



LEOPARD
IMAGING

LI-VENUS-ISX031-GMSL2-xxxH



Address:

910 Auburn Ct
Fremont, CA 94538
USA



Phone:

+1 (408)263-0988

Fax:

+1 (408)217-1960



Sales:

sales@leopardimaging.com

Support:

support@leopardimaging.com

● INTRODUCTION

The LI-VENUS-ISX031-GMSL2-xxxH is equipped with Sony Diagonal 7.45 mm (Type 1/2.42) CMOS image sensor ISX031 and Maxim GMSL2 serializer MAX9295A/B. This camera outputs YUV 8-bit data.

● SPECIFICATIONS

Sensor	Sony Diagonal 7.45 mm CMOS Image Sensor ISX031
Optical Format	1/2.42"
Resolution	1937 (H) x 1553 (V) (active pixels)
Pixel Size	3.0 x 3.0 μm
Output Format	YUV 8-bit
Color / Mono	Color sensor
Frame Rate	30 fps @ 1920 x 1536 (based on ISP)
HDR (High Dynamic Range)	Supported
LFM (LED Flicker Mitigation)	Supported
Serializer	Maxim MAX9295A/B
Lens	FOV H 60° / 118° / 195°
IP Rating	IP69K
Power Supply Range	8 ~ 17 VDC
Connector	FAKRA Z TYPE
Power Consumption	97 mA @ 12 VDC (1920 x 1536 @ 30 fps)
Operating Temp	-40°C ~ +85°C
Storage Temp	-40°C ~ +85°C
Weight	~ 34 g
Part#	LI-VENUS-ISX031-GMSL2-xxxH

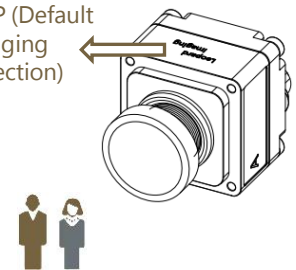
— APPLICATIONS

- Automotive
 - ◆ Autonomous Driving
 - ◆ Assisted Driving
 - ◆ Digital Video Recording
 - ◆ Machine Vision

— DEFAULT IMAGING DIRECTION

- The logo "Leopard Imaging" is on the TOP.

TOP (Default Imaging Direction)

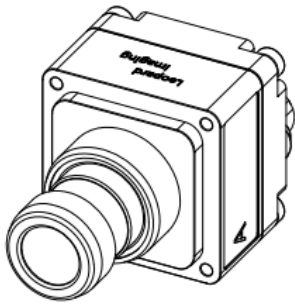
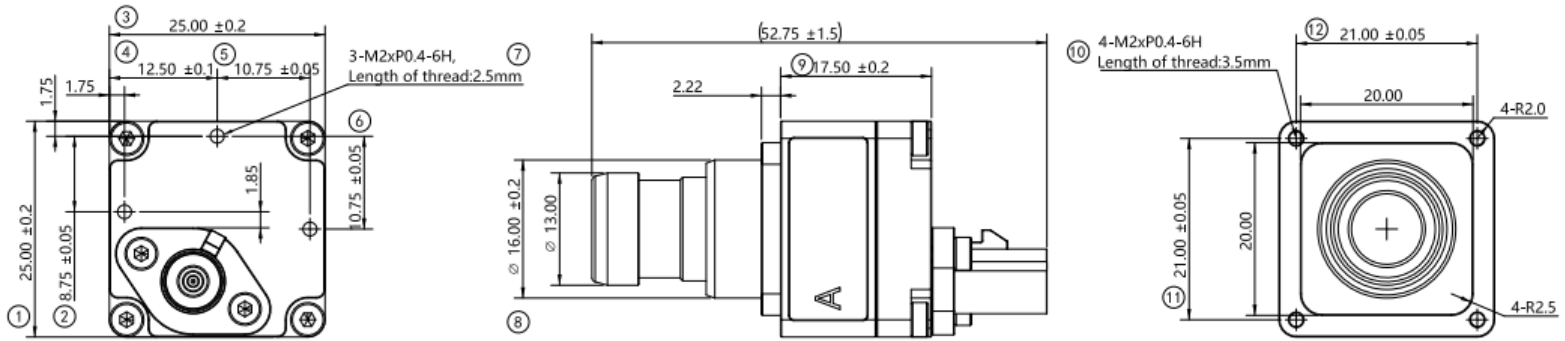


