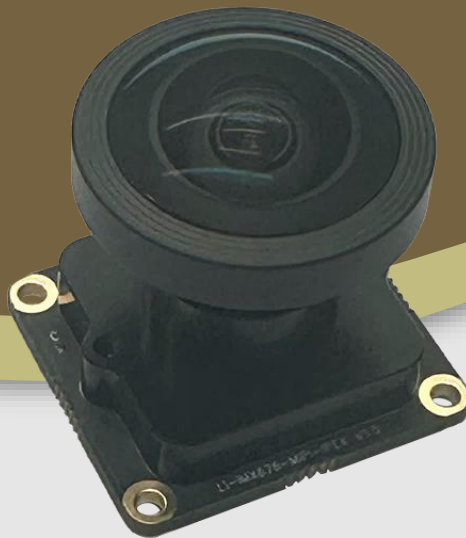




LEOPARD
IMAGING

LI-IMX676-MIPI-185H



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INTRODUCTION

The LI-IMX676-MIPI-185H is a MIPI CSI-2 fisheye camera with Sony STARVIS 2 diagonal 10.04 mm (Type 1/1.6) CMOS solid-state color sensor IMX676 which has low power consumption and achieves high sensitivity, low dark current and no smear. This camera outputs 10-bit / 12-bit RAW data.

SPECIFICATIONS

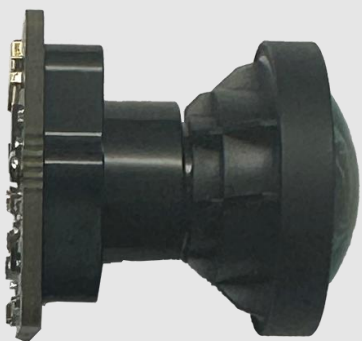
Sensor	Sony STARVIS2 Diagonal 10.04 mm CMOS Image Sensor IMX676
Optical Format	1/1.6"
Pixel Size	2.0 x 2.0 μm
Color / Mono	Color sensor
Shutter Type	Rolling shutter
Resolution	3552 (H) x 3552 (V) (active pixels)
Output Format	10-bit / 12-bit RAW
Maximum Frame Rate	12 bit: 30 fps @ all-pixel scan mode 10 bit: 60 fps @ all-pixel scan mode
ISP	Not included
HDR (High Dynamic Range)	Supported
Interface	4-lane MIPI CSI-2
Connector	30-PIN IPEX MIPI Connector
Power Consumption	298 mA @ 5 VDC (3552 x 3556 @ 8 fps)
Operating Temp	-30°C ~ +85°C
Storage Temp	-30°C ~ +85°C
Weight	~ 20 g

