

your best camera partner

YDS-X4MF-OS02C10 V1.0 2MP OmniVision OS02C10 MIPI Interface M12 **Fixed Focus Camera Module**



Front View



Back View

Camera Module No.	YDS-X4MF-OS02C10 V1.0	
Resolution	2MP	
Image Sensor	OS02C10	
Sensor Type	1/2.8"	
Pixel Size	2.9 um x 2.9 um	
EFL	2.40 mm	
F.NO	2.00	
Pixel	1920 x 1080	
View Angle	169.0°(DFOV) 144.0°(HFOV) 78.5°(VFOV)	
Lens Dimensions	15.30 x 15.30 x 16.06 mm	
Module Size	46.72 x 22.00 mm	
Module Type	Fixed Focus	
Interface	MIPI	
Auto Focus VCM Driver IC	None	
Lens Model	YDS-LENS-TRC-2157A6	
Lens Type	650nm IR Cut	
Operating Temperature	-30°C to +85°C	
Mating Connector	FH12-24S-0.5SH	

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YDS-X4MF-OS02C10 V1.0 2MP OmniVision OS02C10 MIPI Interface M12 Fixed Focus Camera Module



Top View

Side View



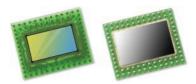


Bottom View

Mating Connector

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A	B	С	D	-	гп	
DDUC				Version	Information	Date
о ПОЛО				V	rirst version	1707-11-0
PIN SIGNAL						
1 AGND						
2 AVDD2.8V						
3 SDA		1920				
4 SCL		£©				
5 PWDN						
6 RST/XSHUNDN			9.22±0.10	Ŧ		
7 MCP	4		3.92+0.10		14.20 -4×¢0.70	
8 MCN				-	G	
9 DGND				14,20	2×¢1.60	0
10 MDP0					(
11 MDN0						
12 DGND	0.20		ט ו הבני מו מתוומווות			
13 MDP1	6.72±0					
14 MDN1	4		F0 0+01 0)
Z 15 DGND			FPC Adhesiveless FCCL,	ED		
16 MDP2						
17 MDN2		10 White silk screen line	_	•-)1 24	
+	-		0.30+0.05	3.00		
19 MDP3		4 - 12.50±0.10	FPC+PI	-	0.30	
20 MDN3					11.80	
21 DGND		TOP VIEW	SIDE VIEW	H	BOTTOM VIEW	
22 DVDD1.1V	NOTE.					
23 DOVDD1.8V						
24 MCLK	1. The device st	Slave				
	address:0x6C(w);0x6D(r)	/);0x6D(r)	-			
Parameter.		2 . Lens specification:				
Z 1. Sensor specification:		FOV: 169°(D);144°(H);78.5°(V)				Ŕ
اmage Sensor: 0S02C10		F/NO.: 2.0				(J
Pixel: 2.9um×2.9um		TV distortion: <16%	Designed By Kevin	Model Name:	X4MF-0302C10 V1.0	C10 V1.0
Lens Type: 1/2.8		Focal length: 2.4mm		Projection Type: Ur	Unit: Material:	
Important Voltage Description: DVDD1.1V	iption: DVDD1.1V	Composition: 6G+IR FILTER	Cherkerd By Anuly			
(external power supply);		IR Cut Coating: 650nm±10nm@50%	, 	rd Angle	1:1 1 of 1	version: 1/0
A	B	C				



OSO2C10 2-megapixel product brief





Image Sensor Combines Ultra Low Light and Nyxel® NIR Technologies for Industry's Best Nighttime Camera Performance

OmniVision's OSO2C10 is a 2.9-micron, 2-megapixel image sensor with breakthrough ultra-low-light (ULL) technology. Combining ULL with OmniVision's industry-leading Nyxel® near-infrared (NIR) technology, the OSO2C10 works equally well in all lighting conditions. It can detect incident light in both visible and NIR wavelengths and produce precise color and monochrome images for security applications such as remote surveillance cameras with AI for accurate facial recognition.

