

KLT-M3MA-AR1335 V8.0 PLCC NIR

**Modulo telecamera con messa a fuoco automatica senza IR
OnSemi AR1335 PLCC MIPI da 13 MP**



Vista frontale



Retrovisore

Specifiche

Modulo telecamera n.	KLT-M3MA-AR1335 V8.0 PLCC NIR
Risoluzione	13 MP
Sensore di immagine	AR1335 PLCC
Tipo di sensore	1/3.2"
Dimensione Pixel	1.1 μm x 1.1 μm
EFL	3.81 mm
F.NO	2.20
Pixel	4208 x 3120
Angolo di visione	74.4°(DFOV) 62.7°(HFOV) 48.7°(VFOV)
Dimensioni delle lenti	8.50 x 8.50 x 5.60 mm
Dimensione del modulo	50.00 x 8.50 mm
Tipo di modulo	Messa a fuoco automatica
Interfaccia	MIPI
Driver VCM per messa a fuoco automatica IC	CN3927
Tipo di lente	Nessuna lente con filtro IR
Temperatura di esercizio	da -30°C a +70°C
Connettore di accoppiamento	DF30FC-30DS-0.4V

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Vista dall'alto



Vista laterale



Vista dal basso



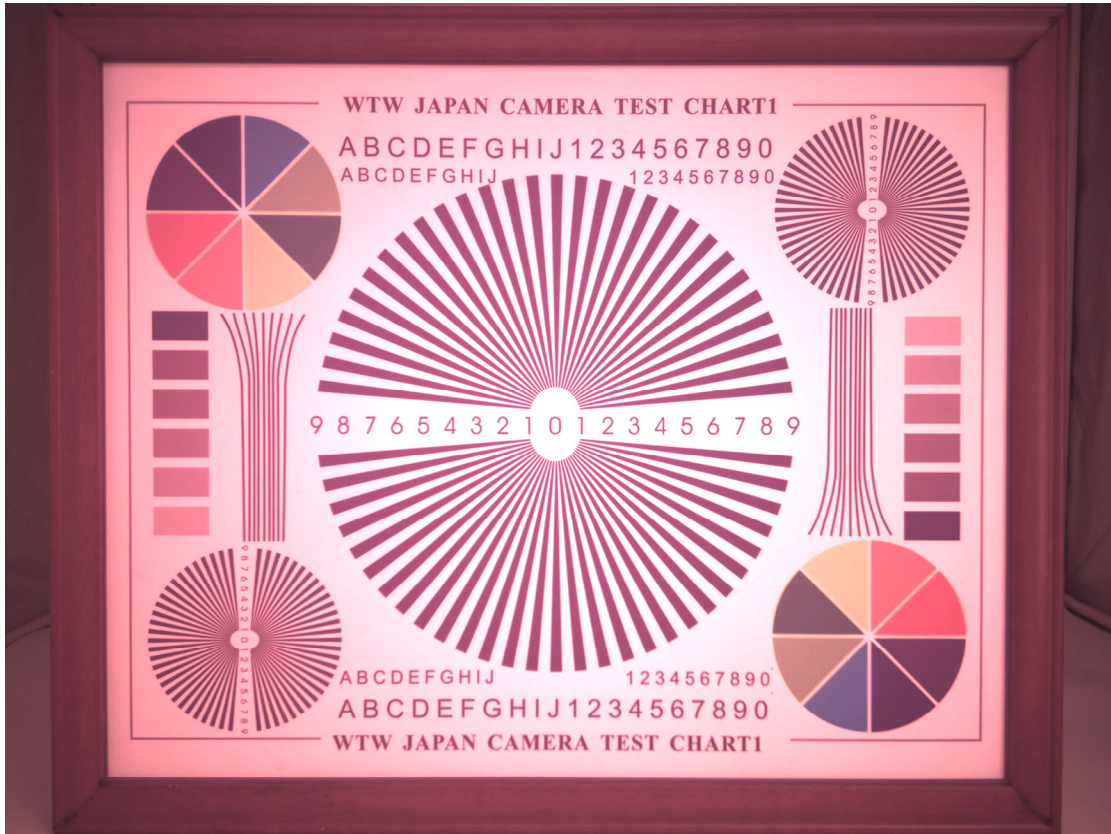
Connettore di accoppiamento



CMOS CAMERA MODULES

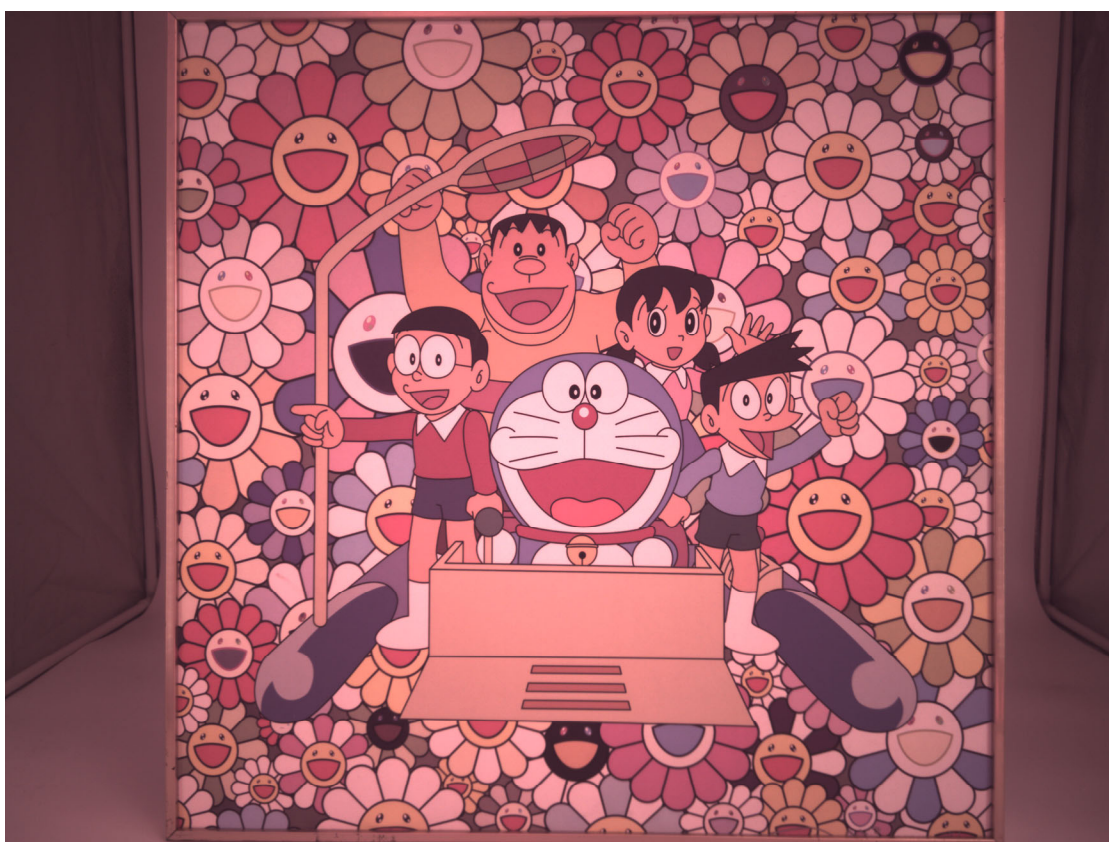


your BEST camera module partner



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Periodic table of Elements

GROUP 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

1 H 1.008 Hydrogen (Gas)

3 Li 6.941 Lithium (Alkali Metals)

4 Be 9.01 Beryllium (Alkaline Earth Metals)

11 Na 22.99 Sodium (Alkali Metals)

12 Mg 24.31 Magnesium (Alkaline Earth Metals)

19 K 39.09 Potassium (Alkali Metals)

20 Ca 40.08 Calcium (Alkaline Earth Metals)

21 Sc 44.95 Scandium (Transition Metals)

22 Ti 47.87 Titanium (Transition Metals)

23 V 50.94 Vanadium (Transition Metals)

24 Cr 51.99 Chromium (Transition Metals)

25 Mn 54.94 Manganese (Transition Metals)

26 Fe 55.85 Iron (Transition Metals)

27 Co 58.93 Cobalt (Transition Metals)

28 Ni 58.69 Nickel (Transition Metals)

29 Cu 63.55 Copper (Transition Metals)

30 Zn 65.39 Zinc (Transition Metals)

31 Ga 69.72 Gallium (Other Metals)

32 Ge 72.61 Germanium (Metalloids)

33 As 74.92 Arsenic (Non-metals)

34 Se 78.96 Selenium (Non-metals)

35 Br 79.90 Bromine (Halogens)

36 Kr 83.80 Krypton (Noble Gases)

37 Rb 85.47 Rubidium (Alkali Metals)

38 Sr 87.62 Strontium (Alkaline Earth Metals)

39 Y 88.91 Yttrium (Transition Metals)

40 Zr 91.22 Zirconium (Transition Metals)

41 Nb 92.91 Niobium (Transition Metals)

42 Mo 95.94 Molybdenum (Transition Metals)

43 Tc 97.91 Technetium (Transition Metals)

44 Ru 101.1 Ruthenium (Transition Metals)

45 Rh 102.9 Rhodium (Transition Metals)

46 Pd 106.4 Palladium (Transition Metals)

47 Ag 107.9 Silver (Transition Metals)

48 Cd 112.4 Cadmium (Transition Metals)

49 In 114.8 Indium (Other Metals)

50 Sn 118.7 Tin (Other Metals)

51 Sb 121.8 Antimony (Metalloids)

52 Te 127.6 Tellurium (Non-metals)

53 I 126.9 Iodine (Halogens)

