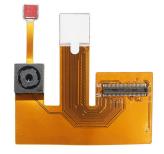


YDS-303352-05-IMX258 V5.1

13MP Sony IMX258 MIPI Interface Auto Focus Dual Sensor Camera Module





Front View

Back View

Specifications

| Camera Module No. | YDS-303352-05-IMX258 V5.1 | | | |
|--------------------------|-------------------------------------|--|--|--|
| Resolution | 13MP | | | |
| Image Sensor | IMX258 x2 | | | |
| Sensor Type | 1/3.06" | | | |
| Pixel Size | 1.12 um x 1.12 um | | | |
| EFL | 3.85 mm | | | |
| F.NO | 2.20 | | | |
| Pixel | 4224 x 3136 | | | |
| View Angle | 74.4°(DFOV) 62.7°(HFOV) 48.7°(VFOV) | | | |
| Lens Dimensions | 8.50 x 8.50 x 5.77 mm | | | |
| Module Size | 40.86 x 41.10 mm | | | |
| Module Type | Auto Focus | | | |
| Interface | MIPI | | | |
| Auto Focus VCM Driver IC | DW9763 | | | |
| Lens Type | 650nm IR Cut | | | |
| Operating Temperature | -20°C to +70°C | | | |
| Mating Connector | DF40C-60DS-0.4V(51) | | | |

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YDS-303352-05-IMX258 V5.1

13MP Sony IMX258 MIPI Interface Auto Focus Dual Sensor Camera Module





Top View

Side View





Bottom View

Mating Connector

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| | A | В | | | / | | | D | | | E | | |
|---|---|--|---|---|--|----------|------------|----------------------|------------------|------------------|-----------------------------------|-----------------|----|
| | | | | | | | | | Version | Inf | ormation | Date | |
| | | | | | | | | | V5.0 | Firs | st Version | 8-22-202 | 20 |
| | | | | | | | | | V5.1 | Cha | ange VCM | 4-13-202 | 23 |
| 1 | 0C.0±72.85 | 00 17.40±0.10 17.40±0.10 17.40±0.10 T=0.2 57 17-0.2 10-0.2 10- | 226500151 Eccobord 42 6.63 87±0.20 | APDS-9300-020 Black silk screen area 1.35 Conductive Fabric | 5.77±0.20 5.60±0.20(Mormal Height) 5.40±0.20(Normal Height) 5.10±0.20(VCM Height) 5.10±0.20(VCM Height) 6.10±0.20(VCM Height) 6.10± | | Cookond 45 | 17 •• • 8 .70 | 60DP-0.4V(51) | | | 4-13-202 | 1 |
| | 1 ALS_I2C_SDA 16 CAM2_FLASH_S' 2 ALS_I2C_SCL 17 GND 3 ALS_INT_N 18 GND 4 ALS_ADDR_PIN 19 CAM2_LANE0+ 5 ALS_2.8VDD 20 CAM2_MCLK 6 GND 21 CAM2_LANE0- 7 GND 22 GND 8 CAM2_LANE3+ 23 CAM2_LANE3+ 9 CAM2_LANE3+ 24 NC 10 CAM2_LANE3- 25 CAM2_CLK- 11 CAM2_LANE2- 26 CAM2_DVD_1. | 32 NC 33 CAM2 VDI 34 GND 35 CAM1 VDI 36 NC 37 CAM1 I2C 38 CAM1 PW 39 CAM1 I2C 40 CAM1 DO 2V 41 GND | SDA 4 4 2_VCM_2.8V 4 5 5 SDA 5 SDA 5 SCL 5 VDD_1.8V 5 5 5 VDD_1.8V 5 | 6 GND 7 CAM1_LANE0- 8 CAM1_MCLK 9 CAM1_LANE0+ 0 GND 1 GND 2 CAM1_FLASH_STROBE_TRIG 3 CAM1_LANE1- 4 CAM1_AVDD_2.8V 5 CAM1_LANE1+ 6 GND | | | BOT | TOM VIEW | | NOTE: 1.The c | devices slav | e address | |
| | 12 GND 27 GND 13 CAM2_LANE1+ 28 CAM2_DOVDD_ | 42 CAM1_DV | | 7 CAM1_LANE2- 8 CAM1_LANE3- | | | | | | | RA1:0x34(w | | |
| | 14 CAM2_AVDD_2.8V 29 CAM2_I2C_SCL 15 CAM2_LANE1- 30 CAM2_PWDN | 44 NC 45 CAM1_CLk | | 9 CAM1_LANE2+ 0 CAM1_LANE3+ | | | | | | | RA2:0x20(w | | |
| 3 | Parameters: 1、Sensor specification Image Sensor: IMX2 Pixel: 1.12um*1.12ur Long Type: 1/2.06 | 58 | FOV: 74.4 F/NO.: 2. | specification: 4°(D);62.7°(H);48. .2 tion: <1.5% | 7°(V); | Designec | d By | Kevin | Model Name: | 30335 | 52-05-IMX25 | 58 V5.1 | -3 |
| | Lens Type: 1/3.06 Important Voltage De DVDD1.0V (external p | | Composit | gth: 3.85mm tion: 5P+IR FILT ating: 650nm±1 | | Checked | Ву | Aouly_Yan | Projection Type: | mm Scale: | Material: Sheet: 1 of 1 | Version: 1/0 | |
| [| A | В | | (| | | [| D | Third Angle | 1:1 | F | 170 | |