Nyxel[®] NIR technology infuses the OS02C10 with exceptional quantum efficiency (QE) of 60% at 850 nm and 40% at 940 nm, which is 2x to 4x better than competing devices. This enables the use of lower-power IR illumination in total darkness, resulting in an estimated 3x reduction in system-level power consumption. Additionally, 940 nm NIR lighting cannot be detected by the human eye in dark indoor settings, while 850 nm light is ideal for outdoor security cameras. The OS02C10's ability to capture crisp, clear images using undetectable 940 nm NIR light means that indoor security cameras will not disturb sleeping occupants, and can be easily concealed from intruders.

The amount of NIR light that a sensor requires to capture high-quality images can be quantified with a new metric called NIR SNR1, which takes into account the QE, pixel size and read noise. The OCO2C10 achieves an SNR1_{850nm} of 23 nW/cm² and an SNR1_{940nm} of 31 nW/cm², which means designers can reduce IR illumination to consume 2x to 4x less power compared to the competitors' sensors, for the same environment and over the same image-detection range.

The OCO2C10 has a superior low-noise design, achieving an SNR1 of 0.16 lux while producing high definition 1080p images. OmniVision's proprietary dual-conversion-gain technology allows this sensor to achieve the industry's best ULL performance, while the 3-frame staggered shutter minimizes motion artifacts and enables a high dynamic range (HDR) of 120 dB. Additionally, these technologies are easily upgradable to 2K and 4K resolution as security systems begin their transition to higher-quality displays.

Find out more at www.ovt.com.





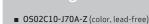
Applications

- Security Camera
- Action Camera
- High Resolution Consumer Camera

Product Features

- QE enhancement in NIR range
- support for image size:
 1920 x 1080
 VGA
 QVGA, and any cropped size
- high dynamic range
- high sensitivity
- programmable conversion gain
- image sensor processor functions:
 defective pixel cancelation
 automatic black level correction, etc.

- pixel data: 12b RAW RGB
- SCCB for register programming
- programmable GPIOs
- high speed serial data transfer with MIPI CSI-2 or LVDS
- external frame synchronization capability
- embedded temperature sensor
- one time programmable (OTP) memory



 OSU2CIU-J/UA-Z (color, lead-free 70-pin fan-out package

Product Specifications

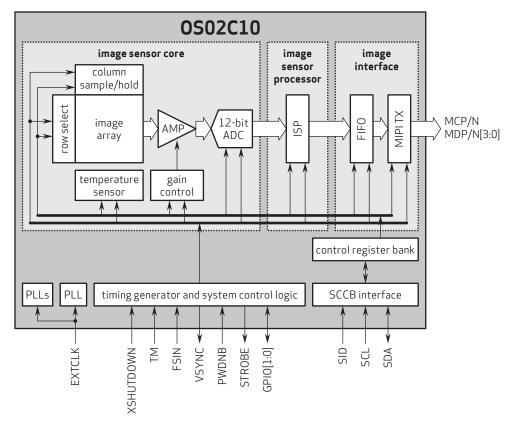
- active array size: 1920 × 1080
- maximum image transfer rate:
 40X3 fps @ 1080p in 10-bit
 30X3 fps @ 1080p in 12-bit
- power supply:
 analog: 2.8V
 digital: 1.1V
- **I/Ö pins:** 1.8V
- temperature range:
 operating: -30°C to +85°C junction temperature
- output interfaces: up to 4-lane MIPI CSI-2 or LVDS

- lens size: 1/2.8"
- lens chief ray angle: 9° linear
- output formats: linear output, dual exposure HDR (long and short), 3-exposure HDR (long, short, and very short), conversion gain programmable in each channel

OS02C10

- scan mode: progressive
- shutter: rolling shutter
- **pixel size:** 2.9 μm x 2.9 μm
- image area: 5614.4 µm x 3178.4 µm

Functional Block Diagram



4275 Burton Drive Santa Clara, CA 95054 USA Tel: + 1 408 567 3000 Fax: + 1 408 567 3001 www.ovt.com OmniVision reserves the right to make changes to their products or to discontinue any product or service without further notice. OmniVision, the OmniVision logo, and Nyxel are registered trademarks of OmniVision Technologies, Inc. All other trademarks are the property of their respective owners.



