

PRODUCT : CAMERA MODULE
MODEL NO. : CA3210-A030SF-E
SUPPLIER : TRULY OPTO-ELECTRONICS LTD.
DATE : July 21, 2009



CERT. No. 946535
ISO9001
TL9000

SPECIFICATION

Revision: 1.4

CA3210-A030SF-E

If there is no special request from customer, TRULY OPTO-ELECTRONICS LTD. will not reserve the tooling of the product under the following conditions:

1. There is no response from customer in two years after TRULY OPTO-ELECTRONICS LTD. submit the samples;

2. There is no order in two years after the latest mass production.

And correlated data (include quality record) will be reserved one year more after tooling was discarded.

TRULY OPTO-ELECTRONICS LTD.: **CUSTOMER:**

Quality Assurance Department: _____

Approved by:

Technical Department: _____

Approved by:

CONTENTS

- n MODULE INFORMATION
- n PIN ASSIGNMENT
- n ELECTRICAL CHARACTERISTICS
- n MECHANICAL DRAWING
- n APPEARANCE SPECIFICATION
- n IMAGE SPECIFICATION
- n QA PLAN
- n PACKAGE INFORMATION
- n PRIOR CONSULT MATTER
- n FACTORY CONTACT INFORMATION

WRITTEN BY	CHECKED BY	APPROVED BY
LI JING	WEI YOU XING	LIU TIE NAN

MODULE INFORMATION

Module No.		CA3210-A030SF-E
Module Size		38.20mmX27.0mmX35.00mm
Image Quality		≥250 TV LINE
Power supply		DC 5~10V
Sensor		OV7950
Lens		1/4inch 4Glass+IR
Focus(F.NO)		2.0
View Angle		178° /125° /92° (D/H/V)
Object distance		50cm-infinity
Array Size		656 X 492(VGA)
Image Area		4.080mm x 3.102mm
Pixel size		6.0μm x 6.0μm
Scan Mode		Progressive
Output Formats		Analog NTSC
Exposure Time Range		1/60s – 20us
S/N Rate		48db
Dynamic Range		49db
IC Package		CLCC-48
Dark Current		10mW/s at 60°C
Fixed Pattern noise		<0.22% of Vpeak-to-peak
Video signal		1.0Vp-p /composite (75ohms)
Temperature Range	Operating	- 20° C to 70° C
	Storage	-40° C to 90° C
Output mode		CABLE WITH CONNECTOR (Video and power)
Power Consumption		200mW
Package		Antistatic Plastic
Application		Visual Phone, Video conferencing, Security and surveillance, Portable security device, Industrial machine monitoring, Process control, PC Multimedia, Video door-bell, automotive rear view system.

PIN ASSIGNMENT

No.	Name	Pin type	Description
1	VIDEO OUTPUT	Analog	Composite video signal output
2	GND	POWER	Ground
3	POWER IN (DC 9V)	POWER	Power Supply for module
4	GND	POWER	Ground

PIN ASSIGNMENT(WIRE)

No.	Name	Pin type	Description
1	GND(BLACK WIRE)	POWER	Ground
2	POWER +9V(RED WIRE)	POWER	Power Supply for module
4	CVBS+(YELLOW WIRE)	Analog	Composite video signal output
6	CVBS-(GND BLACK WIRE)	POWER	Ground
Other pin	NC		

