



LEOPARD
IMAGING

LI-VB1940-IR-OMS-GM2B-143H



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-VB1940-IR-OMS-GM2B-143H is equipped with STMicroelectronics automotive 5.1 megapixel, 2.25 μm global shutter image RGB-IR sensor VB1940, ADI GMSL2 serializer MAX96717 and 4x Infrared LED Emitters. This camera outputs RAW RGB-IR data.

SPECIFICATIONS

Sensor	STMicroelectronics 5.1 MP Global Shutter Image Sensor VB1940
Optical Format	1/2.5"
Color / Mono	RGB-IR
Resolution	2560 (H) x 1984 (V)
Pixel Size	2.25 x 2.25 μm
Shutter	Global shutter
Output Format	RAW RGB-IR, 12-bit / 10-bit / 8-bit
Maximum Frame Rate	60 fps @ full resolution
Serializer	ADI MAX96717
ISP	Not included
IR LED	Included
FAKRA Connector	FAKRA Z TYPE
Power Supply Range	9 ~ 19 VDC
Power Consumption	526 mA @ 12 VDC (2560 x 1984 @ 30 fps)
Operating Temp	-40 °C ~ +85 °C
Storage Temp	-40 °C ~ +85 °C
IP Rating	IP67
Weight	~ 248 g

APPLICATIONS

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

LENS SPECIFICATIONS

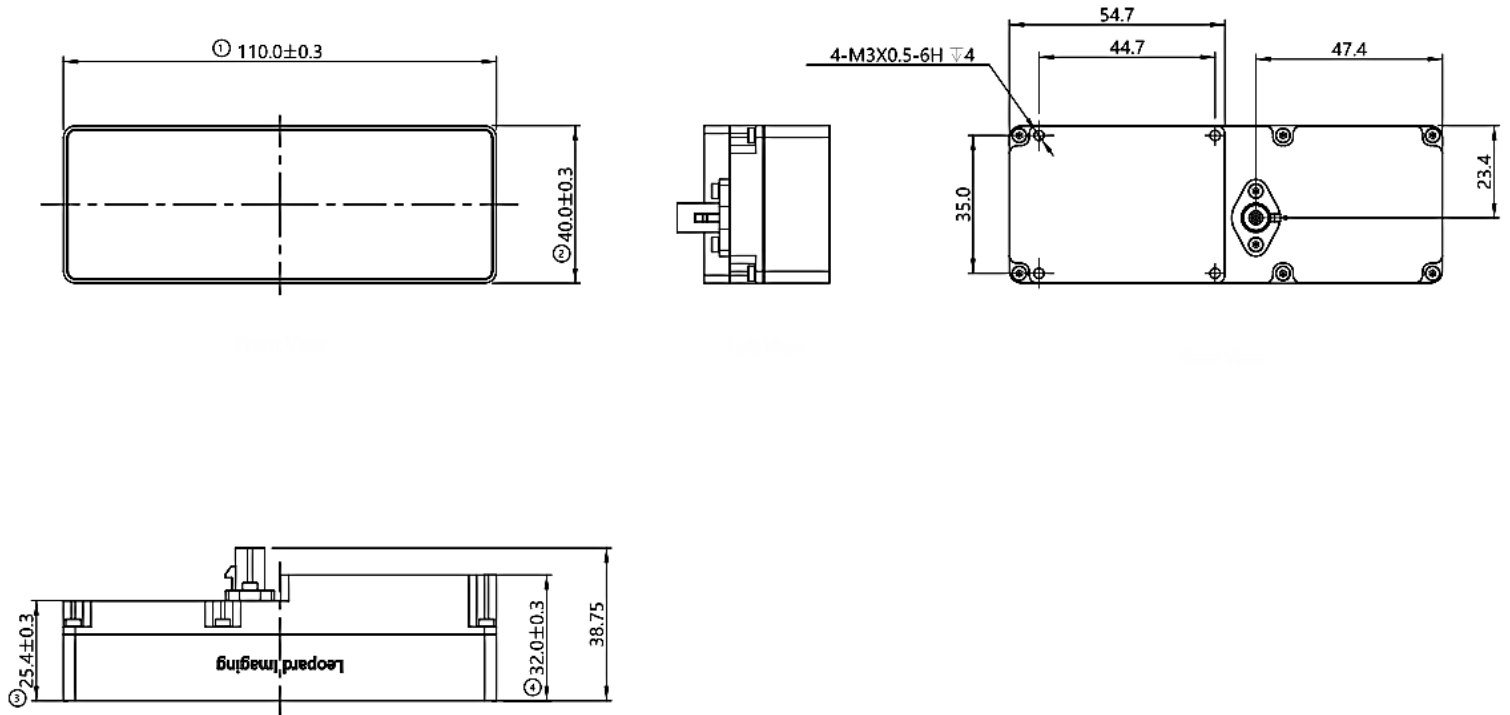
Focal Length	2.42 $\pm$ 5% mm
Aperture, F/#	2.2 $\pm$ 5%
Field of View (FOV)	143° horizontal
IR Filter	940 nm band pass filter
Lens Mount	M12 x P0.5