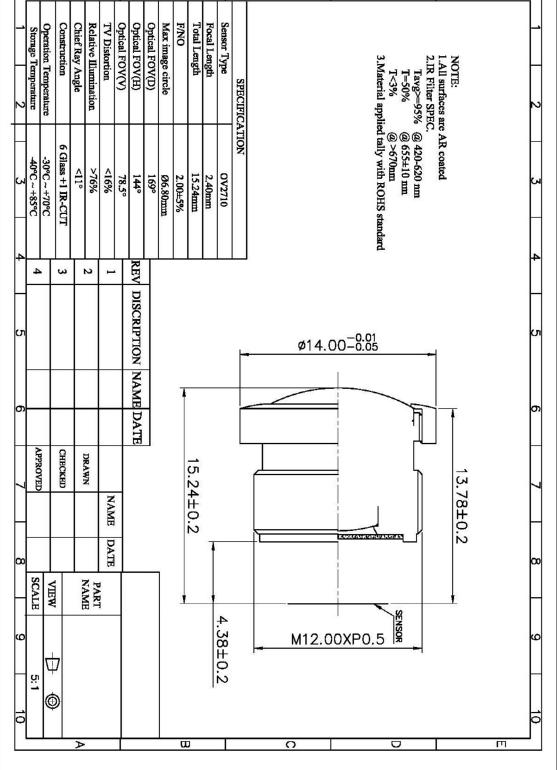
Version 1.3, July 2020

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YDS-LENS-TRC-2157A6 В 0 D Focal Length Total Length F/NO Optical FOV(D) Max image circle Sensor Type **TV** Distortion Optical FOV(V) **Optical FOV(H)**

DS

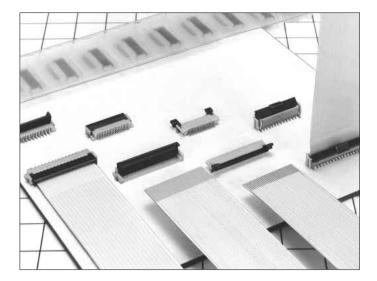


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The product information in this catalog is for reference only. Please request the Engineering Drawing for the most current and accurate design information. All non-RoHS products have been discontinued, or will be discontinued soon. Please check the products status on the Hirose website RoHS search at www.hirose-connectors.com, or contact your Hirose sales representative.

0.5mm and 1mm Pitch Connectors For FPC/FFC

FH12 Series



Features

1. Ease of Use and Space Savings

Only one finger or 6.9N (Newtons) of force is required to lock Hirose's rotational actuator (flip-lock) as compared to using 2 fingers and 39.2N to close a FFC/FPC connector from our competition.

The Flip-Lock design also allows customers to place 2 or more connectors side by side as there is no need to waste additional board space for a side latch.

2. Strengthened Flip-lock Actuator

The standard Flip-Lock requires only 2.0mm height above the board. A strengthened lock lever is available which only requires an additional 0.4mm.

3. Supports Thin FPC (0.18mm)

Hirose does not require double-sided FPC to have any additional strengthening plate or stiffener and can therefore support a thickness of as little as 0.18 mm +/- 0.05.

4. Hirose Ensures Reliability

Hirose's patented half tuning fork contacts maintain the required normal force without relying on the connector housing. With our competitor's conventional products the housing walls support the contact force, which does not provide for long-term reliability.

5. Prevention of Solder Bridge

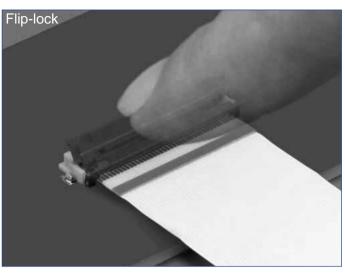
Excess solder cavity absorbs excessive solder and avoids solder bridging.