Electrical Characteristics

OUTPUT NTSC Timing

Figuer1: NTSC Standard Video Timing Diagram

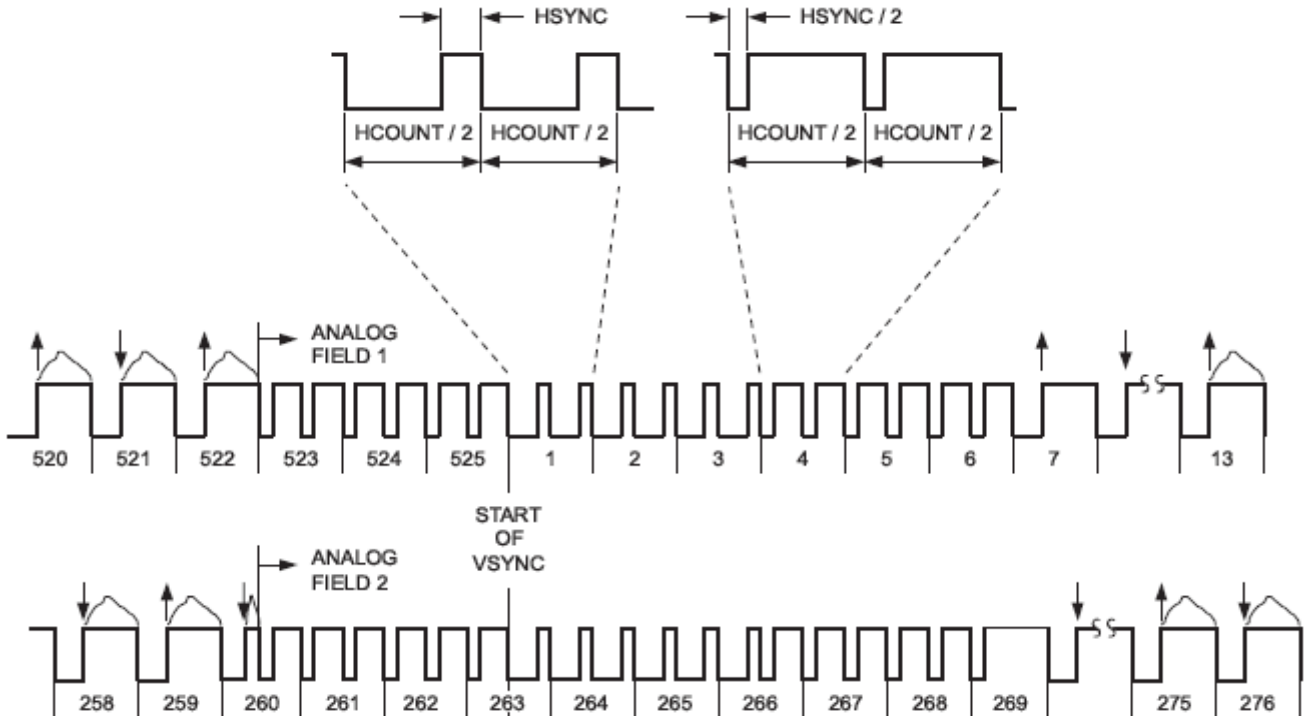
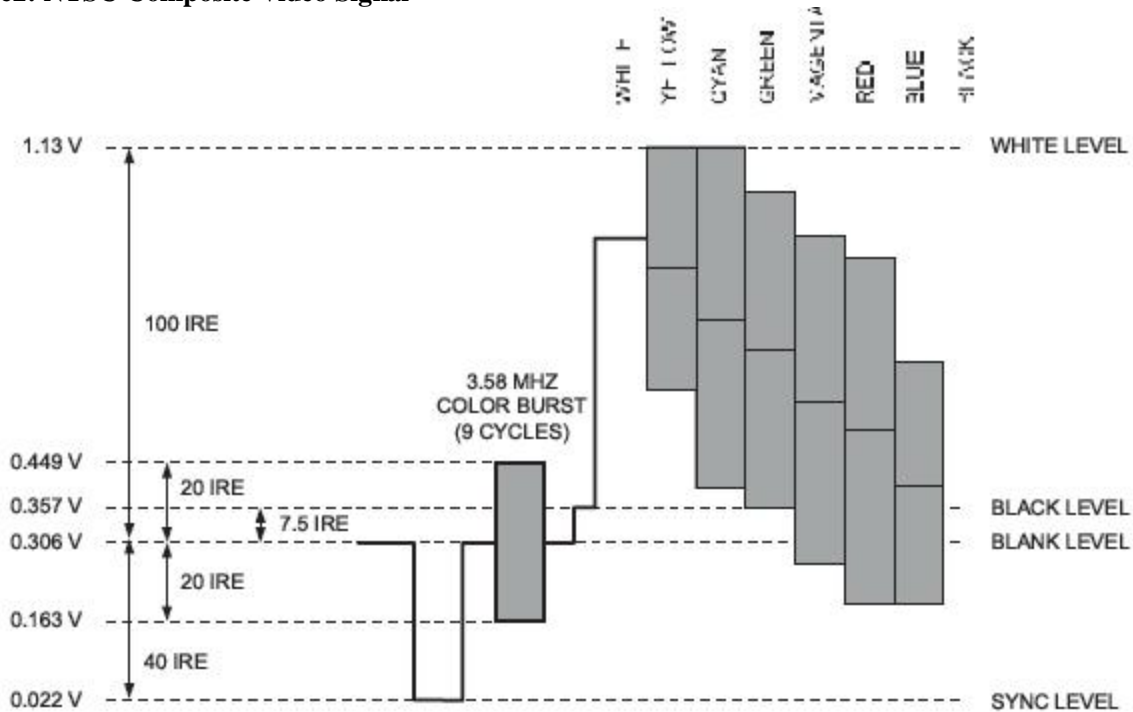