Infrared LED SPECIFICATIONS

Wavelength	940 nm
Angle	80°
QTY on Camera	4
Qualifications	AEC-Q102
Corrosion Robustness Class	3B



DIMENSIONS



NOTE:

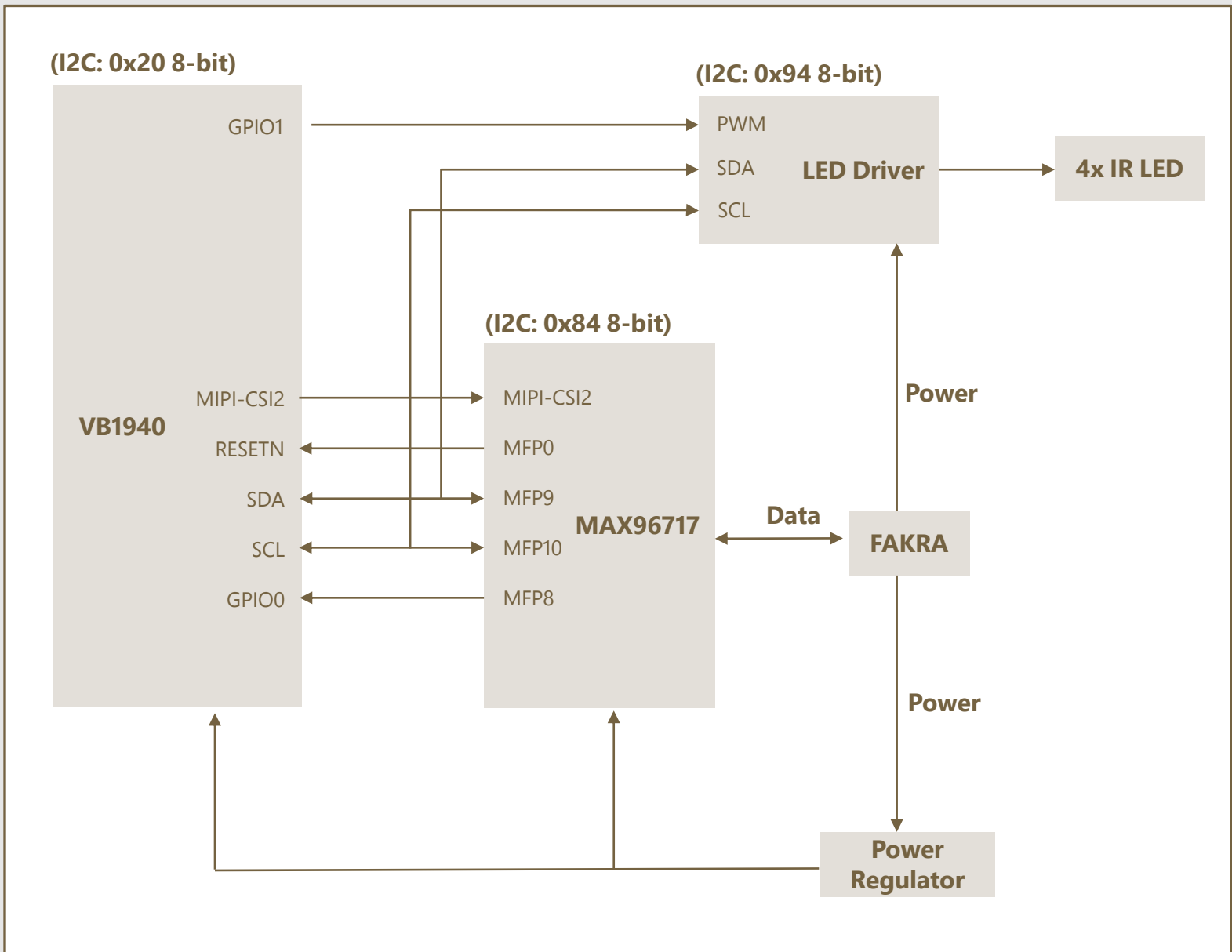
- ⊗ marked are important sizes.
- Tolerances for others unmarked refer to the Tolerance table.
- All materials are compliant with RoHS requirements.
- Unit: mm