SONY

[Product Brief]

Ver.1.0

IMX258

Diagonal 5.867 mm (Type 1/3.06) 13Mega-Pixel CMOS Image Sensor with Square Pixel for Color Cameras

Description

IMX258 is a diagonal 5.867mm (Type 1/3.06) 13 Mega-pixel CMOS active pixel type stacked image sensor with a square pixel array. It adopts Exmor RS[™] technology to achieve high speed image capturing by column parallel A/D converter circuits and high sensitivity and low noise image (comparing with conventional CMOS image sensor) through the backside illuminated imaging pixel structure. R, G, and B pigment primary color mosaic filter is employed. By introducing spatially multiplexed exposure technology, high dynamic range still pictures and movies are achievable. It

equips an electronic shutter with variable integration time. It operates with three power supply voltages: analog 2.7 V, digital 1.2 V and 1.8 V for input/output interface and achieves low power consumption.

In addition, this product is designed for use in cellular phone and tablet pc. When using this for another application, Sony does not guarantee the quality and reliability of product. Therefore, don't use this for applications other than cellular phone and tablet pc. Consult your Sony sales representative if you have any questions.

Functions and Features

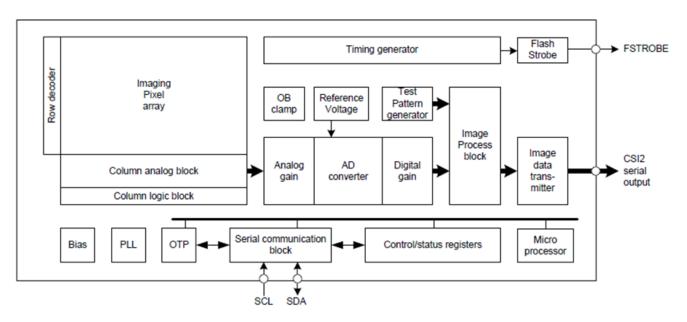
- Back-illuminated and stacked CMOS image sensor Exmor RSTM
- Phase Detection pixel data output for Phase Detection Auto Focus
- High Dynamic Range (HDR) mode with raw data output.
- High signal to noise ratio (SNR).
- ◆ Full resolution @30fps (Normal / HDR). 4K2K @30fps (Normal / HDR) 1080p @60fps (Normal)
- Output video format of RAW10/8.
- Pixel binning readout and V sub-sampling function.
- Independent flipping and mirroring.
- CSI-2 serial data output (MIPI 2lane/4lane, Max. 1.3Gbps/lane, D-PHY spec. ver. 1.1 compliant)
- ◆ 2-wire serial communication.
- Two PLLs for independent clock generation for pixel control and data output interface.
- Dynamic Defect Pixel Correction.
- Fast mode transition. (on the fly)
- Dual sensor synchronization operation.
- 4K bit of OTP ROM for users.
- Built-in temperature sensor.