54 Xe 131.3 Xenon (Noble Gases)

55 Cs 132.9 Cesium (Alkali Metals)

56 Ba 137.3 Barium (Alkaline Earth Metals)

57 La 138.9 Lanthanum (Lanthanides)

58 Ce 140.1 Cerium (Lanthanides)

59 Pr 140.9 Praseodymium (Lanthanides)

60 Nd 144.2 Neodymium (Lanthanides)

61 Pm 145 Promethium (Lanthanides)

62 Sm 150.4 Samarium (Lanthanides)

63 Eu 151.9 Europium (Lanthanides)

64 Gd 157.2 Gadolinium (Lanthanides)

65 Tb 158.9 Terbium (Lanthanides)

66 Dy 162.5 Dysprosium (Lanthanides)

67 Ho 164.9 Holmium (Lanthanides)

68 Er 167.2 Erbium (Lanthanides)

69 Tm 168.9 Thulium (Lanthanides)

70 Yb 173 Ytterbium (Lanthanides)

71 Lu 174.9 Lutetium (Lanthanides)

87 Fr 223 Francium (Alkali Metals)

88 Ra 226 Radium (Alkaline Earth Metals)

89-103 Ac 227 Actinium (Actinides)

104 Rf 261 Rutherfordium (Transition Metals)

105 Db 262 Dubnium (Transition Metals)

106 Sg 263 Seaborgium (Transition Metals)

107 Bh 264 Bohrium (Transition Metals)

108 Hs 265 Hassium (Transition Metals)

109 Mt 268 Meitnerium (Transition Metals)

110 Ds 281 Darmstadtium (Transition Metals)

111 Rg 280 Roentgenium (Transition Metals)

112 Cn 285 Copernicium (Transition Metals)

113 Nh 284 Nihonium (Transition Metals)

114 Fl 289 Flerovium (Transition Metals)

115 Mc 288 Moscovium (Transition Metals)

116 Lv 292 Livermorium (Transition Metals)

117 Ts 294 Tennessine (Transition Metals)

118 Og 294 Oganesson (Transition Metals)

119 Uu 295 Ununennium (Transition Metals)

120 Uu 296 Unbinilium (Transition Metals)

121 Uu 297 Untrium (Transition Metals)

122 Uu 298 Unquadrium (Transition Metals)

123 Uu 299 Unquadium (Transition Metals)

124 Uu 300 Unpentium (Transition Metals)

125 Uu 301 Unsexium (Transition Metals)

126 Uu 302 Unseptium (Transition Metals)

127 Uu 303 Unoctium (Transition Metals)

128 Uu 304 Unnonium (Transition Metals)

129 Uu 305 Undecium (Transition Metals)

130 Uu 306 Unduim (Transition Metals)

131 Uu 307 Untridecium (Transition Metals)

132 Uu 308 Unquadrupium (Transition Metals)

133 Uu 309 Unquintupium (Transition Metals)

134 Uu 310 Unsexupium (Transition Metals)

135 Uu 311 Unseptupium (Transition Metals)

136 Uu 312 Unoctupium (Transition Metals)

137 Uu 313 Unnonupium (Transition Metals)

138 Uu 314 Undecupium (Transition Metals)

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140 Uu 316 Untridecupium (Transition Metals)

141 Uu 317 Unquadrupium (Transition Metals)

142 Uu 318 Unquintupium (Transition Metals)

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144 Uu 320 Unseptupium (Transition Metals)

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147 Uu 323 Undecupium (Transition Metals)

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151 Uu 327 Unquintupium (Transition Metals)

