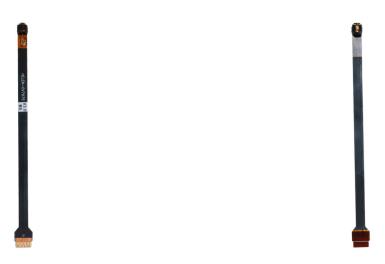


YDS-HELEN-OV7675 V3.0

0.3MP OmniVision OV7675 LED DVP Parallel Interface Fixed Focus Camera Module



Front View

Back View

| Spe | cification | S |
|-----|------------|---|
| | | |

| Camera Module No. | YDS-HELEN-OV7675 V3.0 | |
|--------------------------|-----------------------|--|
| Resolution | 0.3MP | |
| Image Sensor | OV7675 | |
| Sensor Type | 1/9" | |
| Pixel Size | 2.5 um x 2.5 um | |
| EFL | 1.25 mm | |
| F.NO | 5.00 | |
| Pixel | 640 x 480 | |
| View Angle | 105.0°(DFOV) | |
| Lens Dimensions | 4.50 mm Diameter | |
| Module Size | 94.00 x 6.60 mm | |
| Module Type | Fixed Focus with LED | |
| Interface | DVP Parallel | |
| Auto Focus VCM Driver IC | None | |
| Lens Model | YDS-LENS-JHM817B | |
| Lens Type | 650nm IR Cut | |
| Operating Temperature | -30°C to +70°C | |
| Mating Connector | FH26W-21S-0.3SHW(60) | |

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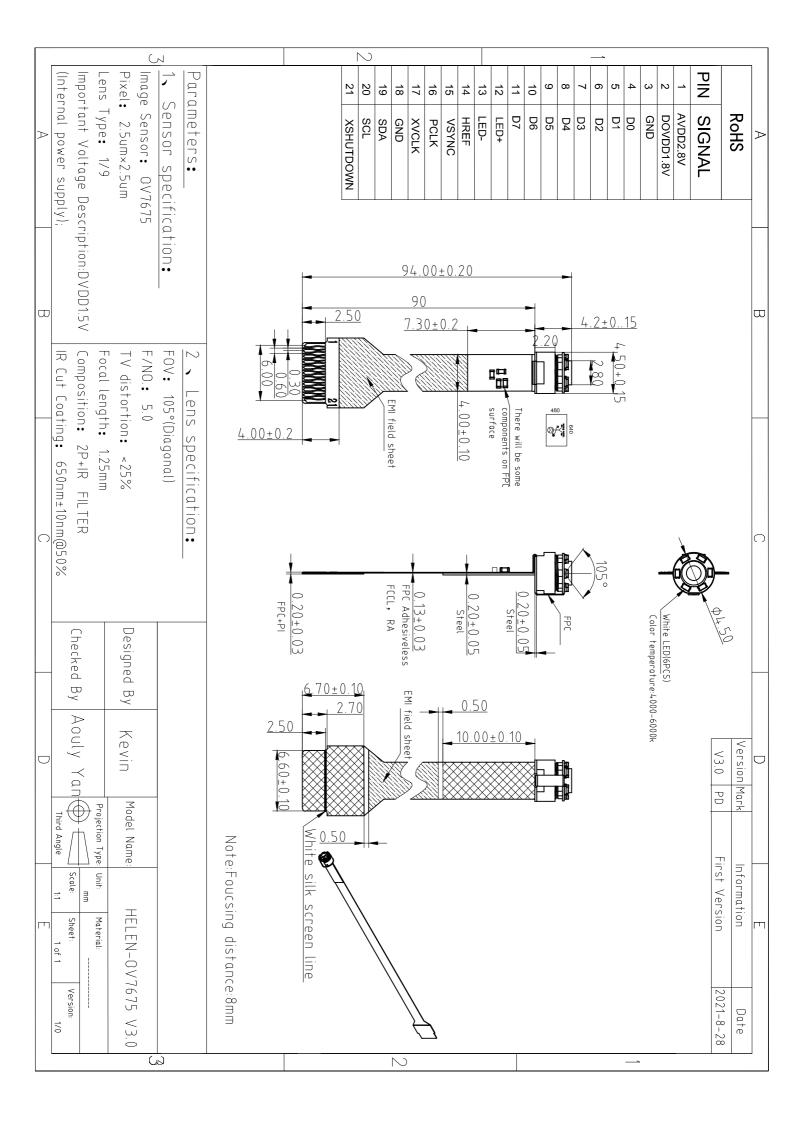
your best camera partner

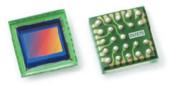
YDS-HELEN-OV7675 V3.0

0.3MP OmniVision OV7675 LED DVP Parallel Interface Fixed Focus Camera Module



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OV7675 VGA product brief





available in a lead-free package

Higher Performance, Feature Rich VGA Sensor to Support Fast Growing Emerging Markets

The OV7675 is a high performance VGA sensor designed specifically to address growing demand for consumer electronics from emerging markets. Its small optical format enables ultra-thin camera modules, which, combined with its excellent low-light performance, make it a very attractive solution for entry-level and mainstream mobile phones, notebooks, netbooks and webcams.

