



LEOPARD IMAGING INC

LI-USB20-OV5640-PAR-AF

Data Sheet

Key Features

- Support 5M video streaming
- OmniVision OV5640 5M sensor
- Pixel size: 1.4um x 1.4um
- Support YUV and MJPEG output
- USB 2.0 compliance
- Support auto focus
- OV5640 module with parallel interface
- Low cost with high quality
- Customized based on customer's specs
- Part#: **LI-USB20-OV5640-PAR-AF**

Interface (SM05B-SRSS-TB)

5 Pin USB Connector (SM05B-SRSS-TB)	
Pin No.	Name
1	USB_5V
2	USB_DM
3	USB_DP
4	NC
5	Shield Ground



Lens Specification

- Focusing Range Capability: 10cm to infinity
- Focal Length: 3.5 mm
- F Number: 2.6
- Fov (H): 65°
- TV Distortion: < 0.3%
- Support Auto Focus

BOM

#	Items	QTY
1	LI-OV5640-PAR-AF-PR	1
2	LI-OV5640-USB Board-PR	1
3	USB 2.0 cable	1



Leopard Imaging Inc.

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Specification

General Behavior		
Video Resolution @ Frame rate	2592 x 1944	YUV @ 2 fps
	2048 x 1536	YUV @ 2 fps
	1920 x 960	YUV @ 7.5 fps
	1024 x 768	YUV @ 12 fps
	800 x 600	YUV @ 23 fps
	640 x 480	YUV @ 30 fps
	320 x 240	YUV @ 30 fps
	160 x 120	YUV @ 30 fps
	2592 x 1944	MJPEG @ 15 fps
	2048 x 1536	MJPEG @ 15 fps
	1920 x 1080	MJPEG @ 10 fps
	1600 x 1200	MJPEG @ 10 fps
	1280 x 960	MJPEG @ 30 fps
	1280 x 720	MJPEG @ 30 fps
	1024 x 768	MJPEG @ 30 fps
	800 x 600	MJPEG @ 30 fps
	640 x 480	MJPEG @ 30 fps
	320 x 240	MJPEG @ 30 fps
Adjustment	The following can be adjusted manually: Brightness, Contrast, Hue, Saturation, Sharpness, Gamma, White Balance (default: Auto), Backlight Comp, Gain, Focus (Auto only) Exposure (default: Auto).	
Interface (Optical)		
Sensor specification	OmniVision OV5640 5M sensor	
Shutter	Rolling	
Format	1/4”	
Resolution	H:2592, V:1944	
Pixel size	H:1.4 um, V: 1.4 um	
Interface (Electrical)		
Interface	USB 2.0	
Current consumption	Approx. 190 mA at 5 VDC	
Interface (Mechanical)		
Mass	2 g	
Environmental		
Max. temperature (operation)	0 °C ~ 50 °C (32 °F~ 122 °F)	
Max. temperature (storage)	-20 °C ~ 80 °C (-4 °F~176 °F)	
Max. humidity (operation)	20 % ~ 80 %, relative, non-condensing	
Max. humidity (storage)	20 % ~ 80 %, relative, non-condensing	