152 Uu 328 Unsexupium (Transition Metals)

153 Uu 329 Unseptupium (Transition Metals)

154 Uu 330 Unoctupium (Transition Metals)

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156 Uu 332 Undecupium (Transition Metals)

157 Uu 333 Unduimupium (Transition Metals)

158 Uu 334 Untridecupium (Transition Metals)

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160 Uu 336 Unquintupium (Transition Metals)

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162 Uu 338 Unseptupium (Transition Metals)

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167 Uu 343 Untridecupium (Transition Metals)

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390 Uu 566 Undecupium (Transition Metals)

391 Uu 567 Unduimupium (Transition Metals)

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396 Uu 572 Unseptupium (Transition Metals)

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402 Uu 578 Unquadrupium (Transition Metals)

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405 Uu 581 Unseptupium (Transition Metals)

406 Uu 582 Unoctupium (Transition Metals)

407 Uu 583 Unnonupium (Transition Metals)

408 Uu 584 Undecupium (Transition Metals)

409 Uu 585 Unduimupium (Transition Metals)

410 Uu 586 Untridecupium (Transition Metals)

411 Uu 587 Unquadrupium (Transition Metals)

412 Uu 588 Unquintupium (Transition Metals)

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417 Uu 593 Undecupium (Transition Metals)

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422 Uu 598 Unsexupium (Transition Metals)

423 Uu 599 Unseptupium (Transition Metals)

424 Uu 600 Unoctupium (Transition Metals)

425 Uu 601 Unnonupium (Transition Metals)

426 Uu 602 Undecupium (Transition Metals)

427 Uu 603 Unduimupium (Transition Metals)

428 Uu 604 Untridecupium (Transition Metals)

429 Uu 605 Unquadrupium (Transition Metals)

430 Uu 606 Unquintupium (Transition Metals)

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441 Uu 617 Unseptupium (Transition Metals)

442 Uu 618 Unoctupium (Transition Metals)

443 Uu 619 Unnonupium (Transition Metals)

444 Uu 620 Undecupium (Transition Metals)

445 Uu 621 Unduimupium (Transition Metals)

446 Uu 622 Untridecupium (Transition Metals)

447 Uu 623 Unquadrupium (Transition Metals)

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453 Uu 629 Undecupium (Transition Metals)

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457 Uu 633 Unquintupium (Transition Metals)

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489 Uu 665 Undecupium (Transition Metals)

490 Uu 666 Unduimupium (Transition Metals)

491 Uu 667 Untridecupium (Transition Metals)

492 Uu 668 Unquadrupium (Transition Metals)

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494 Uu 670 Unsexupium (Transition Metals)

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498 Uu 674 Undecupium (Transition Metals)

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521 Uu 697 Unsexupium (Transition Metals)

522 Uu 698 Unseptupium (Transition Metals)

523 Uu 699 Unoctupium (Transition Metals)

524 Uu 700 Unnonupium (Transition Metals)

525 Uu 701 Undecupium (Transition Metals)

526 Uu 702 Unduimupium (Transition Metals)

527 Uu 703 Untridecupium (Transition Metals)

528 Uu 704 Unquadrupium (Transition Metals)

529 Uu 705 Unquintupium (Transition Metals)

530 Uu 706 Unsexupium (Transition Metals)

531 Uu 707 Unseptupium (Transition Metals)

532 Uu 708 Unoctupium (Transition Metals)

533 Uu 709 Unnonupium (Transition Metals)

534 Uu 710 Undecupium (Transition Metals)

535 Uu 711 Unduimupium (Transition Metals)

536 Uu 712 Untridecupium (Transition Metals)

537 Uu 713 Unquadrupium (Transition Metals)

538 Uu 714 Unquintupium (Transition Metals)

539 Uu 715 Unsexupium (Transition Metals)

540 Uu 716 Unseptupium (Transition Metals)

541 Uu 717 Unoctupium (Transition Metals)

542 Uu 718 Unnonupium (Transition Metals)

543 Uu 719 Undecupium (Transition Metals)

544 Uu 720 Unduimupium (Transition Metals)

545 Uu 721 Untridecupium (Transition Metals)

546 Uu 722 Unquadrupium (Transition Metals)

547 Uu 723 Unquintupium (Transition Metals)

548 Uu 724 Unsexupium (Transition Metals)

549 Uu 725 Unseptupium (Transition Metals)

550 Uu 726 Unoctupium (Transition Metals)

551 Uu 727 Unnonupium (Transition Metals)

552 Uu 728 Undecupium (Transition Metals)

553 Uu 729 Unduimupium (Transition Metals)

554 Uu 730 Untridecupium (Transition Metals)

555 Uu 731 Unquadrupium (Transition Metals)

556 Uu 732 Unquintupium (Transition Metals)

557 Uu 733 Unsexupium (Transition Metals)

558 Uu 734 Unseptupium (Transition Metals)

559 Uu 735 Unoctupium (Transition Metals)

560 Uu 736 Unnonupium (Transition Metals)

561 Uu 737 Undecupium (Transition Metals)

562 Uu 738 Unduimupium (Transition Metals)

563 Uu 739 Untridecupium (Transition Metals)

564 Uu 740 Unquadrupium (Transition Metals)

565 Uu 741 Unquintupium (Transition Metals)

566 Uu 742 Unsexupium (Transition Metals)

567 Uu 743 Unseptupium (Transition Metals)

568 Uu 744 Unoctupium (Transition Metals)

569 Uu 745 Unnonupium (Transition Metals)

570 Uu 746 Undecupium (Transition Metals)

571 Uu 747 Unduimupium (Transition Metals)

572 Uu 748 Untridecupium (Transition Metals)

573 Uu 749 Unquadrupium (Transition Metals)

574 Uu 750 Unquintupium (Transition Metals)

575 Uu 751 Unsexupium (Transition Metals)

576 Uu 752 Unseptupium (Transition Metals)

577 Uu 753 Unoctupium (Transition Metals)

578 Uu 754 Unnonupium (Transition Metals)

579 Uu 755 Undecupium (Transition Metals)

580 Uu 756 Unduimupium (Transition Metals)

581 Uu 757 Untridecupium (Transition Metals)

582 Uu 758 Unquadrupium (Transition Metals)

583 Uu 759 Unquintupium (Transition Metals)

584 Uu 760 Unsexup

A

B

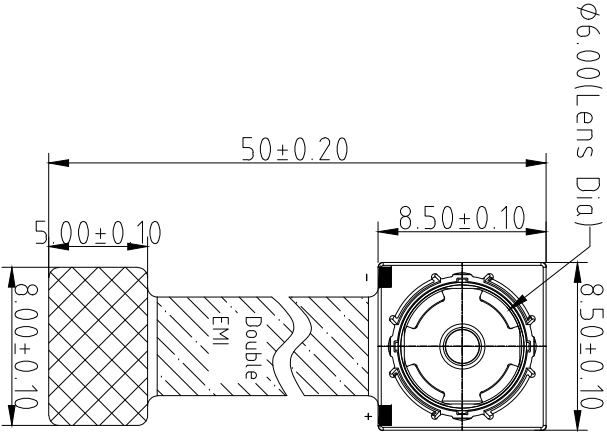
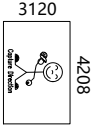
C