Device Structure

- CMOS image sensor
- Image size :
- Total number of pixels :
- Number of effective pixels :
- Number of active pixels :
- Chip size :
- Unit cell size :
- Substrate material :

Diagonal 5.867 mm (Type 1/3.06) 4224 (H) × 3192 (V) approx. 13.48 M pixels 4224 (H) × 3144 (V) approx. 13.28 M pixels 4208 (H) × 3120 (V) approx. 13.13 M pixels 5.990 mm (H) × 3.908 mm (V) 1.12 μ m (H) × 1.12 μ m (V) Silicon

System block diagram





* Exmor RS is a trademark of Sony Corporation. The Exmor RS is a Sony's CMOS image sensor with high-resolution, high-performance and compact size by replacing a supporting substrate in Exmor R[™] which changed fundamental structure of Exmor [™] pixel adopted column parallel A/D converter to back-illuminated type, with layered chips formed signal processing circuits.

1. General Description

The DW9763 is a single 10-bit DAC with 100mA output current sinking capability and embedded 8KByte eFlash memory. Designed for linear control of voice coil motors, the DW9763 is capable of operating voltage up to 3.3V.

The SAC (Smart Actuator Control) mode is applied to minimize the mechanical vibration. The SAC mode highly improves the actuator's settling time and tolerance coverage compared with conventional LSC (Linear Slope Control) mode. The DAC and eFlash are controlled via an I2C compatible serial interface.

The DW9763 incorporates with a POR (Power On Reset) circuit, power down mode. POR circuit gets to operate when VDD (supply power) turns on. The output current keeps 0mA until valid register value takes place. During the power down mode, it consumes current max.1uA.

The DW9763 is designed for auto focus and optical zoom for mobile camera, digital still camera, camcorders and other nano actuator applications.

Features

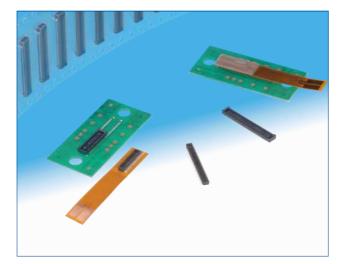
10 bit resolution current sinking of 100mA for VCM SAC (Smart Actuator Control) mode Supply voltage range (VDD) : 2.3V to 3.3V Fast mode I2C interface compatible (1.8V interface available) Power down mode Power on reset (POR) Embedded 8KByte eFlash memory Package : 8 pin WLCSP Package Size : 0.77mm X 1.75mm X 0.3mm

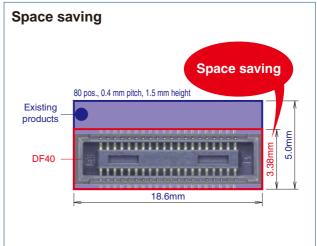
Applications

Mobile camera Digital still camera Camcorder Web camera Nano actuator

0.4mm Pitch, 1.5 to 4.0mm Height, Board-to-Board and Board-to-FPC Connectors

DF40 Series





Features

1. High density mounting

Space saving design that has a minimum connector width, yet still retains a sufficient vacuum area for easy pick-and-place mounting Minimum width : 3.38mm

2. Multiple stack height options

In addition to its space saving design, several stack heights are available and add versatility to any application. Stack heights : 1.5mm, 2.0mm, 2.5mm, 3.0mm, 3.5mm, and 4.0mm.

3. High contact reliability

Despite its small stature and low profile, the contacts deliver strong contact forces and an effective mating length of 0.45mm on the 1.5mm stacking height. This connector utilizes a locking system that prevents accidental unmating issues and emits a clear tactile click to ensure that mating has been completed.

4. Excellent self-aligning range

The use of guide ribs allows 0.33mm of selfalignment on this connector.

5. Reinforced structure with shock absorbing ribs

Both sides of the connector have been reinforced with the addition of shock absorbing ribs.

6. Solder wicking prevention

Nickel-plated barriers were added to protect the contact areas from potential solder wicking.

7. Contamination resistant design

When mated, the connector's design covers the contacts which help to keep dust and other debris away from the contacts. The SMT leads are kept very close to the connector housing which also helps to prevent shorts caused by debris on the exposed contacts.