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				

IMAGE ORIENTATION



SYSTEM BLOCK DIAGRAM



USB3.0 CAMERA KIT

LI-GMSL2-USB



Top View



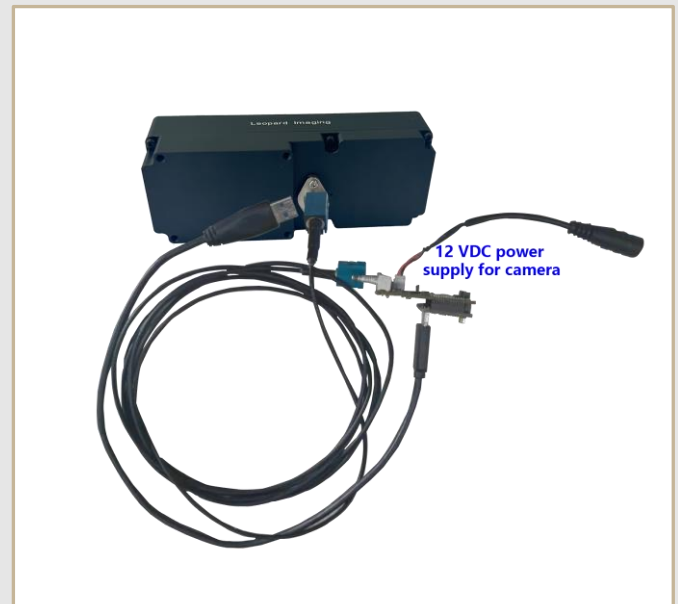
Bottom View

LI-VB1940-IR-OMS-GM2B-143H can connect to LI-GMSL2-USB as a USB 3.0 camera.

Part#: **LI-USB30-VB1940-IR-OMS-GM2B-143H**

SPECIFICATIONS

- USB 3.0 Super Speed support
- UVC compliant
- Global shutter
- Allows customization
- 12 VDC power supply for camera
- Weight: ~ 315 g
- Single Coax Cable transmits up to 12 meters PoC (Power over Cable)
- Resolution: 2560 x 1984 @ 30 fps
- Compatible with Windows, Linux OS and other OS which have UVC drivers



BOM

#	Items	QTY
1	LI-VB1940-IR-OMS-GM2B-143H	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.	17 Nov 2025

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