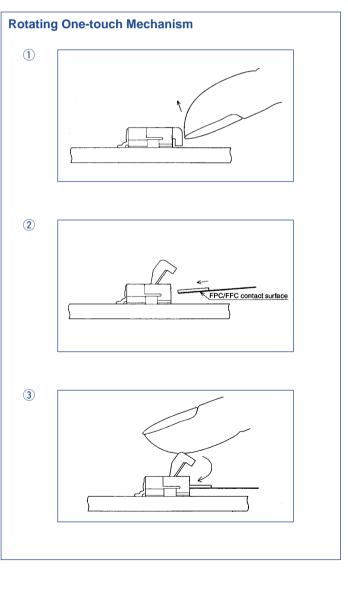
6. Three different assembly types

FH12 is offered in Top & Bottom Contact and Vertical Mount and offered in both a 0.5mm contact pitch as well as a 1.0mm contact pitch (bottom contact only).

Applications

Notebook computers, printers, PDAs, digital cameras and other compact devices for interconnecting the main circuit board with the LCD, HDD or other device.





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■Product Specifications

Rating	Current rating: 0.5A DC(Note 1) Voltage rating: 50V AC	Operating Humidity Range:Relative hum		Storage Temperature Range:-10 to +50°C (Note 3) Storage Humidity Range:Relative humidity, 90% max. (Not dewed)	
Applicable FPC	t=0.3±0.05 Gold plated		t=	0.18 ± 0.05 for FH12F-*S-0.5SH	

ltem	Specification	Conditions
1. Insulation resistance	500M ohms minimum	100V DC
2. Withstanding voltage	No flashover or insulation breakdown.	150V AC/1 minute
3. Contact resistance	50m ohms maximum	1mA
4. Durability (Insertion/withdrawal)	Contact resistance: 50m ohms maximum No damage, cracks, or parts dislocation.	20 cycles
5. Vibration	No electrical discontinuity of 1μ s or more Contact resistance: 50m ohms maximum. No damage, cracks, or parts dislocation.	Frequency: 10 to 55 Hz, single amplitude of 0.75 mm, 2 hours in each of the 3 directions.
6. Shock	No electrical discontinuity of 1μ s or more Contact resistance: 50m ohms maximum. No damage, cracks, or parts dislocation.	Acceleration of 490 m/s ² , 11 ms duration, sine half-wave waveform, 3 cycles in each of the 3 axis
7. Humidity(Steady state)	Contact resistance: 50m ohms maximum. Insulation resistance: 50M ohms minimum. No damage, cracks, or parts dislocation.	96 hours at 40°C and humidity of 90% to 95%
B. Temperature Cycle Contact resistance: 50m ohms maximum. No damage, cracks, or parts dislocation.		Temperature: $-40^{\circ}C \rightarrow 15$ to $35^{\circ}C \rightarrow 85^{\circ}C \rightarrow 15$ to $35^{\circ}C$, Time: $30 \rightarrow 5$ max. $\rightarrow 30 \rightarrow 5$ max.(minutes) 5 cycles
9.Resistance to Soldering heat	No deformation of components affecting performance.	Reflow: At the recommended temperature profile Manual soldering: 350±5℃ for 3 seconds

Note 1: When passing the current through all of the contacts, use 70% of the current rating.

Note 2: Includes temperature rise caused by current flow.

Note 3: The term "storage" refers to products stored for long period of time prior to mounting and use. Operating Temperature Range and Humidity range covers nonconducting condition of installed connectors in storage, shipment or during transportation.