D

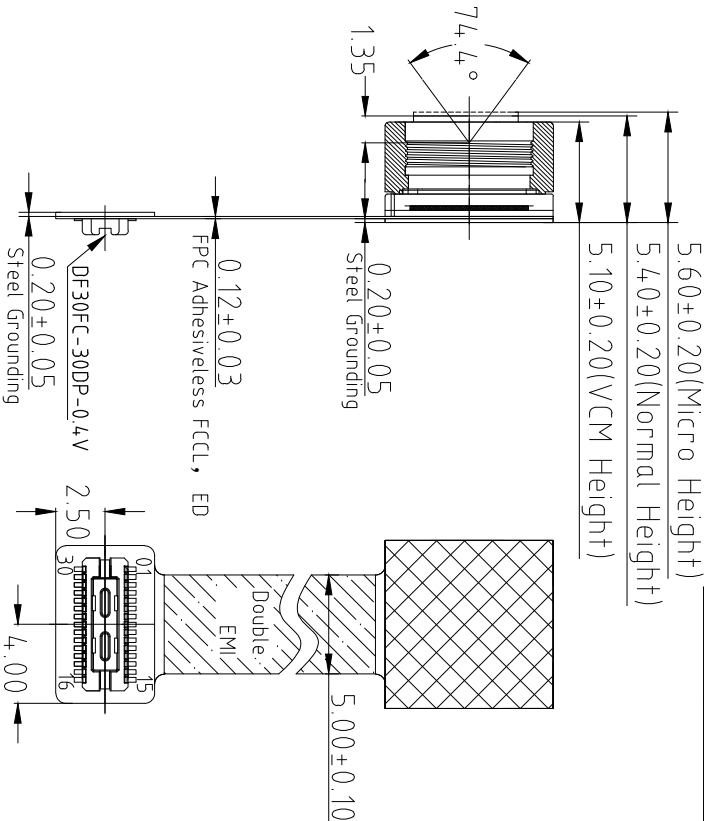
E

ROHS

PIN	SIGNAL
1	AFVDD 2.8V
2	NC
3	DVDD 1.2V
4	DOVDD 1.8V
5	NC
6	AGND
7	AVDD 2.8V
8	DGND
9	SDA
10	SCL
11	RESET
12	NC
13	GND
14	MCLK
15	GND
16	MDP3
17	MDN3
18	GND
19	MDP2
20	MDN2
21	GND
22	MDP1
23	MDN1
24	GND
25	MCP
26	MCN
27	GND
28	MDP0
29	MDN0
30	GND



TOP VIEW



SIDE VIEW

BOTTOM VIEW

NOTE:

1.The device slave address:0x6C(w);0x6D(r)

Parameter:

1、Sensor specification:

Image Sensor: AR1335CCSC32SMD20
Pixel: 1.1um×1.1um
Lens Type: 1/3.2
Important Voltage Description: DVDD1.2V (external power supply);

2、Lens specification:

FOV: 74.4°(D);62.7°(H);48.7°(V);
F/NO.: 2.2
TV distortion: <1.5%
Focal length: 3.81mm
Composition: 5P

Kai Lap Technologies Group Ltd

Designed By	Kevin	Model Name:	KLT-M3MA-AR1335 V8.0 PLCC NIR	
Checked By	Aouly__Yan	Projection Type:	Unit:	Material:
		Third Angle	mm	-----
		Scale:	Sheet:	Version:
		1:1	1 of 1	1/0

Product Overview

AR1335: 13 MP 1/3" CMOS Image Sensor

For complete documentation, see the data sheet.



The AR1335 is a 1/3.2-inch CMOS active-pixel digital image sensor with a pixel array of 4208H x 3120V. The AR1335 digital image sensor, features breakthrough 1.1 μm pixel technology that delivers superior low-light image quality through leading sensitivity, quantum efficiency and linear full well. This allows image quality that rivals digital still cameras. With a sensor architecture focused on low power and a high Chief Ray Angle (CRA) for low Z-heights, the AR1335 is ideal for smartphone and other mobile device applications. It incorporates sophisticated on-chip camera functions such as windowing, mirroring, column and row skip modes, and snapshot mode. It is programmable through a simple two-wire serial interface. The AR1335 sensor can generate full resolution image at up to 30 frames per second (fps) and supports advanced video modes including 4K 30fps, 1080P 60fps and 720P 120fps.

Features

- 13MP CMOS sensor with advanced 1.1 μm pixel BSI technology
 - Data interfaces: 2,3 and 4 lane MIPI
 - Bit-depth compression available for MIPI: 10-8 and 10-6 to lower bandwidth
 - 3D synchronization controls to enable stereo video capture
 - 6.8 kbits one time programmable memory (OTPM)
 - Programmable controls: gain, horizontal and vertical blanking, auto black level offset correction, frame size/rate, exposure, left-right and top-bottom image reversal, window size, and panning
 - Two on-die phase-locked loop (PLL) oscillators for super low noise performance
 - On-chip temperature sensor
 - Bayer pattern horizontal down-size scaler
 - Simple two-wire fast-mode+ serial interface
- For more features, see the data sheet