The OV7675 is a low-voltage color CMOS image sensor that supports the full functionality of a single chip VGA (640 x 480) camera in a small footprint package. The 1/9-inch OV7675 uses a unique 2.5-micron OmniPixel3-HS[™] pixel design, which allows it to offer best-in-class low-light sensitivity (1800 mV/lux-sec), significantly reduced noise and outstanding color reproduction. The OV7675 provides full-frame, sub-sampled, windowed images in VGA, QVGA and QQVGA formats via the control of the serial camera control bus (SCCB) interface. Its image array is capable of operating at up to 30 frames per second (fps) in full VGA resolution with complete user control over image quality, formatting and output data transfer.

All required image processing functions, including exposure control, gamma, white balance, color saturation, hue control, defective pixel canceling, noise canceling are programmable through the SCCB interface. In addition, OmniVision image sensors use proprietary sensor technology to improve image quality by reducing or eliminating common lighting/electrical sources of image contamination, such as fixed pattern noise and smearing to produce a clean, fully stable color image.

Find out more at www.ovt.com.



Applications

Mobile Phones

Notebooks/Netbooks and Webcams



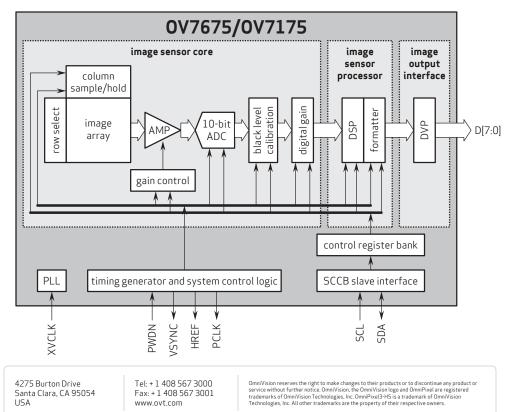
- OV07675-A23A (color, lead-free, 23-pin CSP3)
- OV07175-A23A (B&W, lead-free, 23-pin CSP3)
- OV07675-G04A (color, chip probing, 200 µm backgrinding, reconstructed wafer)

- Product Features
- support for image sizes:
 VGA (640 x 480), QVGA (320 x 240) and QQVGA (160 x 120)
- support for output formats: YUV4:2:2, RAW RGB, ITU656, RGB565
- digital video port (DVP) parallel output interface
- on-chip phase lock loop (PLL)
- built-in 1.5V regulator for core
- capable of maintaining register values at power down
- programmable controls for frame rate, mirror and flip, AEC/AGC, and windowing
- support for horizontal and vertical sub-sampling
- automatic image control functions: - automatic exposure control (AEC) automatic white balance (AWB)
 - automatic black level calibration (ABLC)

- image quality controls: defect pixel correction and lens shading correction support for black sun cancellation
- standard serial SCCB interface
- parallel I/O tri-state configurability and programmable polarity
- module size: 6 mm x 6 mm
- active array size: 640 × 480 power supply: - analog: 2.6 - 3.0 V - core: 1.5 V ±5% (internal regulator)
- I/0: 1.71 3.0 V
- power requirements:
- temperature - stable image: 0°C to 50°C junction temperature
- output formats: YUV422, RAW RGB, ITU656, RGB565
- lens size: 1/9"
- lens chief ray angle: 21°

- **Product Specifications** maximum image transfer rate:
 - VGA: 30 fps QVGA: 60 fps QQVGA: 240 fps
 - sensitivity: 1800 mV/lux-sec
 - shutter: rolling shutter
 - max S/N ratio: 38 dB
 - dynamic range: 71 dB @ 8x gain
 - maximum exposure interval: 510 x t_{ROW}
 - **pixel size:** 2.5 μm x 2.5 μm
 - dark current: 10 mV/s @ 60°C junction temperature
 - image area: 1640 μm x 1220 μm
 - package dimensions:
 CSP3: 2815 μm x 2825 μm - COB: 2830 μm x 2840 μm