Material

Part	Material	Finish	Remarks
Insulator	Polyamide, LCP(60 pos.)	Color : Beige	
Actuator	PPS	Color : Dark brown	UL94V-0
Contact	Phosphor bronze	Gold plated	
Metal Fittings	Brass	Tin plated	

Ordering Information

$\frac{\mathsf{FH12}}{\bullet} \quad \frac{\mathsf{A}}{\circ} = \frac{10}{\circ} \quad \frac{(4)}{\circ} = \frac{\mathsf{S}}{\circ} \quad \frac{\mathsf{A}}{\circ} = \frac{\mathsf{0.5}}{\circ} \quad \frac{\mathsf{SH}}{\circ} \quad \frac{(55)}{\circ}$

Series Name : FH12	Contact alignment: Single
Blank : standard type	6 Eccentric direction:
A : Top contact type	Blank : standard type
S : Type with strengthed flip-lock actuator	A : Eccentric type
F : Type with 0.18mm FPC End Thickness	Contacts Pitch : 0.5mm, 1mm
Standard type : Number of contacts	8 Contact type
Eccentric type : Number of contacts in 0.5mm housing	SH : SMT horizontal mounting type
Standard type : Blank	SV : SMT vertical mounting type
Eccentric type : Number of contacts	Plating specification
	(55) : Gold plated

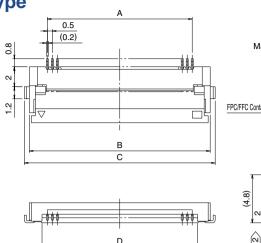
The product information in this catalog is for reference only. Please request the Engineering Drawing for the most current and accurate design information. All non-Roll Argenting to the product of the content of the

Series Configuration

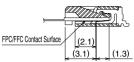
Pitch	Bottom Contact Type	Top Contact Type	Vertical mounting Type
0.5mm	FH12- ** S-0.5SH P.12 Number of contacts 6, 8, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 22, 24, 25, 26, 28, 30, 32, 33, 34, 35, 36, 40, 45, 50, 53 Type with Strengthened Lock Lever FH12S- ** S-0.5SH P.13 Number of contacts 30, 40, 45, 50, 53 Type with 0.18mm FPC End Thickness FH12F- ** S-0.5SH P.14 Number of contacts 6, 8, 10, 12, 13, 14, 15, 16, 18, 20, 22, 24, 25,	FH12A- ** S-0.5SH P.15 Number of contacts 10, 12, 15, 16, 18, 20, 22, 24, 26, 28, 29, 30, 32, 33, 34, 36, 40, 42, 45, 50	FH12- ** S-0.5SV Number of contacts 10, 12, 13, 15, 16, 17, 18, 20, 22, 24, 26, 30, 32, 33, 34, 36, 40, 45,
1mm	26, 28, 30, 32, 34, 36, 40 Standard FH12- ** S-1SH P18 Eccentric FH12- ** (**) SA-1SH Standard Number of contacts 5, 6, 7, 8, 9, 11, 12,16,17,22,26 Eccentric Number of contacts 4, 6, 8, 10, 11, 14, 19, 24		49, 50, 60