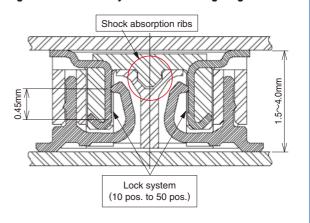
8. RoHS compliant

Environment friendly and does not use RoHS specified prohibited materials. All materials and substances used to produce these parts comply with the RoHS standards.

9. High speed signal with noise prevention

The shielded type can support high speed signal transmissions with noise prevention.

High contact reliability - effective mating length 0.45mm



Stacking height variations

Standard type Stacking 2.5 3.0 3.5 1.5 2.0 4.0 height mm mm mm mm mm mm 10 0 0 _ 12 _ _ 20 \bigcirc \bigcirc 0 _ 0 _ 24 0 0 _ _ _ _ 30 0 0 0 0 _ Contacts 34 0 40 0 0 _ 44 _ ę 50 ġ. 60 \bigcirc \bigcirc \bigcirc \bigcirc 70 \bigcirc _ 80 \bigcirc 0 _ 0 \bigcirc 90 \bigcirc _ _ _ \bigcirc 100

Shielded type

| Stac hei | king ght | 1.5 mm | 3.0 mm | | | |
|--------------------|-------------|-----------|-----------|--|--|--|
| of cts | 30 | 0 | - | | | |
| No. of contacts | 48 | 0 | 0 | | | |
| ∠° | 70 | - | 0 | | | |

Product Specifications

| Ratings | Rated Current 0.3A Rated Voltage AC, DC 30V | Operating Temperature Range -35 to +85°C (Note 1) Operating Humidity Range 20 to 80% | | Storage Temperature Range -10 to +60°C (Note 2) Storage Humidity Range 40 to 70% (Note 2) | |
|--|--|---|---|--|--|
| Items | Specifica | tions | | Conditions | |
| 1. Insulation Resistar | nce 50MΩ min | | Measured with | n DC 100V | |
| 2. Withstanding Volta | ge No flashover or breakdov | vn | Apply AC 100 | V for 1 minute | |
| 3. Contact Resistanc | e 90mΩ max | | Measured with | n AC 20mV, 1 kHz and 1mA | |
| 4. Vibration Resistance No electrical discontinuity of 1 | | of 1 μ s or greater | Frequency 10-55 Hz, half amplitude 0.75mm, 3 directions for 2 hours | | |
| 5. Humidity Resistance Contact resistance : 90mΩ max Insulation resistance : 25mΩ min | | | Left at temper 96 hours | ature $40 \pm 2^{\circ}$ C, humidity 90 to 95%, | |
| 6. Temperature Cycles Contact resistance : 90mΩ max Insulation resistance : 50mΩ min | | | $ \begin{array}{l} (-55^{\circ}\mathbb{C}:30 \text{ minutes} \rightarrow 5{\sim}35^{\circ}\mathbb{C}:10 \text{ minutes} \rightarrow 85^{\circ}\mathbb{C}:\\ \text{minutes} \rightarrow 5{\sim}35^{\circ}\mathbb{C}:10 \text{ minutes}) 5 \text{ cycles} \end{array} $ | | |
| 7. Durability Contact resistance : 90mΩ max | | Ωmax | 30 mating cycles | | |
| 8. Soldering Heat Resistance Should be no melting of resin p its performance | | esin parts that affects | Tem Hand solder : | rding to the Recommended perature Profile Soldering iron temperature 350°C, no more than 3 seconds. | |

Note 1 : Includes temperature rise caused by current flow.

Note 2 : The term "storage" here refers to products stored for a long period prior to board mounting and use. The operating temperature and humidity range covers the non-energized condition of connectors after board mounting and the temporary storage conditions during transportation, etc.

