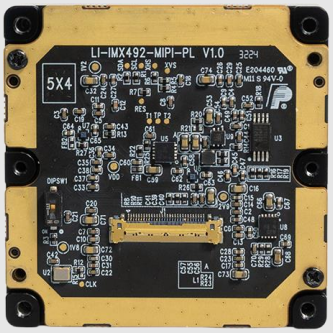
The IMX492-MIPI-TFL is a high-resolution MIPI camera module featuring the Sony IMX492 47.08MP monochrome sensor. With a MIPI CSI-2 interface and 12-bit digital output, it delivers ultra-high-definition imaging. The TFL optical design ensures precise focus. Ideal for factory automation, industrial inspection, and surveillance applications.

SPECIFICATIONS

Sensor	Sony Diagonal 23.1mm CMOS Image Sensor IMX492	
Optical Format	Type 1.4 (23.1 mm diagonal), Multi-Aspect: 4:3 and approx. 17:9	
Resolution (active pixels)	All Pixel	8240 (H) × 5628 (V)
	Approx. 17:9	8240 (H) × 4336 (V)
	4:3	7456 (H) × 5628 (V)
Pixel Size	2.315 × 2.315 μm	
Output Format	10-bit / 12-bit RAW data	
Color / Mono	Mono	
Maximum Frame Rate	10-bit: 13 fps @ All Pixel	
Interface	4-lane MIPI CSI-2	
Lens	No included	
Lens Mount	TFL	
Power Consumption	TBD	
Operating Temp	TBD	
Storage Temp	TBD	
Weight	~60 g	

APPLICATIONS

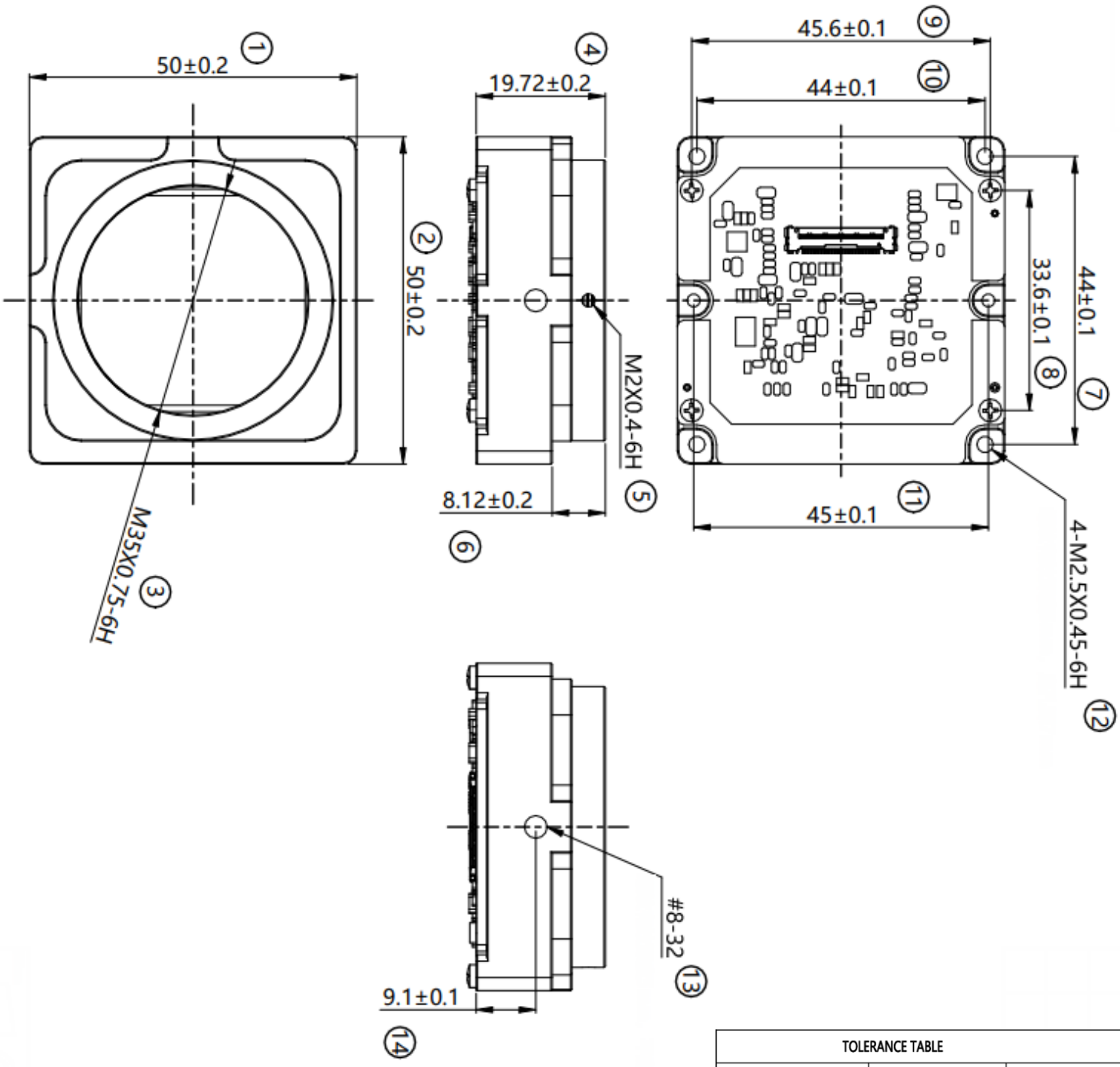
- Industria Camera
- FA Camera
- Surveillance



NOTE:

Lens is not included in LI-IMX492-MIPI-TFL-NL.