Functional Block Diagram



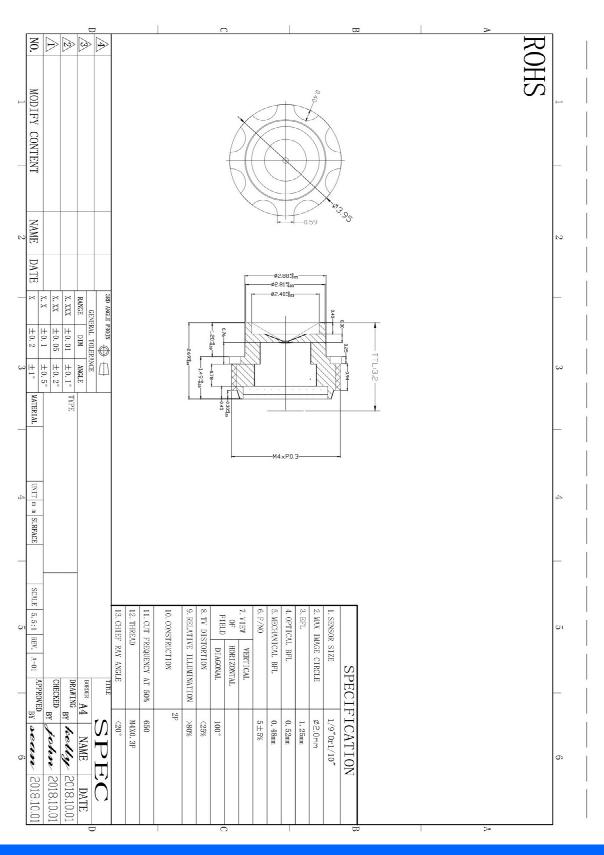
- active: 98 mW standby: 60 µW
- temperature range:
 operating: -30°C to 70°C junction

- input clock frequency: 1.5 27 MHz
- scan mode: progressive

your best camera partner

YDS-LENS-JHM817B

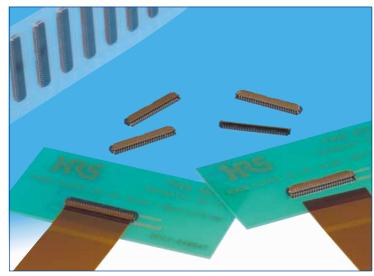
S

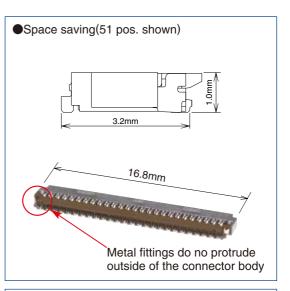


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0.3 mm Pitch, 1.0 mm Height FPC Connector

FH26 Series





Features

1. Low-profile 0.3 mm pitch FPC connector

Ultra-thin design, 1.0 mm height, 3.2 mm width all add up to a compact, space saving form factor. *30% reduction in PCB footprint *40% reduction in weight (Compared to our 0.3 mm pitch FH23 Series 51 position connector.)

2. Easy PCB Mounting

The leads are double sided and have a 0.6 mm mounting lead pitch to simplify mounting.

3. Fully molded structure aids PCB layout

The bottom of this connector is enclosed by a fully molded structure that protects the contacts and removes any restrictions from PCB patterning and design.

4. Rotating one-touch ZIF mechanism

The one-touch rotating ZIF mechanism is easier to operate and works with a light force, and a clear tactile click is delivered upon the successful completion of the mating process

5. Easy FPC insertion

The metal FPC insertion guides helps to make this the FPC insertion process easier.

6. FPC. Accepts standard 0.2 mm thick FPC

This connector accepts standard 0.2 mm thick FPC. (The proper FPC stiffener thickness will prevent FPC deformation and ease insertion and mating.)

7. Supports automatic pick-n-place mounting

Offered in tape and reel packaging that is compatible with automatic machine mounting. (5,000 pieces per reel)

8. Halogen-free

If you need a Halogen free connector, please use the FH26W type. All materials and substances used to produce the FH26W Series product complies with Halogen-free standards. * Defined according to IEC61249-2-21 Br: 900ppm max, Cl: 900ppm max, Br+Cl: 1,500ppm max.

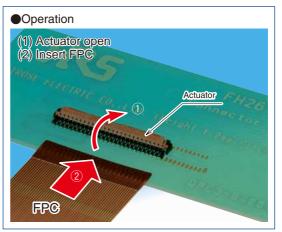
9. Multiple packing options

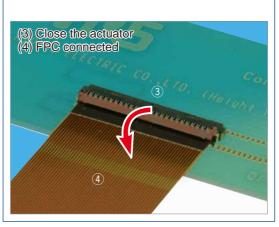
The standard packaging is 5,000 pieces per reel, but it is also offered in a 500 piece reel. (The outer diameter of the reel will be ϕ 180 mm in this case.)