Materials (Standard, non shielded type) / Finish

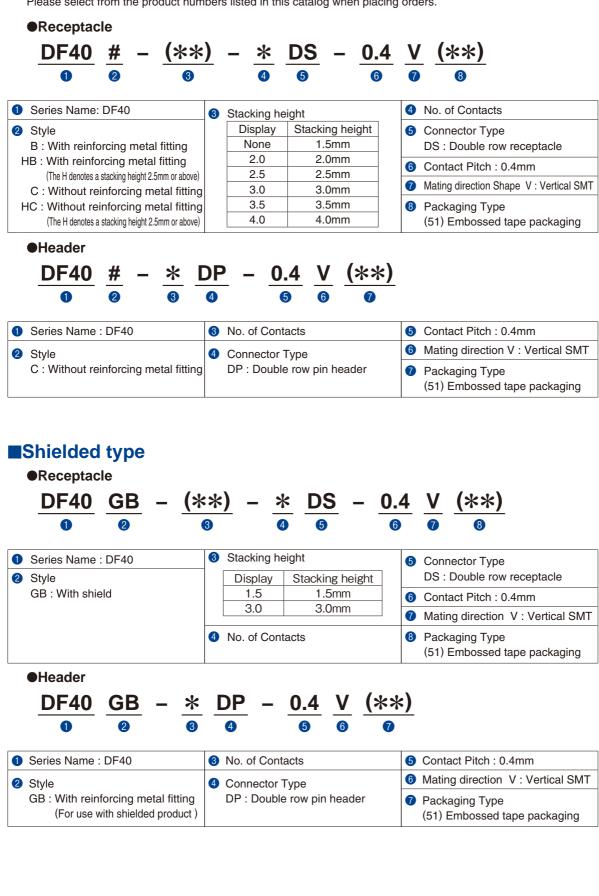
| Product | Component | Materials | Finish | UL Regulation |
|------------|-----------|-----------------|--------------|---------------|
| Pagantagla | Insulator | LCP | Black | UL94V-0 |
| Receptacle | Contact | Phosphor bronze | Gold plating | |
| Header | Insulator | LCP | Black | UL94V-0 |
| Header | Contact | Phosphor bronze | Gold plating | |

Materials (Shielded type) / Finish

| Product | Component | Materials | Finish | UL Regulation |
|------------|---------------------------|-----------------|--------------|---------------|
| | Insulator | LCP | Black | UL94V-0 |
| Receptacle | Contact | Dhoonhor bronzo | Cold plating | |
| | Shield plate | Phosphor bronze | Gold plating | |
| | Insulator | LCP | Black | UL94V-0 |
| Header | Contact | Dhoonhor bronzo | Cold plating | |
| | Reinforcing metal fitting | Phosphor bronze | Gold plating | |

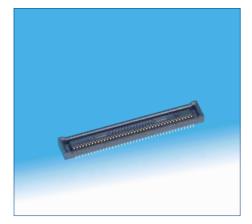
Product Number Structure (Standard, non-shielded type)

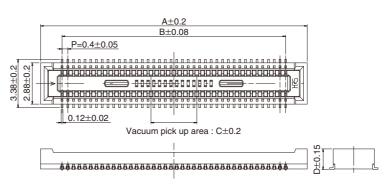
Refer to the chart below when determining the product specifications from the product number. Please select from the product numbers listed in this catalog when placing orders.



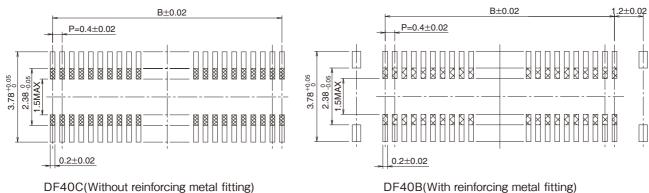
HS 3

Receptacle (Stacking height 1.5mm)





Recommended PCB layout



DF40C(Without reinforcing metal fitting)