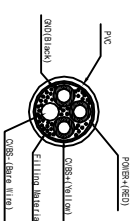
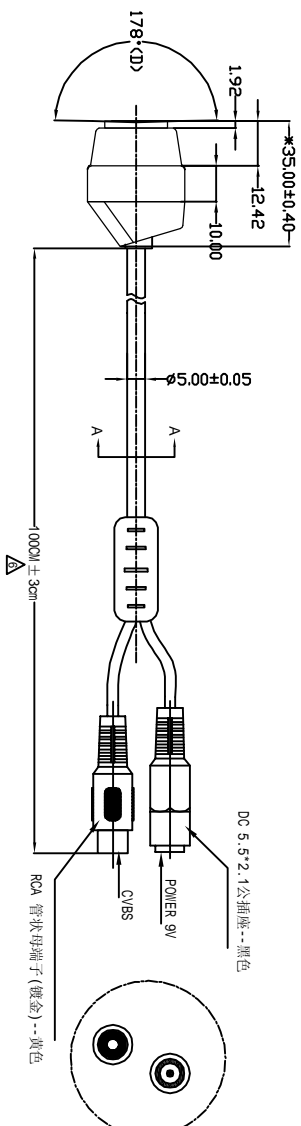
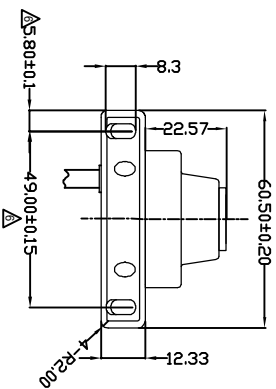
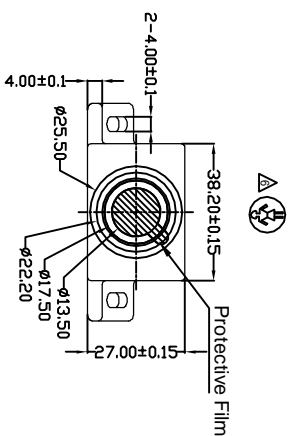
Figure2: NTSC Composite Video Signal



Note: For more information of sensor please refer to the OV7950 specification.

Mechanical Drawing

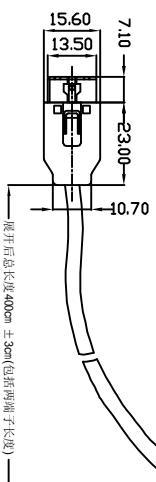
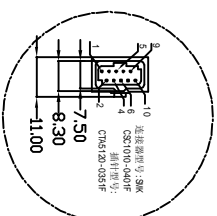
CA3210-A030SF-E Camera Module



Section A-A

连接器接口 PIN定义

PIN NO	DESCRIPTION
1	GND
2	POWER +9V
4	CVBS+
6	CVBS-
其他PIN	NC



NOTE:
1. *: CRITICAL DIMENSIONS.
2. UN-MARKED FILLET R=0.5mm.

