



LI-OX05B1S-VCSEL-OMS-96717-200H



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INTRODUCTION

The LI-OX05B1S-VCSEL-OMS-96717-200H is equipped with OmniVision 1/2.5" RGB-IR CMOS 5MP global shutter image sensor OX05B1S, Maxim GMSL2 serializer MAX96717 and 2 VCSELs. This camera outputs RAW RGB-IR data.

SPECIFICATIONS

Sensor	OmniVision 1/2.5" RGB-IR CMOS 5MP Image Sensor OX05B1S
Optical Format	1/2.5"
Resolution	2592 (H) x 1944 (V) (active pixels)
Pixel Size	2.2 x 2.2 μm
Output Format	RAW RGB-IR
Color / Mono	RGB-IR
Maximum Frame Rate	60 fps @ 1944p
Shutter	Global shutter
Serializer	Maxim MAX96717
Power Supply Range	9 ~ 19 VDC
ISP	Not included
VCSEL	Included
IP Rating	TBD
FAKRA Connector	FAKRA Z TYPE
Power Consumption	Approx. 373 mA @ 12 VDC (2592 x 1944 @ 30 fps)
Operating Temp	-40°C ~ +85°C
Storage Temp	-40°C ~ +85°C
Weight	~ 213 g
Part#	LI-OX05B1S-VCSEL-OMS-96717-200H

APPLICATIONS

- Autonomous Driving
- Driver Monitoring System
- Occupant Monitoring System
- In-Cabin Monitoring System

EYE SAFETY

- Comply with IEC 60825 - 1:2014 standard

LENS SPECIFICATIONS

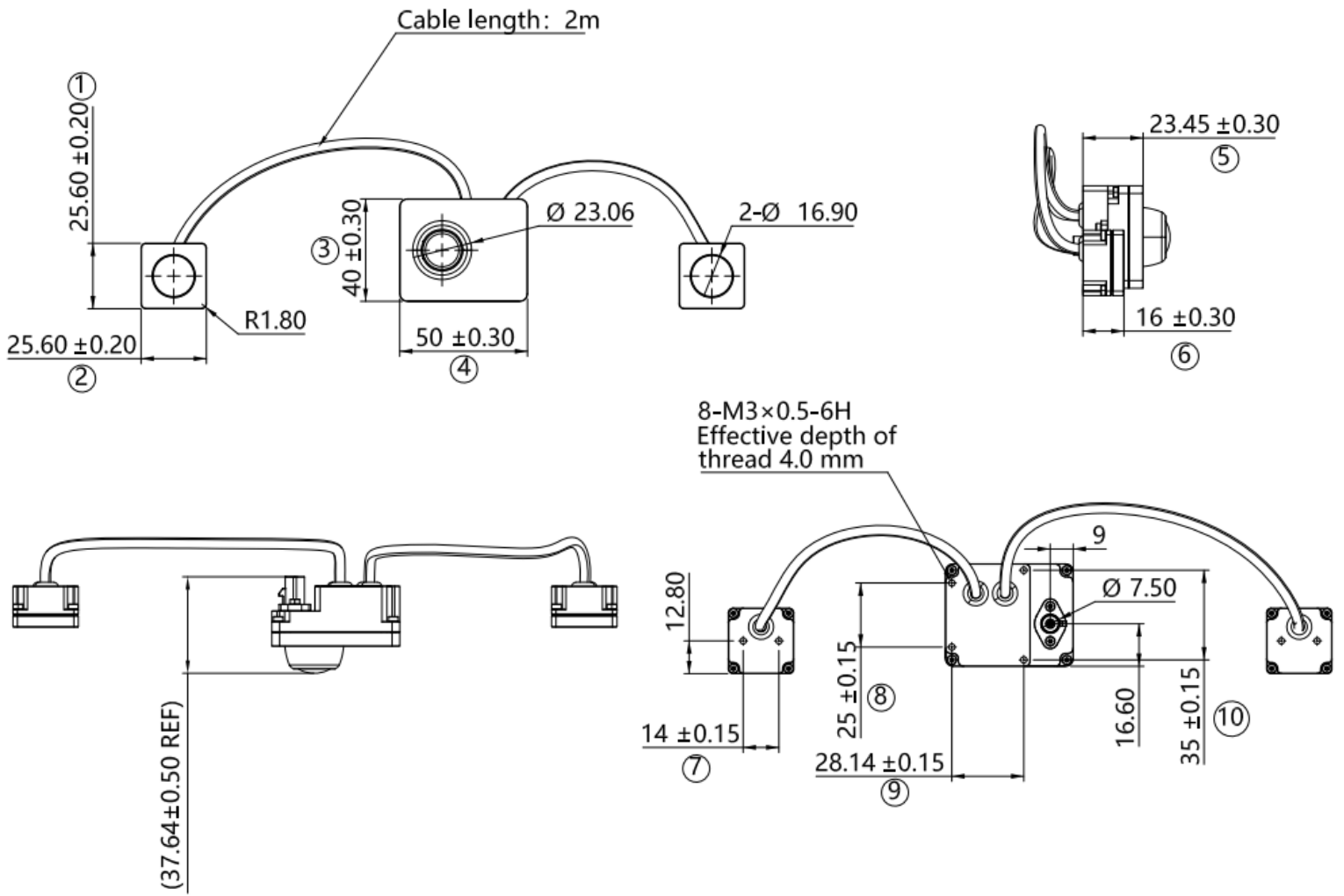
Focal Length	1.44 mm
Aperture, F/#	2.0 \pm 5%
Field of View (FOV)	200° horizontal
IR Filter	Visible + 940 nm band pass filter
Relative Illumination	40.0% @ IH 2.4
Distortion ($y=f\theta$)	+10% @ IH 2.77
Lens Mount	M12 x P0.5