Can be mounted over conductive traces.



No exposed contacts on the bottom of the connector





Specifications

| Rating Current rating Voltage rating 0.2A DC 30V AC Operating temperature range Operating humidity range -55 °C to +85°C (Note 1 Relative humidity 90% r (No condensation) | |
|---|--|
|---|--|

Recommended FPC : T

Thickness: = 0.2 ± 0.03 mm gold plated

| Item | Specification | Conditions |
|--|---|--|
| 1. Insulation resistance | 50 M ohms min. | 100 V DC |
| 2. Withstanding voltage | No flashover or insulation breakdown. | 90 V AC /one minute |
| 3. Contact resistance | 100 m ohms max. * Including FPC conductor resistance | 1 mA |
| 4. Durability (Insertion/ withdrawal) | Contact resistance: 100 m ohms max. No damage, cracks, or parts dislocation. | 10 cycles |
| 5. Vibration | No electrical discontinuity of 1μ s or more. Contact resistance: 100 m ohms max. No damage, cracks, or parts dislocation. | Frequency: 10 to 55 Hz, single amplitude of 0.75 mm, 10 cycles, 3 directions. |
| 6. Shock | No electrical discontinuity of 1μ s. min. Contact resistance: 100 m ohms max. No damage, cracks, or parts dislocation. | Acceleration of 981 m/s ² , 6 ms duration, sine half-wave waveform, 3 cycles in each of the 3 axis |
| 7. Humidity (Steady state) | Contact resistance: 100 m ohms max. Insulation resistance: 50 M ohms min. No affect on appearance or performance. | 96 hours at temperature of $40\pm2^\circ$ C and humidity of 90% to 95%. |
| 8. Temperature cycle | Contact resistance: 100 m ohms max. Insulation resistance: 50 M ohms min. No damage, cracks, or parts looseness. | Temperature: $-55 \ ^\circ C \rightarrow +15 \ ^\circ C \ +35 \ ^\circ C \rightarrow +85 \ ^\circ C \rightarrow +15 \ ^\circ C \ +35 \ ^\circ C \rightarrow +15 \ ^\circ C \rightarrow +15 \ ^\circ C \ +35 \ ^\circ C \rightarrow +15 \ ^\circ C \rightarrow +15$ |
| 9. Resistance to soldering heat | No deformation of components affecting performance. | Reflow: At the recommended temperature profile Manual soldering: 350° +/-10°C for 5±1 seconds |

Note 1: Includes temperature rise caused by current flow.

Note 2: The term "storage" refers to products stored for long period of time prior to mounting and use. Operating Temperature Range and Humidity range covers non- conducting condition of installed connectors in storage, shipment or during transportation.

Materials

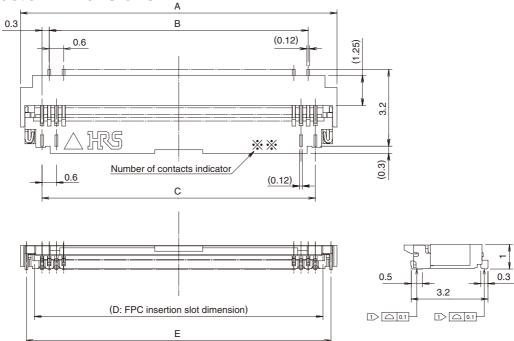
| Part | Material | Finish | Remarks | | |
|---------------|-----------------|---------------------------|---------|--|--|
| | LCP | Color: Black | | | |
| Insulator | PA | FH26 series: Deep brown | UL94V-0 | | |
| | | FH26W series: Light brown | UL94HB | | |
| Contacts | Dhaanbar branna | Gold plating | | | |
| Metalfittings | Phosphor bronze | Pure tin reflow plating | | | |

Ordering information

$\frac{\mathsf{FH}}{\bullet} \ \frac{26}{\$} \ \frac{\mathsf{W}}{\bullet} \ - \ \frac{51\mathsf{S}}{\bullet} \ - \ \frac{0.3}{\bullet} \ \frac{\mathsf{SHW}}{\bullet} \ \frac{(05)}{\bullet}$

| Series name: FH | 6 Termination type SHW: SMT horizontal staggered mounting type | | |
|---|--|--|--|
| Series No.: 26 | Ø Specifications | | |
| 8 Blank: Standard | (10)Gold plating with nickel barrier, 5,000 pieces / reel | | |
| W: Satisfies halogen-free requirements (Flame retardance UL94HB). | (99)Gold plating with nickel barrier, 500 pieces / reel | | |
| 4 Number of positions: 13 to 71 | | | |
| G Contact pitch: 0.3mm | | | |





Notes 1 The coplanarity of each terminal lead within specified dimension is 0.1 mm Max.