Applications

- Mobile
- 4K video capture
- High resolution still capture

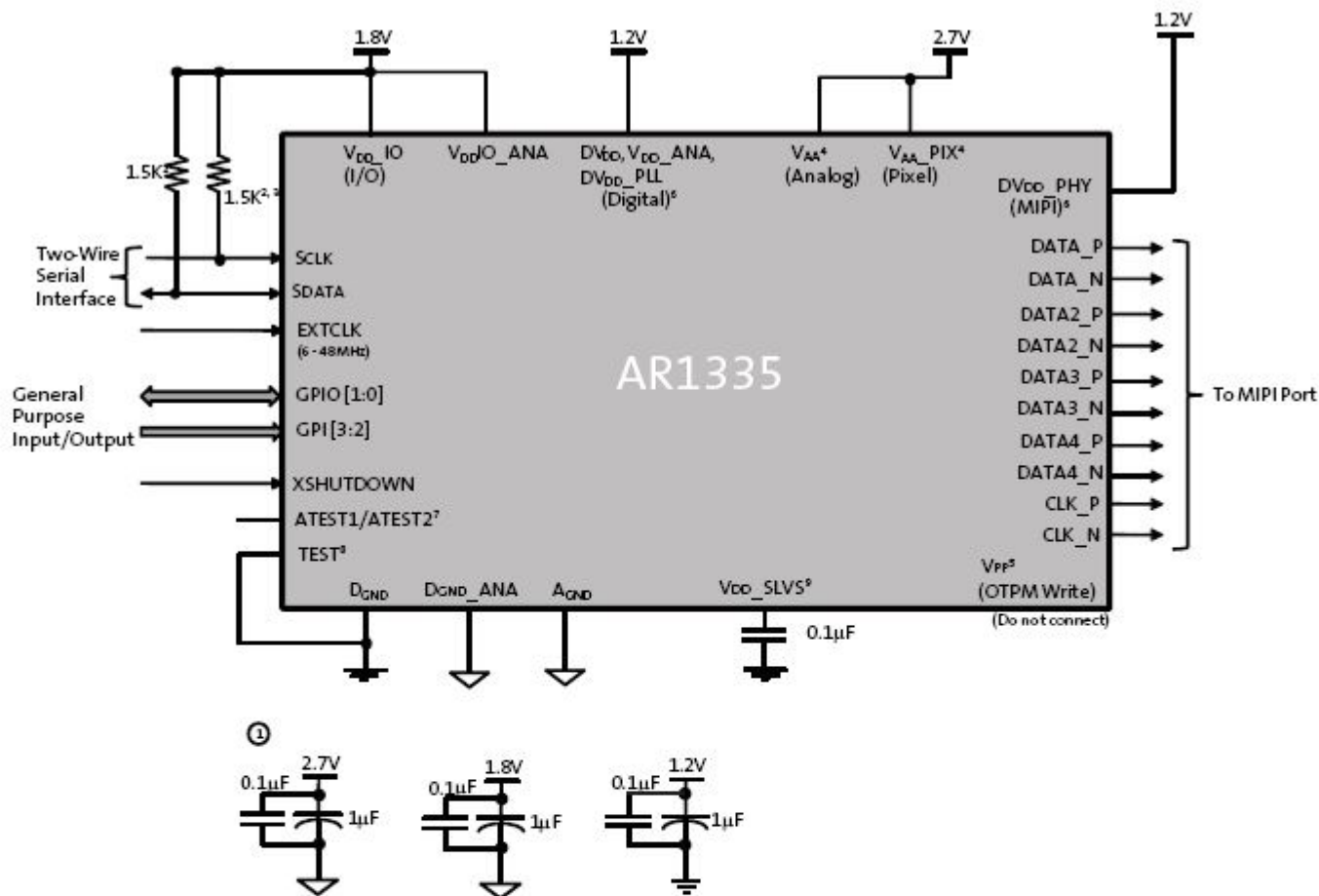
End Products

- Smart Phone
- Digital Still Camera
- PC Camera
- Consumer devices

Part Electrical Specifications

Product	Compliance	Status	Type	Megapixels	Frame Rate (fps)	Optical Format	Shutter Type	Pixel Size (μm)	Output Interface	Color	Package Type
AR1335CSSC11SMD20	Pb-free Halide free	Active	CMOS	13	30	1/3.2 inch	Electronic Rolling	1.1 x 1.1	MIPI	RGB	
AR1335CSSC11SMKA0-CP	Pb-free Halide free	Active	CMOS	13	30	1/3.2 inch	Electronic Rolling	1.1 x 1.1	MIPI	RGB	ODCSP-63
AR1335CSSC11SMKA0-CR	Pb-free Halide free	Active	CMOS	13	30	1/3.2 inch	Electronic Rolling	1.1 x 1.1	MIPI	RGB	ODCSP-63
AR1335CSSC32SMD20	Pb-free Halide free	Active	CMOS	13	30	1/3.2 inch	Electronic Rolling	1.1 x 1.1	MIPI	RGB	
AR1335CSSM11SMD20	Pb-free Halide free	Active	CMOS	13	30	1/3.2 inch	Electronic Rolling	1.1 x 1.1	MIPI	RGB	
AR1335CSSM32SMD20	Pb-free Halide free	Active	CMOS	13	30	1/3.2 inch	Electronic Rolling	1.1 x 1.1	MIPI	RGB	

Application Diagram



For connectivity above:

- Notes:
1. All power supplies should be adequately decoupled; recommended cap values are:
 - 2.7V: 1.0μF and 0.1μF
 - 1.2V: 1.0μF and 0.1μF
 - 1.8V: 1.0μF and 0.1μF
 2. Resistor value 1.5kΩ is recommended, but may be greater for slower two-wire speed.
 3. This pull-up resistor is not required if the controller drives a valid logic level on SCLK at all times.
 4. V_{AA} and V_{AA_PIX} must be tied together.
 5. Internal charge pump is used for OTPM programming.
 6. Digital and MIPI supply can be tied together.
 7. ATEST1/ATEST2 must be left floating.
 8. TEST pin must be tied to D_{GND}.
 9. V_{DD_SLVS} must be connected to D_{GND} through a bypass cap (0.1μF).

For more information please contact your local sales support at www.onsemi.com.

Created on: 9/30/2017



1/3.2-Inch 13 Mp CMOS Digital Image Sensor

AR1335 Datasheet, Rev. A

For the latest datasheet, please visit: www.aptna.com

Features

- 13 Mp CMOS sensor with advanced 1.1 μm pixel BSI technology
- Data interfaces: two-, three-, and four-lane serial mobile industry processor interface (MIPI)
- Bit-depth compression available for MIPI Interface: 10-8 and 10-6 to enable lower bandwidth receivers for full frame rate applications
- 3D synchronization controls to enable stereo video capture
- 6.8 kbits one-time programmable memory (OTPM) for storing shading correction coefficients and module information
- Programmable controls: gain, horizontal and vertical blanking, auto black level offset correction, frame size/rate, exposure, left-right and top-bottom image reversal, window size, and panning
- Two on-die phase-locked loop (PLL) oscillators for super low noise performance
- On-chip temperature sensor
- Bayer pattern horizontal down-size scaler
- Simple two-wire fast-mode+ serial interface
- Low dark current
- Interlaced multi-exposure readout enabling High Dynamic Range (HDR) still and video applications
- On-chip lens shading correction
- Support for external mechanical shutter
- Support for external LED or Xenon Flash
- Extended Flash duration up to start of frame readout