DIMENSIONS (Without Lens)



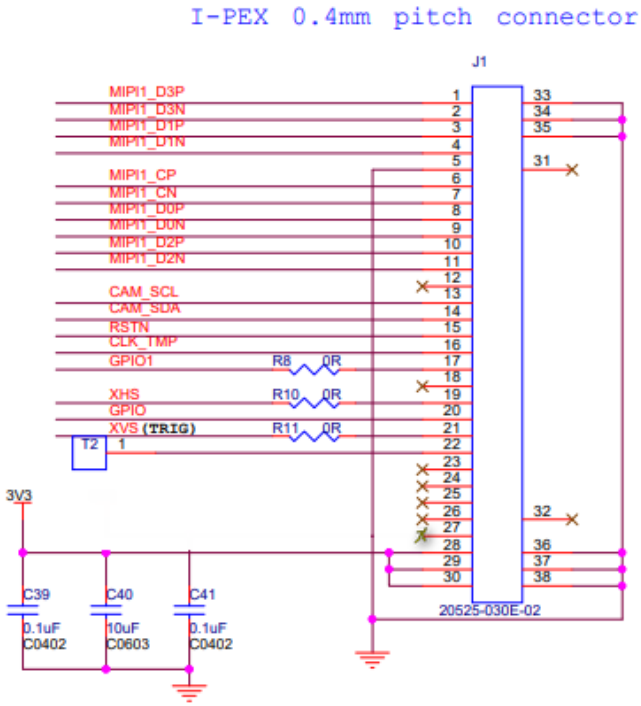
TOLERANCE TABLE					
LENGTH TOLERANCE		CHAMFER TOLERANCE		ANGLE TOLERANCE	
Size X	Tolerance	Size X	Tolerance	Size X	Tolerance
0.5<X≤3	±0.1	0.5<X≤3	±0.2	X≤10	±1°
3<X≤6	±0.1	3<X≤6	±0.5	10<X≤50	±30'
6<X≤30	±0.2	6<X≤30	±1	50<X≤120	±20'
30<X≤120	±0.3	X>30	±2	120<X≤400	±10'
120<X≤400	±0.5			X>400	±5'
400<X≤1000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

NOTE:

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

MIPI INTERFACE

- Connector Part#: 20525-030E-02
- Number of Positions: 30
- Pitch: 0.4 mm
- Mating I-PEX Cable: FAW-1233-03
- I2C Address: 0x1A (7 bit)
- External Power Supply: 3.3V



PINOUT DETAILS

Pin No	Signal Name	Pin Type	Description	Voltage Level
1	MIPI_D3P	OUTPUT	MIPI Clock Data3 Differential Pair +	1.8V
2	MIPI_D3N	OUTPUT	MIPI Clock Data3 Differential Pair -	1.8V
3	MIPI_D1P	OUTPUT	MIPI Clock Data1 Differential Pair +	1.8V
4	MIPI_D1N	OUTPUT	MIPI Clock Data1 Differential Pair -	1.8V
5	GND	POWER	Ground signal for digital and analog	-
6	MIPI_CP	OUTPUT	MIPI Clock Lane Differential Pair +	1.8V
7	MIPI_CN	OUTPUT	MIPI Clock Lane Differential Pair -	1.8V
8	MIPI_D0P	OUTPUT	MIPI Clock Data0 Differential Pair +	1.8V
9	MIPI_D0N	OUTPUT	MIPI Clock Data0 Differential Pair -	1.8V
10	MIPI_D2P	OUTPUT	MIPI Clock Data2 Differential Pair +	1.8V
11	MIPI_D2N	OUTPUT	MIPI Clock Data2 Differential Pair -	1.8V
12	-	-	-	-
13	CAM_SCL	INPUT	1.8V IO Camera I2C SCL signal with 1kΩ pull-up on board.	1.8V

Pin No	Signal Name	Pin Type	Description	Voltage Level
14	CAM_SDA	I/O	1.8V IO Camera I2C SDA signal with 1kΩ pull-up on board.	1.8V
15	RESET	INPUT	1.8V IO Camera reset signal (Active Low) with 4.7kΩ pull-up on board.	1.8V
16	CLK_TMP	INPUT	Reserved CLK for camera (Provided from host side)	1.8V
17	GPIO1	INPUT	Test Point	1.8V
18	-	-	-	-
19	XHS	I/O	Horizontal sync signal	1.8V
20	GPIO	INPUT	Test Point	1.8V
21	XVS	I/O	Vertical sync signal (Reserved)	1.8V
22	T2	INPUT	Test Point	1.8V
23	-	-	-	-
24	-	-	-	-
25	-	-	-	-
26	-	-	-	-
27	-	-	-	-
28	3V3	POWER	3.3V power supply (Provided from host side)	3.3V
29	3V3	POWER	3.3V power supply (Provided from host side)	3.3V
30	3V3	POWER	3.3V power supply (Provided from host side)	3.3V

REVISION HISTORY

Revision	Description	Release Date
0.1	Initial draft.	25 Apr 2026

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