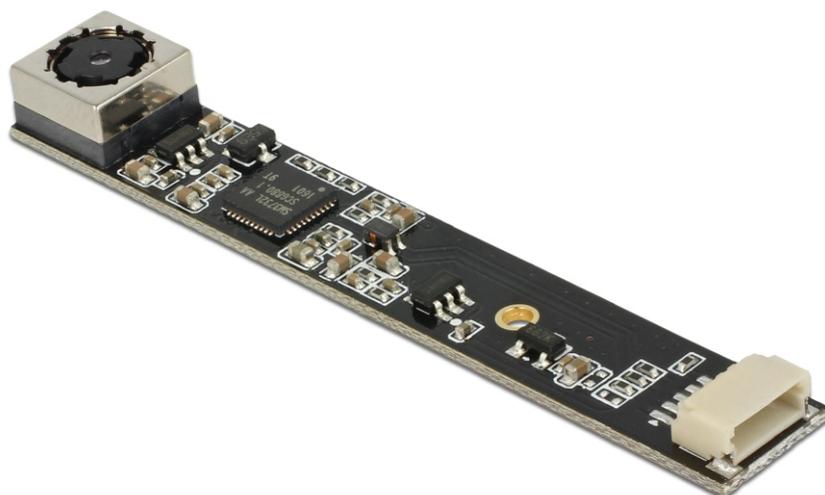


# Specification

## 96381

Delock USB 2.0 camera module 5.04 megapixel 62° auto focus  
vertical edge

EAN: 4043619963812



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### 1. General Description

This is 5.04 mega pixel and AF camera module with sensor on board, lens module and USB2.0 video/image process controller. It is designed for all kinds of electronic image processing.

The OV5640 is a low voltage, high performance, 1/4 inch 5 megapixel CMOS image sensor that provides the full functionality of a single chip camera using OmniBSI™ backside illumination architecture in a small footprint package. It provides full-frame, sub-sample, windowed or arbitrarily scaled 8-bit/10-bit images in various formats via the control of the Serial Camera Control Bus (SCCB) interface.

### 2. Features

- USB specification compliance
  - USB 2.0 and USB 1.1 compliance
  - USB video V1.1 compliance (UVC)
  - USB high speed, full speed auto switching
- Supports QSXGA, QXGA, SXGA, 1080P, 720P, VGA, CIF output formats.
- USB Video Class compliant, works with native driver in Microsoft Windows XP 32-bit/64-bit, VISTA 32-bit/64-bit, Windows 7 and Windows 8 system, also with Linux with UVC Video4Linux
- Auto Exposure (AE).
- Auto White Balance (AWB)
- Auto Flicker Correction.
- Color Correction.
- Gamma Correction.
- Dark Level Compensation.
- Auto Edge enhancement.
- Software controlled connection to USB bus for re-enumeration.
- Adjustable and dynamic frame rate control on USB transaction.
- Automatic frame rate adjustment when exposure in low light environment.
- Selective suspend to minimize power consumption.

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### Specification

Parameter	SPEC.
Optical sensor	OV5640, 1/4 inch CMOS sensor
Sensor resolution	2592 (H) x 1944 (V), QSXGA
Unit pixel size	1.4 um
Color filter	RGB Bayer pattern
Shutter type	Electronic rolling shutter
Max. video frame rate	30fps@720p
View angle	62°
F Number	2.8
AEC / AGC/ white balance	Auto
Focus distance	Auto focus 10 cm - ∞
Interface	USB 2.0
Power	USB Bus Power
Dimensions (mm) (L x W x H)	60 mm x 8 mm x 6.5 +/-0.2 mm
Operating temperature	0°C ~ 50°C
Operating system request	Windows XP, Windows 7/8
Max pixel rate	28 Mp/s
ADC accuracy	10-bit
USB 2.0 PHY	On Chip PHY
Power consumption suspend	90 mA ± 5 mA
operating	140 mA ± 5 mA @ 640x480