Applications

- Cellular phones
- Digital still cameras
- PC cameras
- PDAs

Table 1: Key Performance Parameters

Parameter	Value
Optical format	1/3.2 -inch 13 Mp (4:3)
Active pixels	4208H x 3120V
Pixel size	1.1 μm Back Side Illuminated (BSI)
Chief ray angle (CRA)	32°
Die size	6.3 mm x 5.7 mm
Input clock frequency	6 - 48 MHz
Interface	4-lane MIPI (2- and 3-lane supported); Max data rate: 1.2Gbps/lane
Subsampling modes (column and row)	skip2 bin2 skip3 bin3 skip4 bin4 skip2bin2
ADC resolution	10 bits, on-die
Analog gain	1x – 7.75x
Digital gain	Up to 7.98x
Scaler	Adjustable scaling up to 8x
Temperature sensor	10-bit, controlled by two-wire serial I/F
Compression	DPCM: 10-8-10, 10-6-10
3D support	Frame rate and exposure synchronization
Supply voltage	VAA, VAA_PIX 2.6 - 2.9 V (2.7 V nominal)
	VDD_IO, VDDIO_ANA 1.7 - 1.9 V (1.8 V nominal)
	VDD, VDD_ANA, VDD_PLL, VDD_PHY 1.14 - 1.3 V (1.2 V nominal)
Power consumption	270 mW at 60°C (TYP) at 13 Mp 30 fps
Responsivity	4700 e ⁻ /lux-sec
SNRMAX	37 dB
Dynamic Range	69 dB
Operating Temperature Range (at junction) - TJ	-30°C to +70°C

**Table 2: Mode of Operation and Power**

Mode	Resolution	Readout Configuration	HFOV	FPS	Power Consumption [mW]
4:3 Snapshot Mode					
13 M full resolution	4208x3120	13M full mode	100%	30	270
13 M full resolution	4208x3120	13M full mode	100%	24	250
VGA	640 x 480	Crop+Subsampling+Scaling	61%	120	190
QVGA	320 x 240	Crop+Subsampling+Scaling	30%	240	165
16:9 Video Mode 30 FPS					
4K UHD	3840 x 2160	Cropping	91%	30	230
4K Cinema	4096 x 2160	Cropping	97%	30	235
1080p	1920 x 1080	Crop+Subsampling+Scaling	91%	30	160
1080p LP	1920 x 1080	Crop+Subsampling+Scaling	91%	30	135
720p	1280 x 720	Crop+Subsampling+Scaling	91%	30	140
16:9 Video Mode 60 FPS					
1080p	1920 x 1080	Crop+Subsampling+Scaling	91%	60	210
1080p LP	1920 x 1080	Crop+Subsampling+Scaling	91%	60	180
720p	1280 x 720	Crop+Subsampling+Scaling	91%	60	175
3M 30 FPS					
3M	2000 x 1500	Crop+Subsampling+Scaling	95%	30	195
3M LP	2000 x 1500	Crop+Subsampling+Scaling	95%	30	170
16:9 Video Mode 120 FPS					
720p	1280 x 720	Crop+Subsampling+Scaling	91%	120	260

Ordering Information

Table 3: Available Part Numbers

Part Number	Description
AR1335CSSC32SMD20	Bare die

Applicazioni per fotocamere

your BEST camera module partner



Pilota automobilistico



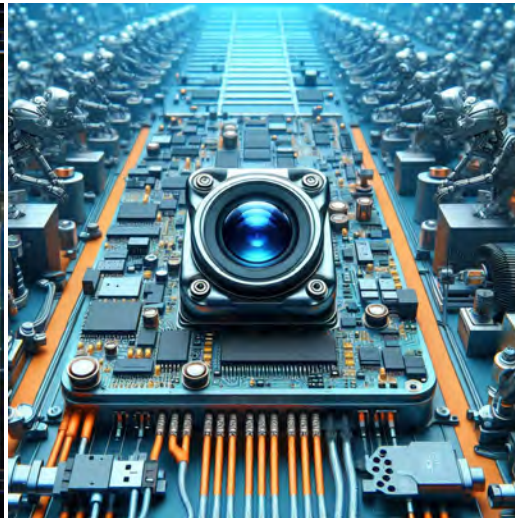
Diretta streaming



Video conferenza



Rilevamento biometrico Eye Tracker



Visione artificiale



Monitor agricolo



Sicurezza della visione notturna



Drone e occhi d'aquila sportivi



Fotocamera interattiva per animali domestici



Applicazioni per fotocamere

your BEST camera module partner



IMAGING DEVICES



Tabella di riferimento per la definizione dei pin del modulo telecamera

OmniVision Sony Himax Samsung On-Semi Aptina Himax GalaxyCore PixArt Sensori di immagine	
Segnale pin	Descrizione
DGND GND	terra per il circuito digitale
AGND	terra per il circuito analogico
PCLK DCK	Uscita PCLK DVP
XCLR PWDN XSHUTDOWN STANDBY	spegnimento attivo alto con resistenza pull-down interna
MCLK XVCLK XCLK INCK	orologio di ingresso del sistema
RESET RST	reset attivo basso con resistenza pull-up interna
NC NULL	non connesso
SDA SIO_D SIOD	Dati SCCB
SCL SIO_C SOIC	Orologio di ingresso SCCB
VSYNCS XVS FSYNC	Uscita DVP VSYNC
HREF XHS	Uscita DVP HREF
DOVDD	alimentazione per il circuito I/O
AFVDD	power for VCM circuit
AVDD	alimentazione per il circuito VCM
DVDD	potenza per il circuito digitale
STROBE FSTROBE	uscita stroboscopica
FSIN	sincronizzare il segnale VSYNC dall'altro sensore
SID	Ingresso ID ultimo bit SCCB
ILPWM	indicatore di uscita dell'otturatore meccanico
FREX	frame exporuse / mechanical shutter
GPIO	esposizione del telaio/otturatore meccanico
SLASEL	Selezione indirizzo slave I2C
AFEN	abilitare attivo alto sull'IC del driver VCM
Interfaccia MIPI	
MDN0 DN0 MD0N DATA_N DMO1N	Uscita negativa della prima corsia dati MIPI
MDP0 DP0 MD0P DATA_P DMO1P	Uscita positiva della prima corsia dati MIPI
MDN1 DN1 MD1N DATA2_N DMO2N	Uscita negativa MIPI 2a corsia dati
MDP1 DP1 MD1P DATA2_P DMO2P	Uscita positiva MIPI 2a corsia dati
MDN2 DN2 MD2N DATA3_N DMO3N	Uscita negativa MIPI 3a corsia dati
MDP2 DP2 MD2P DATA3_P DMO3P	Uscita positiva MIPI 3a corsia dati
MDN3 DN3 MD3N DATA4_N DMO4N	Uscita negativa MIPI 4a corsia dati
MDP3 DP3 MD3P DATA4_P DMO4P	Uscita positiva MIPI 4a corsia dati
MCN CLKN CLK_N DCKN	Uscita negativa dell'orologio MIPI
MCP CLKP MCP CLK_P DCKN	Uscita positiva dell'orologio MIPI
Interfaccia parallela DVP	
D0 DO0 Y0	Porta di uscita dati DVP 0
D1 DO1 Y1	Porta di uscita dati DVP 1
D2 DO2 Y2	Porta di uscita dati DVP 2
D3 DO3 Y3	Porta di uscita dati DVP 3
D4 DO4 Y4	Porta di uscita dati DVP 4
D5 DO5 Y5	Porta di uscita dati DVP 5
D6 DO6 Y6	Porta di uscita dati DVP 6
D7 DO7 Y7	Porta di uscita dati DVP 7
D8 DO8 Y8	Porta di uscita dati DVP 8
D9 DO9 Y9	Porta di uscita dati DVP 9
D10 DO10 Y10	Porta di uscita dati DVP 10
D11 DO11 Y11	Porta di uscita dati DVP 11