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RoHS



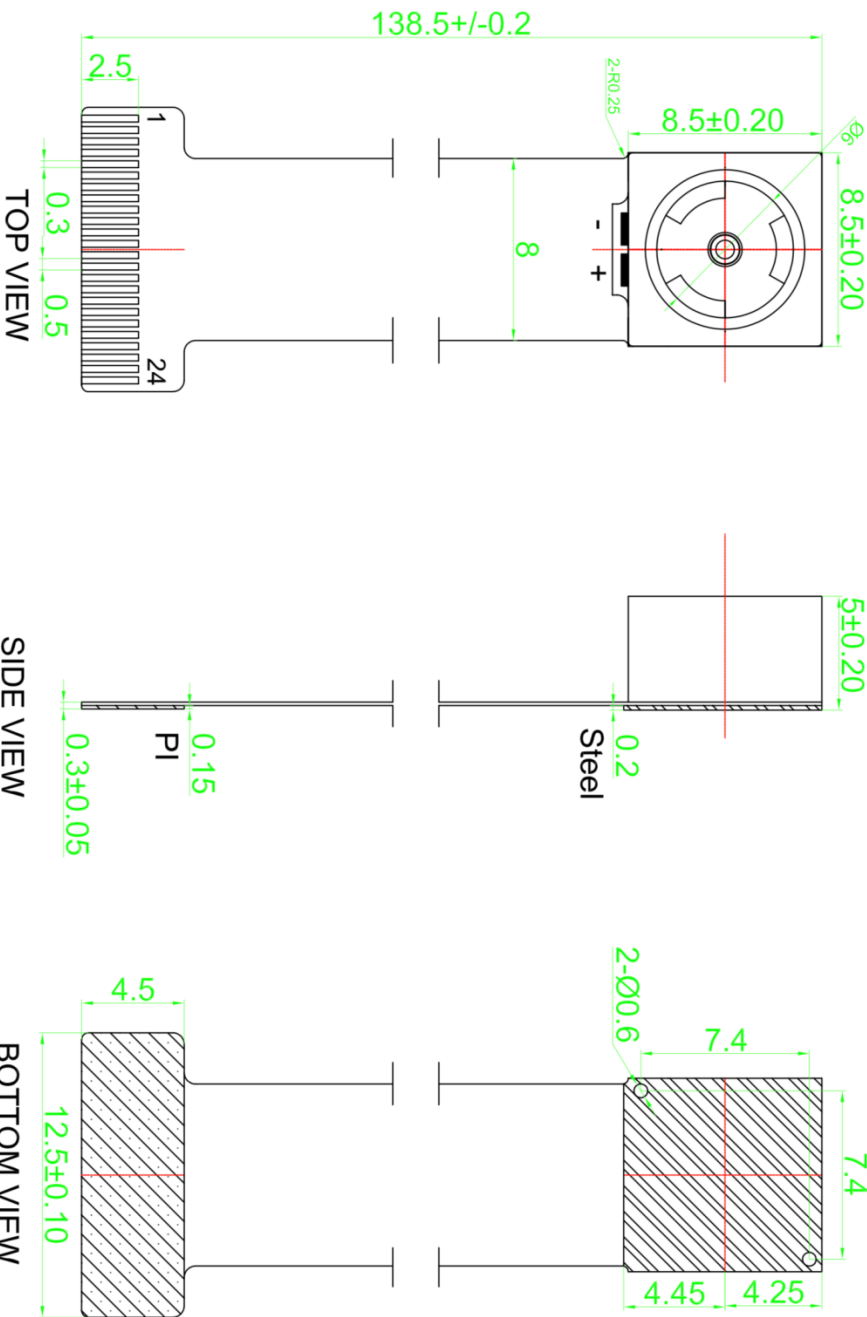
LI-OV5640-PAR-AF-PR

QR-RD-F002 Rev-A

advert:
basic tolerance: $\pm 0.1\text{mm}$
label have *** is emphasis dimension

Optical Lens Specification:
Focusing Range: 10cm to Infinity
Focal Length: 3.5mm
F Number: 2.6
Fov(D): 65°
TV Distortion: $< 0.3\%$

Pin	NAME
1	NC
2	GND
3	SDA
4	AVDD2.8V
5	SCL
6	RESET
7	V5VNC
8	PWDN
9	HSYNC
10	DVDD1.5V
11	D0VDD2.8V
12	D7
13	MCLK
14	D6
15	GND
16	D5
17	PCLK
18	D4
19	D0
20	D3
21	D1
22	D2
23	AF-NC2.8V
24	AF-GND



Note: # Image direction register use default settings.
Output format: YUV output

NO	Change item	Version	Date
	Original	V1.0	2014-08-11



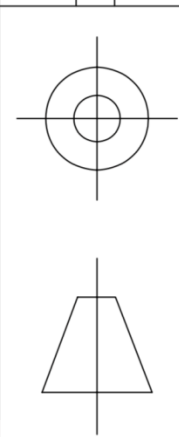
Leopard Imaging Inc.

Draft:	Date:	Project Name:
Check:	Date:	
Approval:	Date:	LI-OV5640-PAR-AF-PR

Reinforcement:

NO	ITEM	QTY	DESCRIPTION
1	Steel	1	
2	FPC	1	
3	TAKING LENS	1	
4	Sensor	1	OV5640
5	Test Connector	1	FHT245-0.5SH

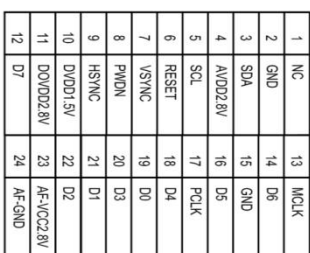
Proportion:	1:1	Unit:	MM
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QR-RD-F002 Rev-A
advert:
basic tolerance: ± 0.1 mm
label have "mm" is emphasis dimension



Connector

PIN	NAME
1	USB_5V
2	USB_DP
3	USB_DM
4	GND
5	Shield_Ground

USB Connector

BOTTOM VIEW

Reinforcement:

NO	ITEM	Q'TY	DESCRIPTION
1	PCB	1	
2	DSP	1	SM3732
3	Connector	1	FH12-24S-0.5SH
4	USB Connector	1	SM05B-SR-SS-1TB

NO	Change item	Version	Date
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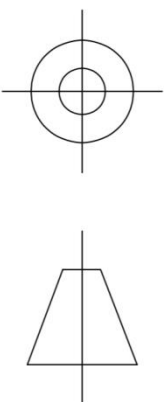
NO	Change item	Version	Date
	Original	V1.0	2014-11-11



Leopard Imaging Inc.

Project Name:	Li-OV5640-USB Board-PR		
Draft:	Date:		
Check:	Date:		
Approval:	Date:		

Reinforcement:	10F1	Version:	1.0
Proportion:	1:1	Unit:	MM



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