- 2 Packaged on tape and reel only. Check packaging specification.
- 3 Slight variations in color of the plastic compounds do not affect form, fit or function of the connector.
- 4 After reflow, the terminal plating may change color, however this does not represent a quality issue.

| | | | | | | All dime | ensions: mm |
|--|--|----------------------|------------------------------|------------------------------|------------------------------|----------------------------------|------------------------------|
| Part Number | CL No. | Number of Contacts | А | В | С | D | E |
| FH26-13S-0.3SHW(**) | 580-0209-3-** | 13 | 5.4 | 3.0 | 3.6 | 4.23 | 4.9 |
| FH26-15S-0.3SHW(**) | 580-0218-4-** | 15 | 6.0 | 3.6 | 4.2 | 4.83 | 5.5 |
| FH26-17S-0.3SHW(**) | 580-0217-1-** | 17 | 6.6 | 4.2 | 4.8 | 5.43 | 6.1 |
| FH26-21S-0.3SHW(**) | 580-0207-8-** | 21 | 7.8 | 5.4 | 6.0 | 6.63 | 7.3 |
| FH26-23S-0.3SHW(**) | 580-0203-7-** | 23 | 8.4 | 6.0 | 6.6 | 7.23 | 7.9 |
| FH26-25S-0.3SHW(**) | 580-0208-0-** | 25 | 9.0 | 6.6 | 7.2 | 7.83 | 8.5 |
| FH26-27S-0.3SHW(**) | 580-0204-0-** | 27 | 9.6 | 7.2 | 7.8 | 8.43 | 9.1 |
| FH26-29S-0.3SHW(**) | 580-0216-9-** | 29 | 10.2 | 7.8 | 8.4 | 9.03 | 9.7 |
| FH26-31S-0.3SHW(**) | 580-0214-3-** | 31 | 10.8 | 8.4 | 9.0 | 9.63 | 10.3 |
| FH26-33S-0.3SHW(**) | 580-0210-2-** | 33 | 11.4 | 9.0 | 9.6 | 10.23 | 10.9 |
| FH26-35S-0.3SHW(**) | 580-0205-2-** | 35 | 12.0 | 9.6 | 10.2 | 10.83 | 11.5 |
| FH26-37S-0.3SHW(**) | 580-0224-7-** | 37 | 12.6 | 10.2 | 10.8 | 11.43 | 12.1 |
| FH26-39S-0.3SHW(**) | 580-0201-1-** | 39 | 13.2 | 10.8 | 11.4 | 12.03 | 12.7 |
| FH26-41S-0.3SHW(**) | 580-0206-5-** | 41 | 13.8 | 11.4 | 12.0 | 12.63 | 13.3 |
| FH26-45S-0.3SHW(**) | 580-0211-5-** | 45 | 15.0 | 12.6 | 13.2 | 13.83 | 14.5 |
| FH26-51S-0.3SHW(**) | 580-0200-9-** | 51 | 16.8 | 14.4 | 15.0 | 15.63 | 16.3 |
| FH26-55S-0.3SHW(**) | 580-0221-9-** | 55 | 18.0 | 15.6 | 16.2 | 16.83 | 17.5 |
| FH26-57S-0.3SHW(**) | 580-0212-8-** | 57 | 18.6 | 16.2 | 16.8 | 17.43 | 18.1 |
| FH26-61S-0.3SHW(**) | 580-0213-0-** | 61 | 19.8 | 17.4 | 18.0 | 18.63 | 19.3 |