### Support for various OS

Windows 7/8.1/10

Linux with UVC Video4Linux

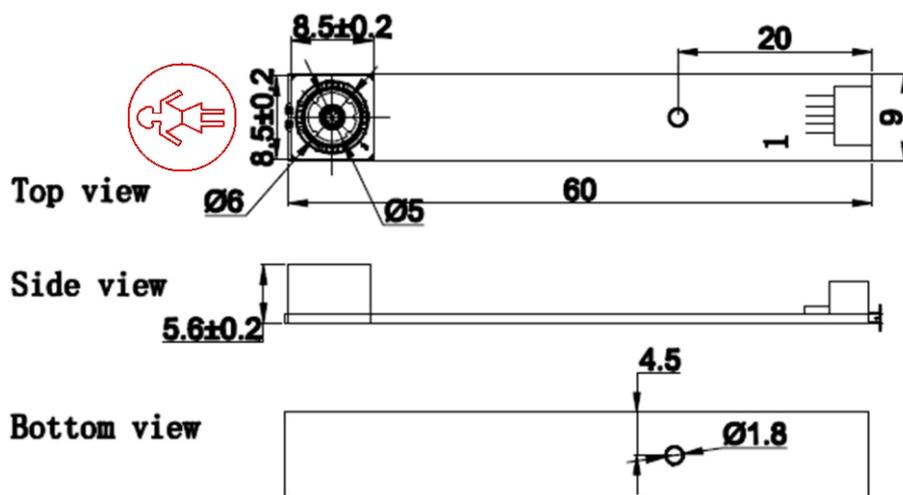
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### Mechanical drawing



# Specification

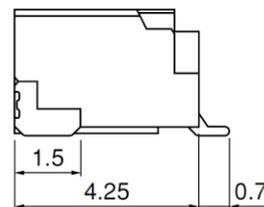
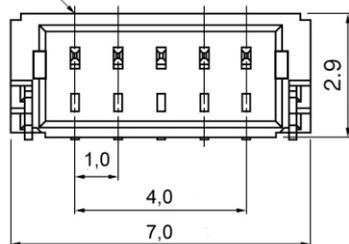
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### Pin assignment

Circuit No.1



SM05B-SRSS-TB vendor JST

Pin No.	Symbol	Description
1	USB+5V	+ 5V power supply
2	USB D-	USB data cable-
3	USB D+	USB data cable+
4	USB GND	Ground
5	USB GND	Ground

### Optional cable:

A95843 0.1 m

A95986 1.5 m

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### Video capability

Standard	Resolution	fps
HVGA	320x480	30fps
VGA	640x480	30fps
XGA	1024x768	30fps
720p	1280x720	30fps
	1280x960	30fps
	1600x1200	15fps
1080p	1920x1080	15fps
	2048x1536	15fps
	2592x1944	15fps

### I/O

USB 2.0 High Speed device

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### Reliability Test

No.	Test Item	Test Conditions
1	Constant temperate and humidity storage test	Temperate : $60\pm 2^{\circ}\text{C}$ ; Humidity : $90\pm 2\% \text{RH}$ ; Test duration: 120h
2	High temperate storage test	Temperate : $80\pm 2^{\circ}\text{C}$ ; Test duration : 72h
3	Low temperate storage test	Temperate : $-40\pm 2^{\circ}\text{C}$ ; Test duration: 72h
4	High and low temperature shock test	High temp. : $65 \pm 3^{\circ}\text{C}$ ; Low temp. : $-10 \pm 3^{\circ}\text{C}$ ; Each place time : 30min ; Number of cycles : 100
5	Vibration test	Frequency range : 10-2000Hz ; Amplitude : 1.5mm ; 2G Test all 3 axes (X, Y, Z) ; Duration 20min for each axis
6	ESD test	HBM: 2.0KV MM: 150V
7	Drop test	150cm hight free fall Surface: concrete or steel Number of drop: 3 tines

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### **WEEE note**

The WEEE (Waste Electrical and Electronic Equipment) directive, which came into force on 13 February 2003, lead to a comprehensive change in the disposal of used electric products. It is the main purpose of this directive to avoid electric waste products (WEEE), while simultaneously promoting the re-usage, recycling and other forms of reconditioning in order to reduce the amount of waste. The WEEE logo on the product and the package shows that the product should not be disposed of with regular garbage. You are responsible for disposing all used electric and electronic devices at the corresponding collection sites. The separate collection and meaningful re-usage of electronic waste helps to deal with natural resources more economically. In addition, re-using electronic waste contributes to the preservation of the environment and human health. Additional information regarding the disposal of electric and electronic devices, their re-usage and the collection sites can be found at your local authorities, disposal companies, specialist shops and the manufacturer of the product.

### **RoHS conformity**

This product complies with the directive 2002/95/EC of the European parliament and the council from January 27th 2003 concerning the restricted use of dangerous substances in electrical and electronical devices (RoHS) as well as its modification. This product complies with the directive 2011/65/EU which becomes effective from January 3rd 2013.

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### **Support Delock**

If you have further questions, please contact our customer support  
support@delock.de.

You can find current product information on our homepage: [www.delock.com](http://www.delock.com).

### **Final clause**

Information and data contained in this manual are subject to change without  
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### **Copyright**

No part of this user manual may be reproduced, or transmitted for any purpose,  
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Edition: 01/2017