VCSEL SPECIFICATIONS

Wavelength	940 nm
Field of Illumination (FOI)	125.5° horizontal
	111.5° vertical
QTY on Camera	2



DIMENSIONS

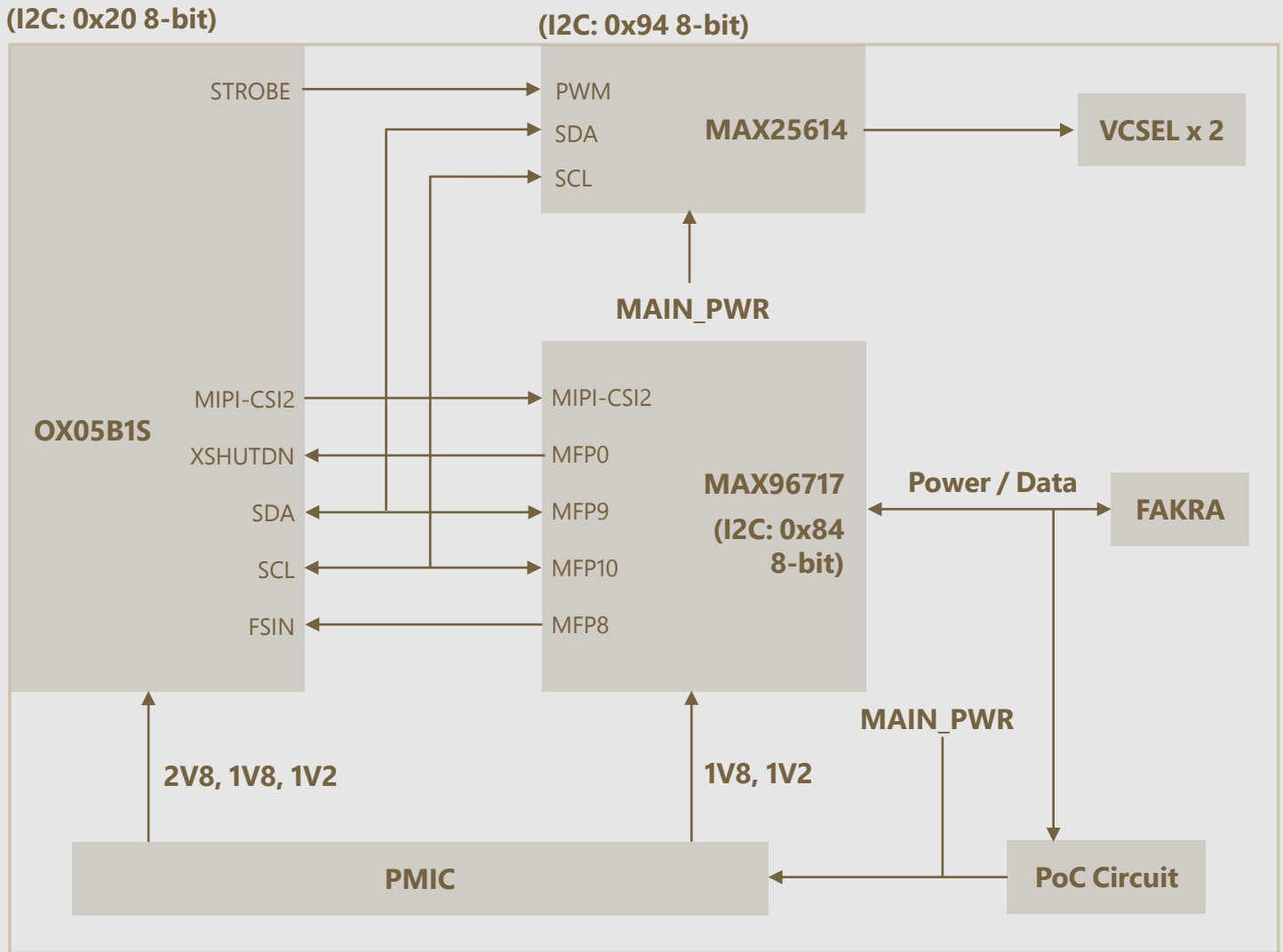


NOTE:

- ⊗ marked are important sizes.
- Other unmarked tolerances are $\pm 0.3 \text{ mm}$.

Unit: mm

PINOUT CONNECTIONS

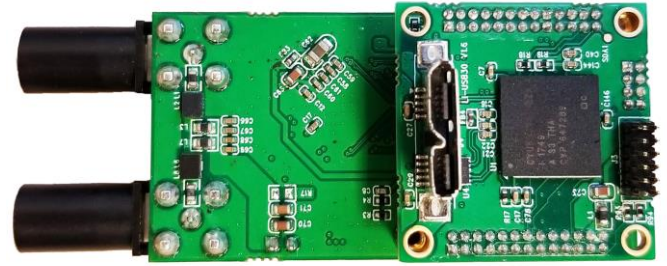


USB3.0 CAMERA KIT

LI-GMSL2-USB



Top View



Bottom View

LI-OX05B1S-VCSEL-OMS-96717-200H can connect to LI-GMSL2-USB as a USB 3.0 camera.

Part#: **LI-USB30-OX05B1S-VCSEL-OMS-96717-200H**

SPECIFICATIONS

- USB 3.0 Super Speed support
- UVC compliant
- Global shutter
- Allows customization
- 12 VDC power supply for camera
- Weight: ~ 280 g
- Single Coax Cable transmits up to 12 meters PoC (Power over Cable)
- Resolution: 2592 x 1944 @ 30 fps
- Compatible with Windows, Linux OS and other OS which have UVC drivers



BOM

#	Items	QTY
1	LI-OX05B1S-VCSEL-OMS-96717-200H	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
0.1	Initial draft.	24 Oct 2022
0.2	1. Replaced 3D images with actual product images. 2. Updated weight info, power consumption and USB30 resolution.	01 Mar 2023
0.3	Updated product images and weight info.	20 Mar 2023
0.4	1. Updated temp info. 2. Replaced block diagram with pinout connections. 3. Added "Eye-Safety" section	03 Aug 2023

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