Test di affidabilità della fotocamera

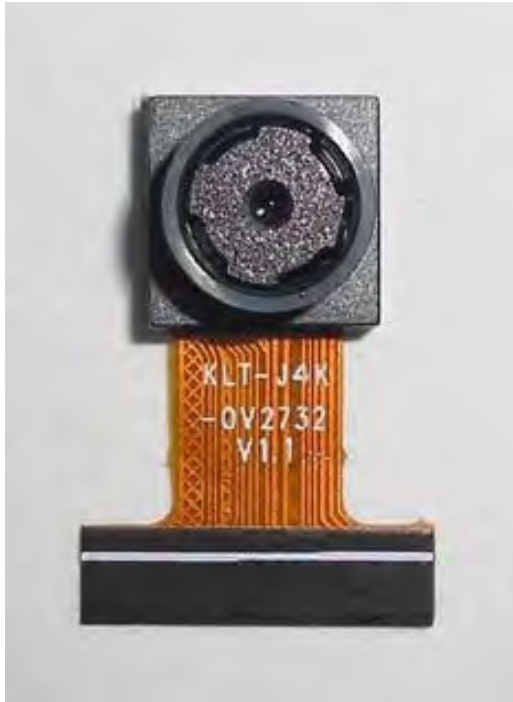
Elemento di ispezione dell'affidabilità			Metodo di prova	Criteri di accettazione
Categoria		Articolo		
Ambientale	Magazzinaggio Temperatura	No.Alto 60°C 96 ore	Camera di temperatura	Nessuna situazione anomala
		Bassa -20°C 96 ore	Camera di temperatura	Nessuna situazione anomala
	Operazione Temperatura	Alta 60°C 24 ore	Camera di temperatura	Nessuna situazione anomala
		Bassa -20°C 24 ore	Camera di temperatura	Nessuna situazione anomala
	Umidità	60°C 80% 24 ore	Camera di temperatura	Nessuna situazione anomala
	Shock termico	Alta 60°C 0,5 ore Bassa -20°C 0,5 ore Pedalare in 24 ore	Camera di temperatura	Nessuna situazione anomala
Fisico	Prova di caduta (Caduta libera)	Senza confezione 60 cm	10 volte su pavimento in legno	Elettricamente Funzionale
		Con Confezione 60cm	10 volte su pavimento in legno	Elettricamente Funzionale
	Prova di vibrazione	50 Hz Asse X 2 mm 30 min	Tavola vibrante	Elettricamente Funzionale
		50 Hz Asse Y 2 mm 30 min	Tavola vibrante	Elettricamente Funzionale
		50 Hz Asse Z 2 mm 30 min	Tavola vibrante	Elettricamente Funzionale
	Trazione del cavo Prova di forza	Peso di carico 4 kg 60 secondi Pedalare in 24 ore	Macchina per prove di trazione	Elettricamente Funzionale
Elettrico	Prova ESD	Scarica a contatto 2 KV	Macchina per test ESD	Elettricamente Funzionale
		Scarica d'aria 4 KV	Macchina per test ESD	Elettricamente Funzionale
	Prova di invecchia-mento	Accensione/spegnimento 30 secondi Pedalare in 24 ore	Interruttore di alimentazione	Elettricamente Funzionale
	Connettore USB	Accensione/spegnimento 250 volte	Plug and Unplug	Elettricamente Funzionale



Elemento di ispezione		Metodo di ispezione	Standard di ispezione	
Categoria	Articolo			
Aspetto	FPC / PCB	Colore	L'occhio nudo	Non sono ammesse differenze sostanziali.
		Essere strappato/tritato	L'occhio nudo	L'esposizione alle crepe del rame non è consentita.
		Marcatura	L'occhio nudo	Chiaro, riconoscibile (entro 30 cm di distanza)
	Titolare	Graffi	L'occhio nudo	L'esposizione a crepe interne non è consentita
		Spacco	L'occhio nudo	Rispetta lo standard di altezza
		Vite	L'occhio nudo	Assicurarsi che siano presenti le viti (se presenti)
		Danno	L'occhio nudo	L'esposizione a crepe interne non è consentita
	Lente	Graffio	L'occhio nudo	Nessun effetto sullo standard di risoluzione
		Contaminazione	L'occhio nudo	Nessun effetto sullo standard di risoluzione
		Pellicola d'olio	L'occhio nudo	Nessun effetto sullo standard di risoluzione
		Nastro di copertura	L'occhio nudo	Nessun problema sull'aspetto.
	Funzione	Immagine	Nessuna comunicazione	Scheda di prova
Pixel luminoso			Lavagna	Non consentito nel Centro immagini
Pixel scuro			Lavagna bianca	Non consentito nel Centro immagini
Offuscato			L'occhio nudo	Non autorizzato
Nessuna immagine			L'occhio nudo	Non autorizzato
Linea verticale			L'occhio nudo	Non autorizzato
Linea orizzontale			L'occhio nudo	Non autorizzato
Perdita di luce			L'occhio nudo	Non autorizzato
Immagine lampeggiante			L'occhio nudo	Non autorizzato
Ammaccare			Inspection Jig	Non autorizzato
Risoluzione			Grafico	Segue lo standard della tabella di ispezione in uscita
Colore			L'occhio nudo	Nessun problema
Rumore			L'occhio nudo	Non autorizzato
Angolo buio			L'occhio nudo	Meno di 100px per 100px
Risoluzione del colore			L'occhio nudo	Nessun problema
Dimensione			Altezza	L'occhio nudo
	Larghezza	L'occhio nudo	Segue la scheda tecnica di approvazione	
	Larghezza	L'occhio nudo	Segue la scheda tecnica di approvazione	
	Complessivamente	L'occhio nudo	Segue la scheda tecnica di approvazione	

