

# Specification

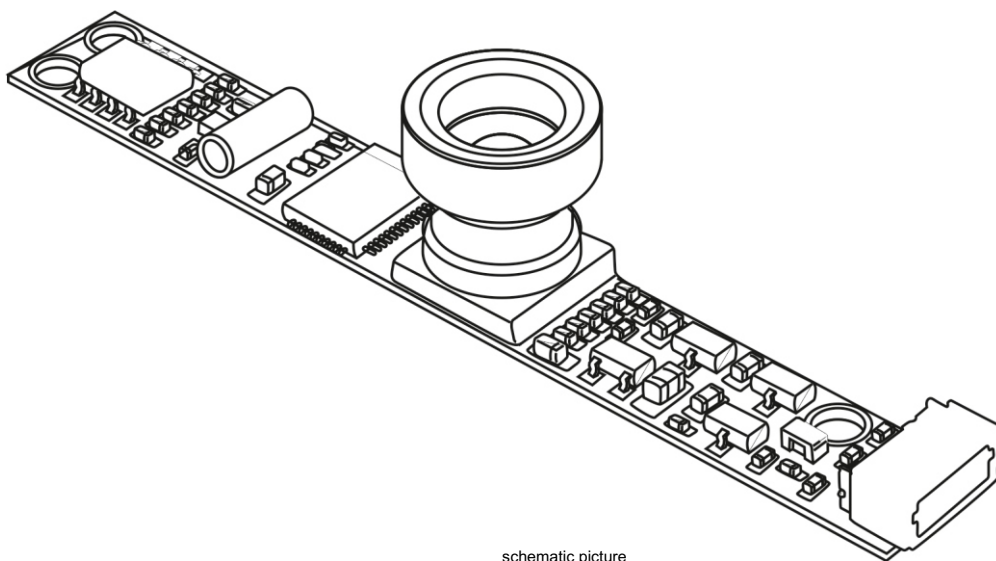
95976 95977 95978

Delock USB 2.0 camera module 3.14 Mpix

EAN: 4043619959761

EAN: 4043619959778

EAN: 4043619959785



schematic picture

**Edition: 06/2015**

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### General Description

This is 3.14 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 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.

### 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 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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## Character:

- Total height: 95976: 48°: 6.30 mm +/- 0.10 mm  
95977: 55°: 12.00 mm +/- 0.10 mm  
95978: 80°: 13.00 mm +/- 0.10 mm
- The dimension of lens's seat: 8.0 × 8.0 mm.
- With IR Filter
- Working temperature: 0°C ~ 50°C
- Storage temperature: -40°C ~ 80°C

| Parameter                 | SPEC.                        |
|---------------------------|------------------------------|
| Optical sensor            | OV5640, 1/4 inch COMS sensor |
| Sensor resolution         | 2592 (H) x 1944 (V), QSXGA   |
| Unit pixel size           | 1.4 um                       |
| Image area                | 3673.6 x 2738.4 micrometer   |
| Color filter              | RGB Bayer pattern            |
| Shutter type              | Electronic rolling shutter   |
| Max. video frame rate     | 90fps@VGA,30fps@720p         |
| F Number                  | 2.8                          |
| AEC / AGC/ white balance  | Auto                         |
| Focus distance            | Fix focus 30 cm - ∞          |
| Interface                 | USB 2.0                      |
| Power                     | USB Bus Power                |
| Dimensions (mm) (L x W)   | 60 mm x 8 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      |

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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 |

## System requirements

- Device with Microsoft Windows Vista/7/8 or Linux above kernel 2.6.15 with Video4Linux

## Optical lens specification

|               | Field of view           | F   | Elements |
|---------------|-------------------------|-----|----------|
| 95976 / 95980 | D=60° / H=46° / V=32°   | 2.8 | 4        |
| 95977 / 95981 | D=80° / H=60° / V=45°   | 3.0 | 5        |
| 95978 / 95979 | D=170° / H=107° / V=80° | 2.5 | 4        |

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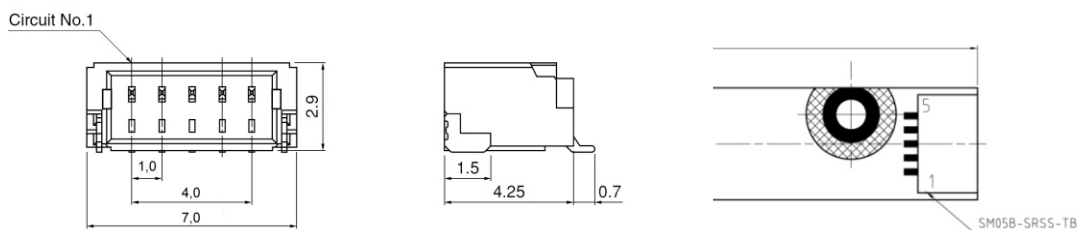
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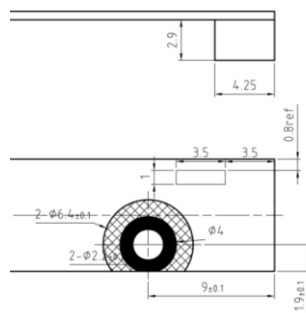
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## Pin assignment



(5pin 1.0mm pitch) connector definition:

|   |         |
|---|---------|
| 1 | USB D+  |
| 2 | USB D-  |
| 3 | USB 5 V |
| 4 | NC      |
| 5 | GND     |



## Optional cable:

A95843 10cm

A95985 1.5m USB plug A

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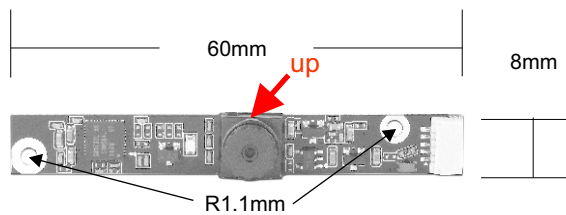
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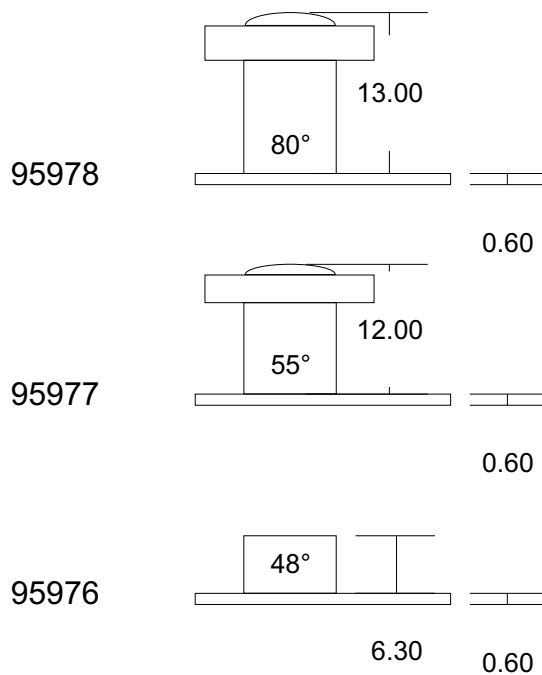
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## Structural diagram



## lens height



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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 is compliant with Directive 2011/65/EU of 3 January 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 notice in advance. Errors and misprints excepted.

## **Copyright**

No part of this user manual may be reproduced, or transmitted for any purpose, regardless in which way or by which means, electronically or mechanically, without explicit written approval of Delock.

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