| FH26-71S-0.3SHW(**) | 580-0202-4-** | 71 | 22.8 | 20.4 | 21.0 | 21.63 | 22.3 |
| Part Number | CL No. | Number of Contacts | А | В | С | D | E |
| FH26W-13S-0.3SHW(**) | 580-2401-1-** | 13 | 5.4 | 3 | 3.6 | 4.23 | 4.9 |
| FH26W-15S-0.3SHW(**) | 580-2402-4-** | 15 | 6.0 | 3.6 | 4.2 | 4.83 | 5.5 |
| FH26W-17S-0.3SHW(**) | 580-2403-7-** | 17 | 6.6 | 4.2 | 4.8 | 5.43 | 6.1 |
| FH26W-19S-0.3SHW(**) | 580-2437-9-** | 19 | 7.2 | 4.8 | 5.4 | 6.03 | 6.7 |
| FH26W-21S-0.3SHW(**) | 580-2404-0-** | 21 | 7.8 | 5.4 | 6.0 | 6.63 | 7.3 |
| FH26W-23S-0.3SHW(**) | 580-2405-2-** | 23 | 8.4 | 6.0 | 6.6 | 7.23 | 7.9 |
| FH26W-25S-0.3SHW(**) | 580-2406-5-** | 25 | 9.0 | 6.6 | 7.2 | 7.83 | 8.5 |
| FH26W-27S-0.3SHW(**) | 580-2400-9-** | 27 | 9.6 | 7.2 | 7.8 | 8.43 | 9.1 |
| FH26W-29S-0.3SHW(**) | 580-2407-8-** | 29 | 10.2 | 7.8 | 8.4 | 9.03 | 9.7 |
| FH26W-31S-0.3SHW(**) | 580-2408-0-** | 31 | 10.8 | 8.4 | 9.0 | 9.63 | 10.3 |
| FH26W-33S-0.3SHW(**) | 580-2409-3-** | 33 | 11.4 | 9.0 | 9.6 | 10.23 | 10.9 |
| FH26W-35S-0.3SHW(**) | 580-2410-2-** | 35 | 12.0 | 9.6 | 10.2 | 10.83 | 11.5 |
| FH26W-37S-0.3SHW(**) | | | | 1 | 10.0 | 11.43 | 12.1 |
| FH26W-39S-0.3SHW(**) | 580-2411-5-** | 37 | 12.6 | 10.2 | 10.8 | 11.45 | 14.1 |
| 1112000 0000 0001 0000 00000 0000000000 | 580-2411-5-** 580-2412-8-** | 37 39 | 12.6 13.2 | 10.2 | 10.8 | 12.03 | 12.7 |
| FH26W-41S-0.3SHW(**) | | - | | - | | | |
| | 580-2412-8-** | 39 | 13.2 | 10.8 | 11.4 | 12.03 | 12.7 |
| FH26W-41S-0.3SHW(**) | 580-2412-8- * * 580-2413-0- * * | 39 41 | 13.2 13.8 | 10.8 11.4 | 11.4 12.0 | 12.03 12.63 | 12.7 13.3 |
| FH26W-41S-0.3SHW(**) FH26W-45S-0.3SHW(**) | 580-2412-8-** 580-2413-0-** 580-2414-3-** | 39 41 45 | 13.2 13.8 15.0 | 10.8 11.4 12.6 | 11.4 12.0 13.2 | 12.03 12.63 13.83 | 12.7 13.3 14.5 |
| FH26W-41S-0.3SHW(**) FH26W-45S-0.3SHW(**) FH26W-51S-0.3SHW(**) | 580-2412-8-** 580-2413-0-** 580-2414-3-** 580-2414-3-** | 39 41 45 51 | 13.2 13.8 15.0 16.8 | 10.8 11.4 12.6 14.4 | 11.4 12.0 13.2 15.0 | 12.03 12.63 13.83 15.63 | 12.7 13.3 14.5 16.3 |