Soluzioni pacchetto KLT

Modulo telecamera KLT



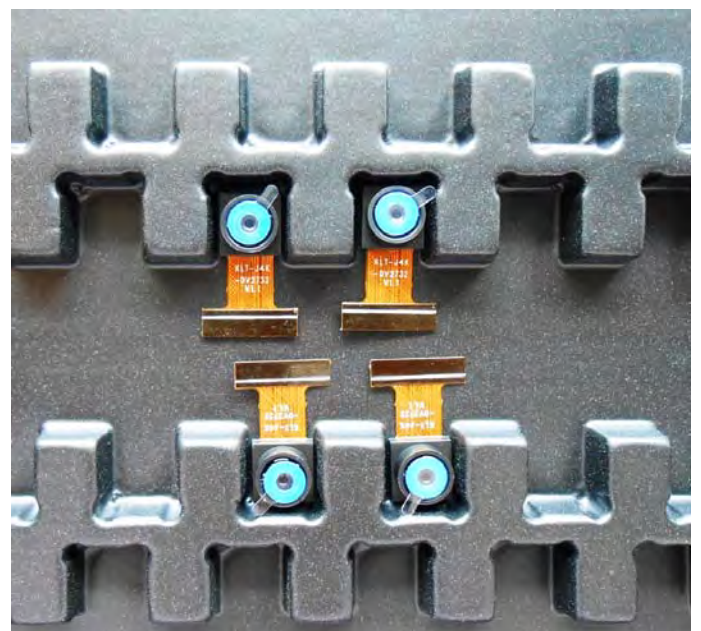
Completo di pellicola protettiva per lente



Vassoio con griglia e spazio



Posiziona le fotocamere sul vassoio



Soluzione del pacchetto moduli fotocamera

Vassoio pieno di fotocamere



Vassoio di copertura con coperchio



Mettere il vassoio nella borsa antistatica



Aspirare il sacchetto antistatico



Soluzione del pacchetto moduli fotocamera

Busta sottovuoto sigillata con etichette

1. Modello e descrizione 2. Quantità 3. Data di spedizione 4. Attenzione



Soluzione per pacchetti di ordini di grandi dimensioni

Posizionare i fogli di schiuma tra i vassoi



I fogli di schiuma sono leggermente più grandi dei vassoi



Posizionare i fogli e i vassoi in schiuma nella scatola



I fogli di schiuma sono una scatola perfettamente aderente



Soluzione di pacchetti per piccoli ordini

Posizionare i fogli e i vassoi in schiuma nella scatola piccola



I fogli di schiuma si adattano perfettamente alla scatola piccola



Confezione in piccola scatola per la spedizione



Posiziona le scatole piccole nella scatola più grande



Soluzione del pacchetto Carbon Box

Sigillare la scatola del carbonio

Scatola etichettata del pacchetto finale



Scatola di carbonio pronta per la spedizione

1. Indirizzo di consegna e numero di telefono 2. Numero di casella e data di spedizione 3. Attenzione alla fragilità



Soluzione del pacchetto di ordini di esempio

Posizionare il campione in una piccola busta antistatica



Posiziona i connettori nella piccola busta antistatica



Etichette campione sulla borsa piccola

1. Modulo telecamera o modello connettore
2. Data e quantità di spedizione
3. Attenzione



Soluzione di connettori di grandi dimensioni

Connettori in una ruota



Etichetta connettori nella ruota



La ruota si adatta perfettamente alla scatola



Scatola connettori pronta per la spedizione



Azienda Kai Lap Technologies (KLT)

Kai Lap Technologies Group Limited. (KLT) è stata fondata nel 2009, un produttore guidato dalla tecnologia di nuova generazione specializzato nella ricerca, progettazione e produzione di prodotti audio e video. KLT occupa uno stabilimento automatizzato di 20.000 piedi quadrati con 100 dipendenti e un rendimento annuo di 30.000.000 di telecamere.

KLT fornisce OEM, progettazione ODM, produzione a contratto e costruisce prodotti per fotocamere. Puoi fornirci i requisiti, anche con una bozza manuale, le nostre vendite e ingegneria collaboreranno per soddisfare le tue esigenze. Ci consideriamo il vostro partner a lungo termine nello sviluppo di soluzioni pratiche e innovative.

Il nostro team copre tutto, dallo sviluppo del concetto iniziale al prodotto prodotto in serie. KLT è specializzata nella progettazione personalizzata di fotocamere, materie prime, ingegneria elettronica, sviluppo firmware/software, test di prodotto e progettazione di imballaggi. I nostri esperti sistemi di fornitura strategica offrono una capacità produttiva solida e affidabile per ordini di varie dimensioni.



Garanzia limitata

KLT fornisce la seguente garanzia limitata se hai acquistato il/i Prodotto/i direttamente dalla società KLT o dal sito web di KLT, www.KaiLapTech.com. I prodotti acquistati da altri venditori o fonti non sono coperti dalla presente Garanzia limitata. KLT garantisce che i Prodotti saranno esenti da difetti nei materiali e nella lavorazione in condizioni di utilizzo normale per un periodo di un (1) anno dalla data di ricezione del prodotto ("Periodo di garanzia").

Per tutti i Prodotti che contengono o sviluppano difetti materiali o di lavorazione durante il Periodo di garanzia, KLT, a sua esclusiva discrezione: (i) riparerà il/i Prodotto/i; (ii) sostituire il(i) Prodotto(i) con uno(i) nuovo(i) o ricondizionato (Prodotto(i) sostitutivo(i) di modello identico o equivalente dal punto di vista funzionale); o (iii) fornirti un rimborso del prezzo pagato per il/i Prodotto/i.

La presente Garanzia Limitata di KLT è limitata esclusivamente alla riparazione e/o sostituzione nei termini sopra indicati. KLT non è affidabile né responsabile per eventuali eventi successivi.





CMOS CAMERA MODULES



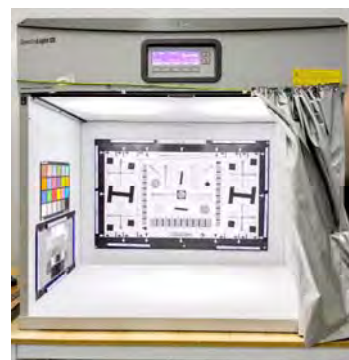
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