— CABLE CONNECTOR

- Housing Connector
FAKRA Z Type
- Cable Length: 3 meters
- Cable Part#: FAK-SMZSMZ-3M



DIMENSIONS: LI-VENUS-ISX031-GMSL2-060H



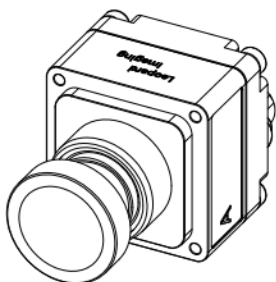
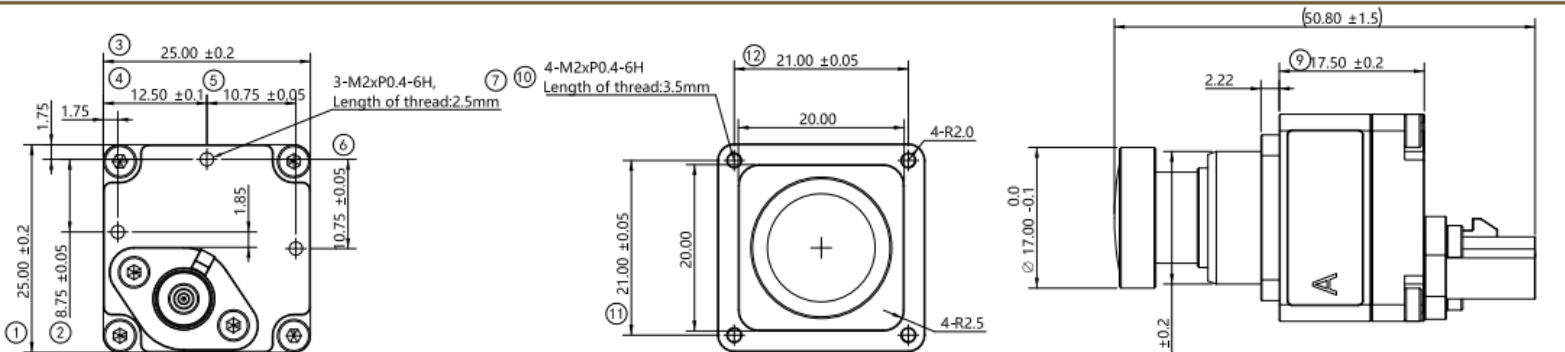
TOLERANCE TABLE		
Size X (mm)	Tolerance (mm)	Angle Tolerance (°)
0.5 < X ≤ 3	±0.1mm	±0.05°
3 < X ≤ 6	±0.1mm	±0.05°
6 < X ≤ 30	±0.2mm	±0.05°
30 < X ≤ 120	±0.3mm	±0.05°
120 < X ≤ 400	±0.5mm	±0.1°
400 < X ≤ 1000	±0.8mm	±0.1°
X > 1000	±1.2mm	±0.1°

NOTE:

- ⊗ marked are important sizes.
- Tolerances for others unmarked – refer to the Tolerance Table.

Unit: mm

DIMENSIONS: LI-VENUS-ISX031-GMSL2-118H



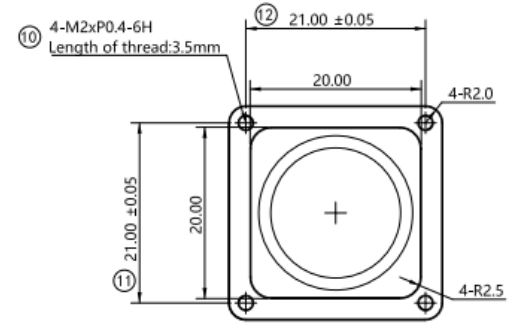
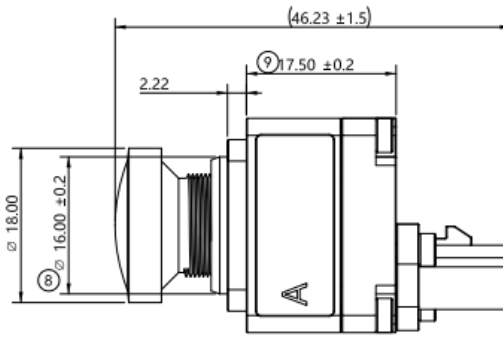
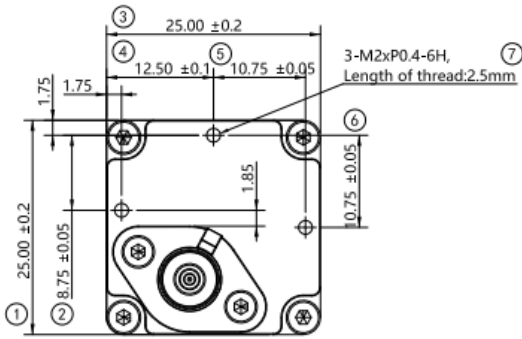
TOLERANCE TABLE		
Size X (mm)	Tolerance (mm)	Angle Tolerance (°)
0.5 < X ≤ 3	±0.1mm	±0.05°
3 < X ≤ 6	±0.1mm	±0.05°
6 < X ≤ 30	±0.2mm	±0.05°
30 < X ≤ 120	±0.3mm	±0.05°
120 < X ≤ 400	±0.5mm	±0.1°
400 < X ≤ 1000	±0.8mm	±0.1°
X > 1000	±1.2mm	±0.1°