■0.5mm Pitch Bottom Contact Type





Mated Cross-sectional Diagram







Unit:mm

	Part Number	CL No.	Number of Contacts	А	В	С	D	RoHS
	FH12- 6S-0.5SH(55)	586-0582-5-55	6	2.5	6.1	7.1	3.57	
	FH12- 8S-0.5SH(55)	586-0744-5-55	8	3.5	7.1	8.1	4.57	
	FH12-10S-0.5SH(55)	586-0522-3-55	10	4.5	8.1	9.1	5.57	
	FH12-11S-0.5SH(55)	586-0600-5-55	11	5	8.6	9.6	6.07	
	FH12-12S-0.5SH(55)	586-0704-0-55	12	5.5	9.1	10.1	6.57	
	FH12-13S-0.5SH(55)	586-0549-0-55	13	6	9.6	10.6	7.07	
	FH12-14S-0.5SH(55)	586-0533-0-55	14	6.5	10.1	11.1	7.57	
	FH12-15S-0.5SH(55)	586-0523-6-55	15	7	10.6	11.6	8.07	
	FH12-16S-0.5SH(55)	586-0531-4-55	16	7.5	11.1	12.1	8.57	
	FH12-17S-0.5SH(55)	586-0606-1-55	17	8	11.6	12.6	9.07	
	FH12-18S-0.5SH(55)	586-0530-1-55	18	8.5	12.1	13.1	9.57	
	FH12-19S-0.5SH(55)	586-0534-2-55	19	9	12.6	13.6	10.07	
	FH12-20S-0.5SH(55)	586-0524-9-55	20	9.5	13.1	14.1	10.57	
	FH12-22S-0.5SH(55)	586-0532-7-55	22	10.5	14.1	15.1	11.57	YES
	FH12-24S-0.5SH(55)	586-0521-0-55	24	11.5	15.1	16.1	12.57	1123
	FH12-25S-0.5SH(55)	586-0692-3-55	25	12	15.6	16.6	13.07	
	FH12-26S-0.5SH(55)	586-0576-2-55	26	12.5	16.1	17.1	13.57	
	FH12-28S-0.5SH(55)	586-0612-4-55	28	13.5	17.1	18.1	14.57	
Note 2	FH12-30S-0.5SH(55)	586-0525-1-55	30	14.5	18.1	19.1	15.57	
	FH12-32S-0.5SH(55)	586-0681-7-55	32	15.5	19.1	20.1	16.57	
	FH12-33S-0.5SH(55)	586-0520-8-55	33	16	19.6	20.6	17.07	
	FH12-34S-0.5SH(55)	586-0617-8-55	34	16.5	20.1	21.1	17.57	
	FH12-35S-0.5SH(55)	586-0740-4-55	35	17.0	20.6	21.6	18.07	
	FH12-36S-0.5SH(55)	586-0526-4-55	36	17.5	21.1	22.1	18.57	
Note 2	FH12-40S-0.5SH(55)	586-0527-7-55	40	19.5	23.1	24.1	20.57	
Note 2	FH12-45S-0.5SH(55)	586-0528-0-55	45	22	25.6	26.6	23.07	
Note 2	FH12-50S-0.5SH(55)	586-0529-2-55	50	24.5	28.1	29.1	25.57	
Note 2	FH12-53S-0.5SH(55)	586-0595-7-55	53	26	29.6	30.6	27.07	

Note 1 : Embossed tape reel packaging (2,000 pieces/reel).

Order by number of reels.

Note $\boxed{2}$: If there is no problem with the connector height, we recommend the type with the strengthened Flip-lock actuator (FH12S-*S-0.5SH).

Standard type connector height: 2 mm

Connector height of type with strengthened Flip-lock actuator: 2.4 mm



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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 DMO1N	MIPI 1st data lane negative output
MDP0 DP0 MD0P DATA P DMO1P	MIPI 1st data lane positive output
MDN1 DN1 MD1N DATA2 N DMO2N	MIPI 2nd data lane negative output
MDP1 DP1 MD1P DATA2 P DMO2P	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	DVP data output port 0
D1 D01 Y1	DVP data output port 1
D2 D02 Y2	DVP data output port 2
D3 D03 Y3	DVP data output port 2
D4 D04 Y4	DVP data output port 3
D5 D05 Y5	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 7
D9 D09 Y9	DVP data output port 9
D10 D010 Y10	DVP data output port 9 DVP data output port 10
D11 D011 Y11	DVP data output port 10 DVP data output port 11
	עשר שמומ שעוףטו דיו

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Cameras Applications

8

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Camera Reliability Test

	Reliability Inspect	ion Item	Testing Mathed	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	
Environmental	Humidity	60°C 80% 24 Hours	Temperature Chamber	No Abnormal Situation	
	Thermal Shock	High 60°C 0.5 Hours Low -20°C 0.5 Hours Cycling 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	
		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 K		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		n Item	Inspection Method	Standard of Inspection
Categ	gory	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	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	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



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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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