APPLICATIONS

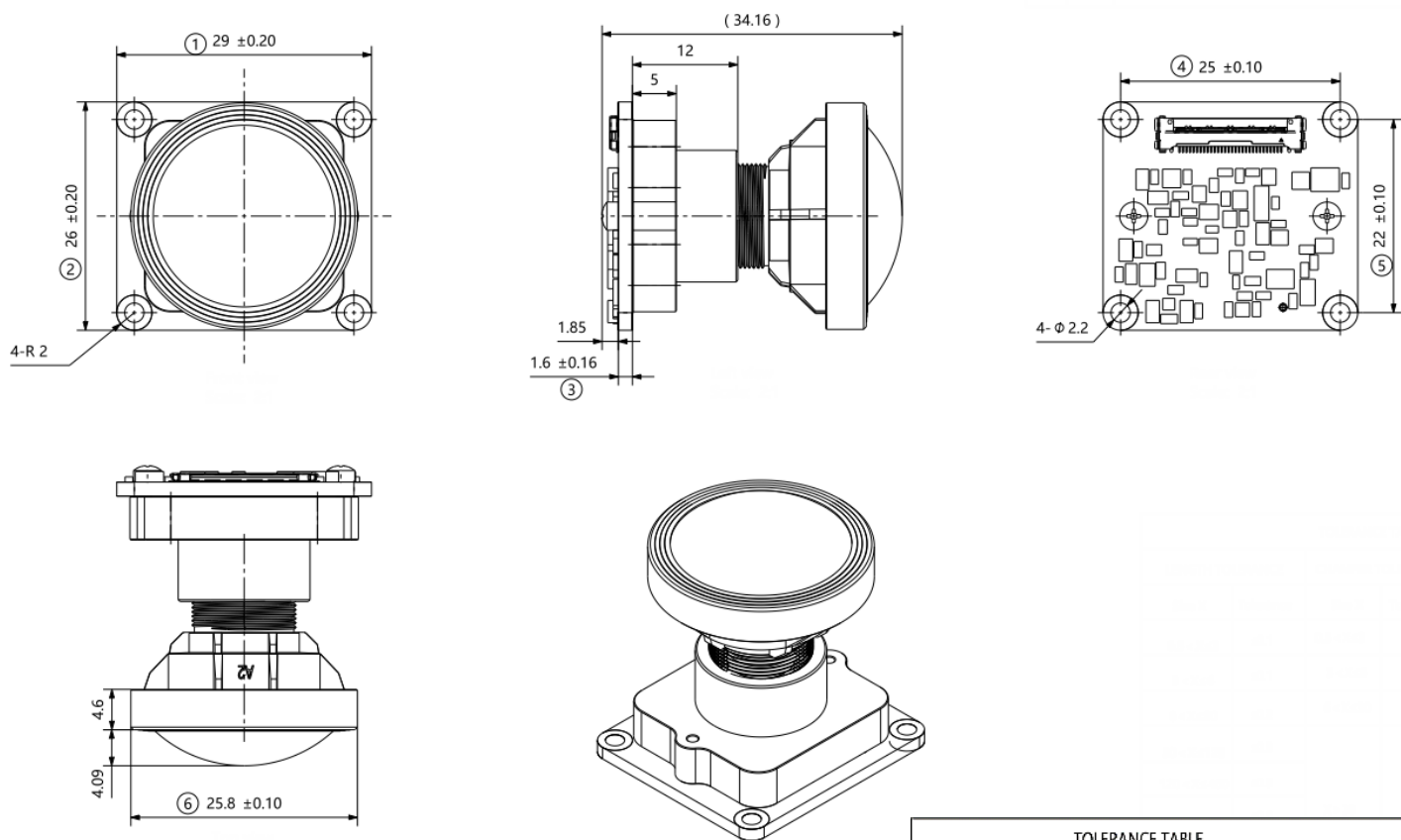
- IoT
- Drone
- Robots

LENS SPECIFICATIONS

Effective Focal Length	1.7 mm
Aperture, F/#	2.0
Field of View (FOV)	185° horizontal
IR Filter	650 nm IR cut filter
Lens Mount	M12 x 0.5



DIMENSIONS



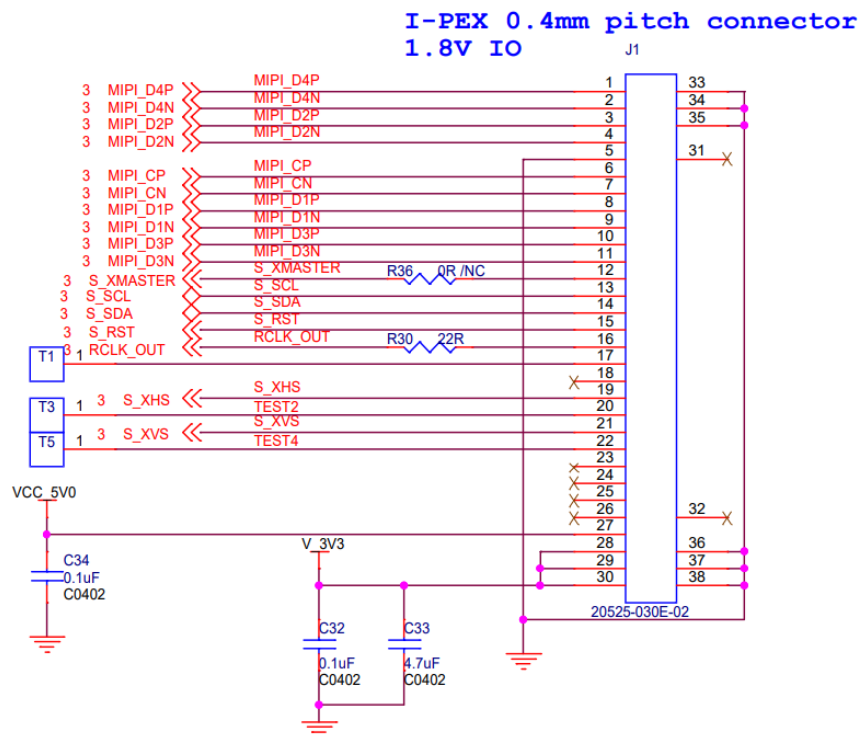
NOTE:

- $\otimes$ 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
$0.5 < X \leq 3$	± 0.1	$0.5 < X \leq 3$	± 0.2	$X \leq 10$	$\pm 1^\circ$
$3 < X \leq 6$	± 0.1	$3 < X \leq 6$	± 0.5	$10 < X \leq 50$	$\pm 30'$
$6 < X \leq 30$	± 0.2	$6 < X \leq 30$	± 1	$50 < X \leq 120$	$\pm 20'$
$30 < X \leq 120$	± 0.3	$X > 30$	± 2	$120 < X \leq 400$	$\pm 10'$
$120 < X \leq 400$	± 0.5			$X > 400$	$\pm 5'$
$400 < X \leq 1000$	± 0.8				
$X > 1000$	± 1.2				

MIPI CONNECTOR INTERFACE J1

- Connector Part#: 20525-030E-02
- Number of Positions: 30
- Pitch: 0.4 mm
- Mating I-PEX cable: LI-FAW-1233
- Sensor I2C Address: 0x1A (7-bit)
- External Power Supply: 3.3V, 5.0V



Connector Pinout

Pin No	Signal Name	Pin Type	Description	Voltage Level
1	MIPI_D4P	OUTPUT	MIPI Clock Data4 Differential Pair +	MIPI DPHY
2	MIPI_D4N	OUTPUT	MIPI Clock Data4 Differential Pair -	MIPI DPHY
3	MIPI_D2P	OUTPUT	MIPI Clock Data2 Differential Pair +	MIPI DPHY
4	MIPI_D2N	OUTPUT	MIPI Clock Data2 Differential Pair -	MIPI DPHY
5	GND	-	-	-
6	MIPI_CP	OUTPUT	MIPI Clock Lane Differential Pair +	MIPI DPHY
7	MIPI_CN	OUTPUT	MIPI Clock Lane Differential Pair -	MIPI DPHY
8	MIPI_D1P	OUTPUT	MIPI Clock Data1 Differential Pair +	MIPI DPHY
9	MIPI_D1N	OUTPUT	MIPI Clock Data1 Differential Pair -	MIPI DPHY
10	MIPI_D3P	OUTPUT	MIPI Clock Data3 Differential Pair +	MIPI DPHY
11	MIPI_D3N	OUTPUT	MIPI Clock Data3 Differential Pair -	MIPI DPHY
12	S_MASTER	INPUT	Master / Slave selection input (Reserved) Master mode in default	1.8V
13	S_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	S_SDA	I/O	1.8V IO Camera I2C SDA signal (Pulled up to 1.8V with 1k)	1.8V
15	S_RST	INPUT	1.8V IO camera reset signal (Pulled up to 1.8V with 10k)	1.8V
16	RCLK_OUT	INPUT	Reserved CLK for camera	1.8V
17	TP	-	Test point	-
18	-	-	-	-
19	S_XHS	I/O	Horizontal sync signal	1.8V
20	TEST2	-	Test point	-
21	S_XVS	I/O	Vertical sync signal	1.8V
22	TEST4	-	Test point	-
23	-	-	-	-
24	-	-	-	-
25	-	-	-	-
26	-	-	-	-
27	5V0	POWER	5V power supply	5V
28	3V3	POWER	3.3V power supply	3.3V
29	3V3	POWER	3.3V power supply	3.3V
30	3V3	POWER	3.3V power supply	3.3V

- REVISION HISTORY

Revision	Description	Release Date
0.1	Initial draft.	28 Aug 2025
0.2	Updated dimensions.	04 Aug 2025

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