主要参数 (Module Specification)	
焦距 (f1)	2.0 mm Δ
光圈 (F: NO)	2.0
视场角 (View Angle)	178° / 125° / 92° (D/H/V) Δ
畸变 (Distortion)	< 98% Δ
解析力 (Image Quality)	\geq 250 TV line
景深 (Focusing Range)	50 cm~Infinity
感光芯片 (Chip Type)	OV7950
像素 (Array Size)	0.3M
镜头类型 (Lens Size)	1/4INCH 4G+IR ($\phi 40 \pm 0.10$ mm)

CUSTOMER APPROVE		AMEND		光电感应模组	
Mechanical	Electrical	New shield	08.07.25	TOLERANCE !	DECIMAL x .30 xx ± .20 ± 1/4
		更新连接导线	08.07.01	PRODUCT NO.	
		影像方向由12点更改到6点, 增加尺寸公差标注	09.05.11	CA3210-D030SF-E	DRAW NO.
		Image mirror	08.09.08	DSN Francis 20090512	REV
		CONTENT	DATE	CHKD Francis 20090512	APPD 刘铁楠 20090512
				ND.	SHEET: 1/2

TRULY SEMICONDUCTORS LTD.

Image Specification

NO.	Item	Standard	Important Class
1	TV Line	Center \geq 350 8 point of 0.7 viewing field \geq 250	A
2	Dust	No dust in the center viewing area; Border area according to the limit samples	A
3	Dead pixel	No in the viewing area.	A
4	Distortion	$<$ 98%	B

QA Plan

NO.	Item	Sampling frequency	Measure	Remark
Image and reliability item				
1	TV Line	AQL 0.65 II Class	Same as production	100% Inspection
2	Dust	AQL 0.65 II Class	Same as production	100% Inspection
3	Dead pixel	AQL 0.65 II Class	Same as production	100% Inspection
4	Distortion	N=5,c=0 per batch	Same as production	Sampling by QA
Appearance Check Items				
1	Top side of Lens	AQL 1.0 II Class	Same as production	100% Inspection
2	Screw glue	AQL 1.0 II Class	Same as production	100% Inspection
3	L1 Glass	AQL 1.0 II Class	Same as production	100% Inspection
4	Holder	AQL 1.5 II Class	Same as production	100% Inspection
5	Sealed glue	AQL 1.0 II Class	Same as production	100% Inspection
6	FPC/PCB	AQL 1.0 II Class	Same as production	100% Inspection
7	Connector	AQL 1.0 II Class	Same as production	100% Inspection
8	Gold finger	AQL 1.0 II Class	Same as production	100% Inspection
9	Stiffener	AQL 1.5 II Class	Same as production	100% Inspection
10	Double coated tapes	AQL 1.5 II Class	Same as production	100% Inspection
11	Protective film	AQL 1.5 II Class	Same as production	100% Inspection

Sample:

Referenced standard: GB/T 2828.1-2003/ISO 2859-1:1999 and ANSI/ASQC.4-1993 II

Package Specification
Packaging Design

TBD

PRIOR CONSULT MATTER

- 1.①For Truly standard products, we keep the right to change material, process for improving the product property without notice on our customer.
- ②For OEM products, if any change needed which may affect the product property, we will consult with our customer in advance.
2. If you have special requirement about reliability condition, please let us know before you start the test on our samples.

FACTORY CONTACT INFORMATION

FACTORY NAME: TRULY OPTO-ELECTRONICS LTD.

FACTORY ADDRESS: Truly Industrial Area, ShanWei City, GuangDong, China

FACTORY PHONE: 86-0660-3380061 **FAX:** 86-0660-3371772