Note1 : Embossed tape reel packaging(5,000pieces/reel, 500pieces/reel). Order by number of reels.



Camera Module Pinout Definition Reference Chart

| OmniVision Sony Samsung On-Semi Ap | tina Himax GalaxyCore PixArt SmartSens Sensors |
|------------------------------------|---|
| Pin Signal | Description |
| DGND GND | ground for digital circuit |
| AGND | ground for analog circuit |
| PCLK DCK | DVP PCLK output |
| XCLR PWDN XSHUTDOWN STANDBY | power down active high with internal pull-down resistor |
| MCLK XVCLK XCLK INCK | system input clock |
| RESET RST | reset active low with internal pull-up resistor |
| NC NULL | no connect |
| SDA SIO_D SIOD | SCCB data |
| SCL SIO_C SIOC | SCCB input clock |
| VSYNC XVS FSYNC | DVP VSYNC output |
| HREF XHS | DVP HREF output |
| DOVDD | power for I/O circuit |
| AFVDD | power for VCM circuit |
| AVDD | power for analog circuit |
| DVDD | power for digital circuit |
| STROBE FSTROBE | strobe output |
| FSIN | synchronize the VSYNC signal from the other sensor |
| SID | SCCB last bit ID input |
| ILPWM | mechanical shutter output indicator |
| FREX | frame exposure / mechanical shutter |
| GPIO | general purpose inputs |
| SLASEL | I2C slave address select |
| AFEN | CEN chip enable active high on VCM driver IC |
| MIPI Interface | |
| MDN0 DN0 MD0N DATA_N DM01N | MIPI 1st data lane negative output |
| MDP0 DP0 MD0P DATA P DM01P | MIPI 1st data lane positive output |
| MDN1 DN1 MD1N DATA2 N DMO2N | MIPI 2nd data lane negative output |
| MDP1 DP1 MD1P DATA2 P DM02P | MIPI 2nd data lane positive output |
| MDN2 DN2 MD2N DATA3 N DMO3N | MIPI 3rd data lane negative output |
| MDP2 DP2 MD2P DATA3 P DMO3P | MIPI 3rd data lane positive output |
| MDN3 DN3 MD3N DATA4 N DMO4N | MIPI 4th data lane negative output |
| MDP3 DP3 MD3P DATA4_P DMO4P | MIPI 4th data lane positive output |
| MCN CLKN CLK_N DCKN | MIPI clock negative output |
| MCP CLKP MCP CLK_P DCKN | MIPI clock positive output |
| DVP Parallel Interface | |
| D0 D00 Y0 | DV/P data output port 0 |
| D1 D01 Y1 | DVP data output port 0 |
| D1 D01 Y1 D2 D02 Y2 | DVP data output port 1 DVP data output port 2 |
| D3 D03 Y3 | |
| | DVP data output port 3 |
| D4 D04 Y4 D5 D05 Y5 | DVP data output port 4 |
| | DVP data output port 5 |
| D6 D06 Y6 | DVP data output port 6 |
| D7 D07 Y7 | DVP data output port 7 |
| D8 D08 Y8 | DVP data output port 8 |
| D9 D09 Y9 | DVP data output port 9 |
| D10 D010 Y10 | DVP data output port 10 |
| D11 D011 Y11 | DVP data output port 11 |

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Cameras Applications

8

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Camera Reliability Test

| Reliability Inspection Item | | Testing Mathed | Acceptones Criteria | | |
|-----------------------------|--|--|-------------------------|-------------------------|--|
| Category | | Item | Testing Method | Acceptance Criteria | |
| | Storage | High 60°C 96 Hours | Temperature Chamber | No Abnormal Situation | |
| | Temperature | Low -20°C 96 Hours | Temperature Chamber | No Abnormal Situation | |
| | Operation | High 60°C 24 Hours | Temperature Chamber | No Abnormal Situation | |
| Environmental | Temperature | Low -20°C 24 Hours | Temperature Chamber | No Abnormal Situation | |
| Environmentai | Humidity | 60°C 80% 24 Hours | Temperature Chamber | No Abnormal Situation | |
| | High 60°C 0.5 HoursThermal ShockLow -20°C 0.5 HoursCycling in 24 Hours | | Temperature Chamber | No Abnormal Situation | |
| | Drop Test | Without Package 60cm | 10 Times on Wood Floor | Electrically Functional | |
| | (Free Falling) | With Package 60cm | 10 Times on Wood Floor | Electrically Functional | |
| | Vibration Test | 50Hz X-Axis 2mm 30min | Vibration Table | Electrically Functional | |
| Physical | | 50Hz Y-Axis 2mm 30min | Vibration Table | Electrically Functional | |
| Physical | | 50Hz Z-Axis 2mm 30min | Vibration Table | Electrically Functional | |
| | Cable Tensile Strength Test | Loading Weight 4 kg 60 Seconds Cycling in 24 Hours | Tensile Testing Machine | Electrically Functional | |
| | | Contact Discharge 2 KV | ESD Testing Machine | Electrically Functional | |
| | ESD Test | Air Discharge 4 KV | ESD Testing Machine | Electrically Functional | |
| Electrical | Aging Test | On/Off 30 Seconds Cycling in 24 Hours | Power Switch | Electrically Functional | |
| | USB Connector | On/Off 250 Times | Plug and Unplug | Electrically Functional | |