Stacking height 1.5mm

[Specification No.] (51) : Embossed package 5,000 pcs/reel

11.5

| | | | | - | | Unit : mm |
|----------------------|---------------|-----------------|------|------|-----|-----------|
| Part No. | HRS No. | No. of Contacts | А | В | С | D |
| DF40B-10DS-0.4V(51) | 684-4038-8 51 | 10 | 4.6 | 1.6 | 1.0 | |
| DF40B-12DS-0.4V(51) | 684-4152-3 51 | 12 | 5.0 | 2.0 | 1.0 | |
| DF40B-30DS-0.4V(51) | 684-4090-8 51 | 30 | 8.6 | 5.6 | 1.5 | |
| DF40B-50DS-0.4V(51) | 684-4018-0 51 | 50 | 12.6 | 9.6 | | |
| DF40B-60DS-0.4V(51) | 684-4049-4 51 | 60 | 14.6 | 11.6 | 3.2 | |
| DF40B-80DS-0.4V(51) | 684-4052-9 51 | 80 | 18.6 | 15.6 | | |
| DF40C-20DS-0.4V(51) | 684-4005-9 51 | 20 | 6.6 | 3.6 | 1.0 | |
| DF40C-24DS-0.4V(51) | 684-4006-1 51 | 24 | 7.4 | 4.4 | 1.2 | |
| DF40C-30DS-0.4V(51) | 684-4007-4 51 | 30 | 8.6 | 5.6 | 1.5 | 1.45 |
| DF40C-34DS-0.4V(51) | 684-4023-0 51 | 34 | 9.4 | 6.4 | 2.3 | |
| DF40C-40DS-0.4V(51) | 684-4008-7 51 | 40 | 10.6 | 7.6 | | |
| DF40C-50DS-0.4V(51) | 684-4009-0 51 | 50 | 12.6 | 9.6 | | |
| DF40C-60DS-0.4V(51) | 684-4004-6 51 | 60 | 14.6 | 11.6 | | |
| DF40C-70DS-0.4V(51) | 684-4016-5 51 | 70 | 16.6 | 13.6 | 3.2 | |
| DF40C-80DS-0.4V(51) | 684-4002-0 51 | 80 | 18.6 | 15.6 |] | |
| DF40C-90DS-0.4V(51) | 684-4124-8 51 | 90 | 20.6 | 17.6 |] | |
| DF40C-100DS-0.4V(51) | 684-4033-4 51 | 100 | 22.6 | 19.6 | | |

Note 1 : Please place orders by full reel.

Note 2 : The surface of the 60 to 100 pos. parts have a small, concave section that will not affect the vacuum pick up operation. Note 3 : I Resist coating area.

Note 4 : This connector is NOT polarized.



your best camera partner

Cameras Applications

Y



Automotive Driver Pilot





Video Conference



Live Streaming

Eye Tracker Biometric Detection

Machine Vision

Agricultural Monitor



Night Vision Security

Drone and Sports Eagle Eyes



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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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Camera Reliability Test

| | Reliability Inspection Item | | | A coorton oo Critorio |
|---------------|--|--|-------------------------|-------------------------|
| Cat | egory | 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 |
| Filysical | | 50Hz Z-Axis 2mm 30min | Vibration Table | Electrically Functional |
| | Cable Tensile Strength Test Cable Tensile 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 | | ı Item | Increation Mathed | Standard of Inspection |
|------------|----------|------------------|-------------------|--|
| Categ | gory | Item | Inspection Method | 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 | Holdel | 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 | 1910[1 | Length | The Naked Eye | Follows Approval Data Sheet |
| | | Overall | The Naked Eye | Follows Approval Data Sheet |

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YDSCAM Package Solutions

YDS Camera Module



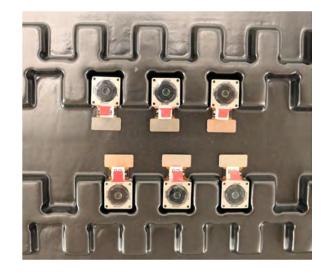
Tray with Grid and Space

Complete with Lens Protection Film



Place Cameras on the Tray





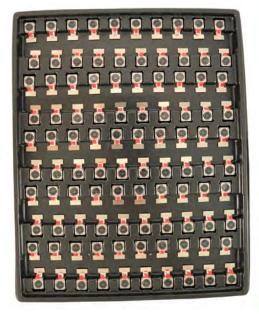
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your best camera partner

YDSCAM Package Solutions

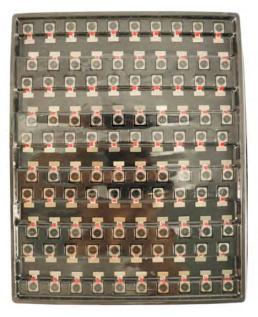
Full Tray of Cameras

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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YDSCAM Package Solutions

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



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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

Powerful Factory



Professional Service



Promised Delivery



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