NOTE:

- ⊗ marked are important sizes.
- Tolerances for others unmarked – refer to the Tolerance Table.

Unit: mm

DIMENSIONS: LI-VENUS-ISX031-GMSL2-195H



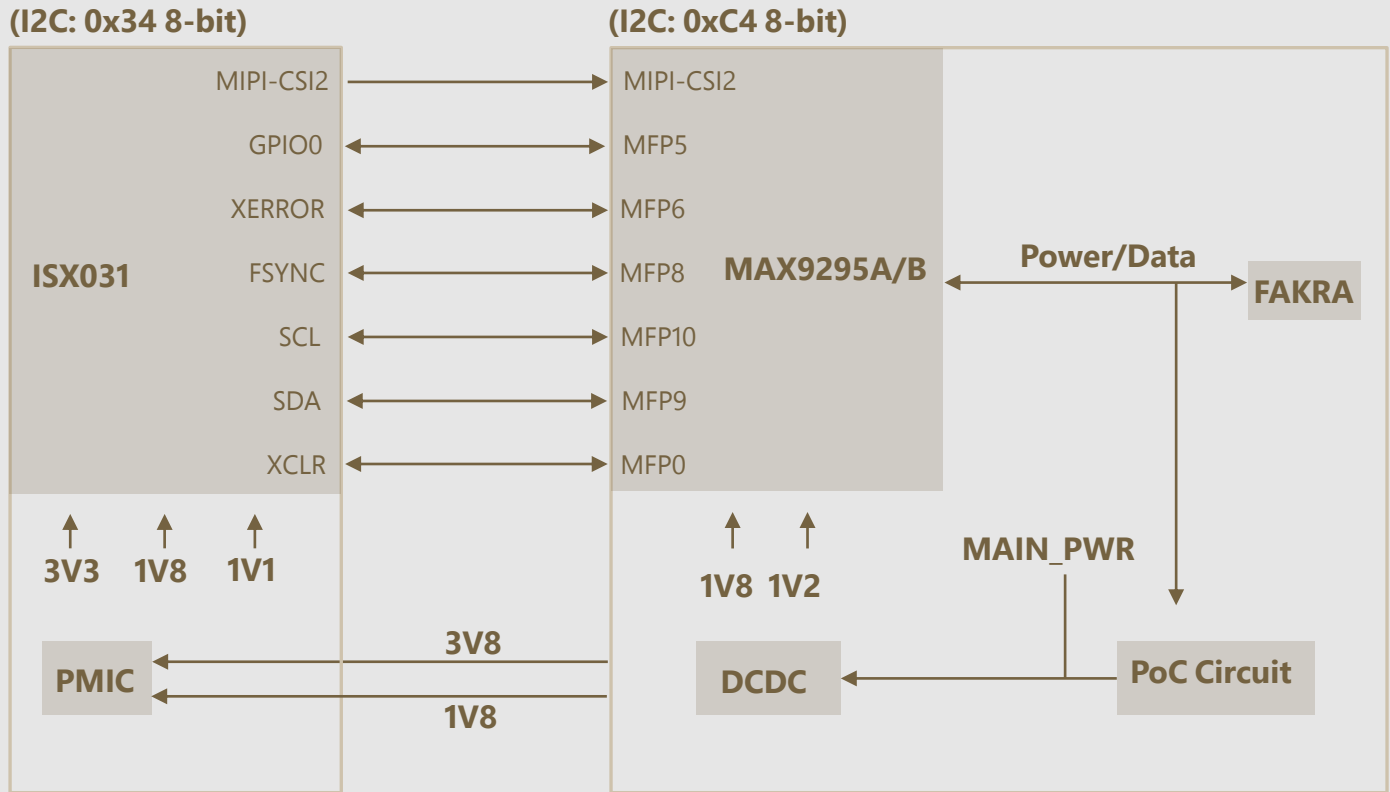
TOLERANCE TABLE		
Size X (mm)	Tolerance (mm)	Angle Tolerance (°)
0.5 < X ≤ 3	±0.1mm	±0.05°
3 < X ≤ 6	±0.1mm	±0.05°
6 < X ≤ 30	±0.2mm	±0.05°
30 < X ≤ 120	±0.3mm	±0.05°
120 < X ≤ 400	±0.5mm	±0.1°
400 < X ≤ 1000	±0.8mm	±0.1°
X > 1000	±1.2mm	±0.1°