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Camera Inspection Standard

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| Inspection Item | | Inspection Method | Standard of Inspection | |
|-----------------|----------|-------------------|------------------------|--|
| Category | | Item | пересноп менной | Standard of Inspection |
| | | Color | The Naked Eye | Major Difference is Not Allowed. |
| | FPC/ PCB | Be Torn/Chopped | The Naked Eye | Copper Crack Exposure is Not Allowed. |
| | | Marking | The Naked Eye | Clear, Recognizable (Within 30cm Distance) |
| | | Scratches | The Naked Eye | The Inside Crack Exposure is Not Allowed |
| | Holder | Gap | The Naked Eye | Meet the Height Standard |
| Appearance | HOIDEI | Screw | The Naked Eye | Make Sure Screws Are Presented (If Any) |
| | | Damage | The Naked Eye | The Inside Crack Exposure is Not Allowed |
| | | Scratch | The Naked Eye | No Effect On Resolution Standard |
| | Long | Contamination | The Naked Eye | No Effect On Resolution Standard |
| | Lens | Oil Film | The Naked Eye | No Effect On Resolution Standard |
| | | Cover Tape | The Naked Eye | No Issue On Appearance. |
| | | No Communication | Test Board | Not Allowed |
| | - | Bright Pixel | Black Board | Not Allowed In the Image Center |
| | | Dark Pixel | White board | Not Allowed In the Image Center |
| | | Blurry | The Naked Eye | Not Allowed |
| | | No Image | The Naked Eye | Not Allowed |
| | | Vertical Line | The Naked Eye | Not Allowed |
| | | Horizontal Line | The Naked Eye | Not Allowed |
| Function | Image | Light Leakage | The Naked Eye | Not Allowed |
| | | Blinking Image | The Naked Eye | Not Allowed |
| | | Bruise | Inspection Jig | Not Allowed |
| | | Resolution | Chart | Follows Outgoing Inspection Chart Standard |
| | | Color | The Naked Eye | No Issue |
| | | Noise | The Naked Eye | Not Allowed |
| | | Corner Dark | The Naked Eye | Less Than 100px By 100px |
| | | Color Resolution | The Naked Eye | No Issue |
| | | Height | The Naked Eye | Follows Approval Data Sheet |
| Dimen | sion | Width | The Naked Eye | Follows Approval Data Sheet |
| Dimen | 131011 | Length | The Naked Eye | Follows Approval Data Sheet |
| | | Overall | The Naked Eye | Follows Approval Data Sheet |

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YDS Camera Module



Tray with Grid and Space

Complete with Lens Protection Film



Place Cameras on the Tray





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Full Tray of Cameras

DS



Place Tray into Anti-Static Bag

Cover Tray with Lid



Vacuum the Anti-Static Bag



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Sealed Vacuum Anti-Static Bag with Labels

1. Model and Description 2. Quantity 3. Manufacturing Date Code 4. Caution



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Place Foam Sheets Between Tray Bags



Place Foam Sheets and Trays into Box



Seal the Carbon Box



Foam Sheets are Larger Than Trays



Foam Sheets are Tightly Fitting in Box



Label the Carbon Shipping Box



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USB Camera Module







Place Camera Sample into Anti-Static Bag

Place USB Cameras into Tray







Seal the Tray with Anti-Static Bag



Label the Carbon Shipping Box



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Complete with Lens Protection Film



YDSCAM Package Solutions

Place Camera Sample into Anti-Static Bag





Label the Sample Bags

Place Connectors into Anti-Static Bag



Place Connectors into Reel



Place Samples into the Carbon Box





Place Connectors into the Carbon Box



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YDS

Company YDSCAM

YingDeShun Co. Ltd. (YDS) was established in 2017, a next-generation technology driven manufacturer specialized in research, design, and produce of audio and video products. YDS is occupying 20,000 square feet automated plants with 100 employees of annual throughput 30,000,000 units cameras.

YDS provides OEM, ODM design, contract manufacturing, and builds the camera products. You may provide the requirements to us, even with a hand draft, our sales and engineering work together to meet your needs. We consider ourselves your last-term partner in developing practical and innovative solutions.

Our team covers everything from initial concept development to mass produced product. YDS specializes in customized camera design, raw material, electronic engineering, firmware/software development, product testing, and packing design. Our experienced strategic supply systems offer a robust and dependable manufacturing capacity for orders of various sizes.



Limited Warranty

YDS provides the following limited warranty if you purchased the Product(s) directly from YDS company or from YDS's website <u>www.YDSCAM.com</u>. Product(s) purchased from other sellers or sources are not covered by this Limited Warranty. YDS guarantees that the Product(s) will be free from defects in materials and workmanship under normal use for a period of one (1) year from the date you receive the product ("Warranty Period").

For all Product(s) that contain or develop material defects in materials or workmanship during the Warranty Period, YDS will, at its sole option, either: (i) repair the Product(s); (ii) replace the Product(s) with a new or refurbished Product(s) (replacement Product(s) being of identical model or functional equivalent); or (iii) provide you a refund of the price you paid for the Product(s).

This Limited Warranty of YDS is solely limited to repair and/or replacement on the terms set forth above. YDS is not reliable or responsible for any subsequential events.



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YDS Strength

Y

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Professional Service



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