NOTE:

- ⊗ marked are important sizes.
- Tolerances for others unmarked – refer to the Tolerance Table.

Unit: mm

PINOUT CONNECTIONS



LENS SPECIFICATIONS

NOTE:

xxxH refers to 060H (FOV H 60°), 118H (FOV H 118°) or 195H (FOV H 195°)

LI-VENUS-ISX031-GMSL2-060H

Lens EFL: 5.83 mm \pm 2%
Aperture, F/#: 1.8 \pm 5%
Field of View (FOV): 60° horizontal
Optical Distortion: < -20.7% (2Y' = 6.826 mm)
TV Distortion: < -10.19% (2Y' = 6.826 mm)
Relative Illumination: 90% (2Y' = 6.826 mm)
IR Filter: 650 nm IR cut filter
Mount: M12
IP Rating: IP69K

LI-VENUS-ISX031-GMSL2-118H	LI-VENUS-ISX031-GMSL2-195H
	
Lens EFL: 3.021 mm \pm 5%	Lens EFL: 1.51 mm \pm 5%
Aperture, F/#: 2.0 \pm 5%	Aperture, F/#: 2.0 \pm 5%
Field of View (FOV): 118° horizontal	Field of View (FOV): 195.9° \pm 3° horizontal (y = 2.880 mm)
Optical Distortion: -62.41% \pm 5% (f-tan θ)	F- θ Distortion: -154.2% (y = 3.025 mm)
Relative Illumination: > 45.0%	Relative Illumination: 37% (y = 3.025 mm)
IR Filter: 700 nm IR cut filter	IR Filter: 650 nm IR cut filter
Mount: M12	Mount: M12
IP Rating: IP6K9K	IP Rating: IP69K

USB3.0 CAMERA KIT

LI-GMSL2-USB



Top View



Bottom View

LI-VENUS-ISX031-GMSL2-xxxH can connect to LI-GMSL2-USB as a USB 3.0 camera.

Part#: **LI-USB30-VENUS-ISX031-GMSL2-xxxH**

SPECIFICATIONS

- USB 3.0 Super Speed support
- UVC compliant
- Allows customization
- 12 VDC power supply for camera
- Weight: ~ 190 g
- Single Coax Cable transmits up to 12 meters PoC (Power over Cable)
- Resolution: 1920 x 1536 @ 30 fps
- Power consumption: 97 mA @ 12 VDC
- Compatible with Windows, Linux OS and other OS which have UVC drivers



BOM

#	Items	QTY
1	LI-VENUS-ISX031-GMSL2-xxxH	1
2	LI-GMSL2-USB	1
3	3-Meter Fakra Cable	1
4	12 VDC Power Supply	1
5	USB3.0 Cable	1

SDK SUPPORTED

- Camera Tool Source Code in C#
- Capture & Display
- Register Access Function

- REVISION HISTORY

Revision	Description	Release Date
1.0	First Release.	03 Feb 2023

910 Auburn Ct, Fremont, CA 94538, USA

Phone: +1 (408)263-0988

Fax: +1 (408)217-1960

Email: sales@leopardimaging.com

Website: www.leopardimaging.com

