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	SPECIFICATION	APPLICABLE DIVISION YAO PLANT APPLIANCE SYSTEMS GROUP

Preliminary

SPECIFICATION FOR CCD CAMERA MODULE

Model No.

YH-250GE

☐CUSTOMER'S APPROVAL

DATE _____

BY _____

PRESENTED
BY J. Aoki
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Vice President
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SHARP CORPORATION

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RECORDS OF REVISION

SPEC No.	DATE	Revised No.	SUMMARY Page	SUMMARY	NOTE
YH250GE-01	Jul.7,1998	01		---------	1st issue

1. Application

This document describes the specifications of CCD Camera to be supplied to _____.

All figures described in this document are based on the conditions that the camera is used under *normal operating temperature, normal operating humidity.

*Normal operating temperature ; +20 ~ +25°C

*Normal operating humidity ; 65±5%RH

The monitor to be used shall be standard monitor.

Model No.	TV system	Output signal	Iris control	Lens
YH-251NW	EIA	Composite	Electronic Exposure(EE)	O

2. General Description

This CCD camera module incorporates 1/4-inch CCD with following characteristics:

1) Focus ; fixed

2) Normal/Mirror image selectable

3) Back light compensation function

4) Built-in compact lens specially designed for module.

5) 9V single operation

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3. Specification

TV system	EIA
Image sensor	1/4"Inter-line transfer CCD
Total pixels	542(H)x492(V)(Total;270K)
Effective pixels	512(H)x492(V)(Total;250K)
Resolution Distance from chart to camera : 3m	Horizontal : 310 TV lines
Focus	Fixed(Factory setting is 3m)
S/N ratio	≧45dB Condition: AGC off High pass filter 10KHz Fsc trap Weighting filter on Low pass filter(NTSC;4.2MHz) Light shield
Minimum illumination	3 lx ± 2 lx Condition: ITE gray scale chart(Gamma=1.0) Y signal amplitude 350mV
Maximum illumination	≧90,000 ix Abnormal operation when the camera aimed at the sun is not concerned.
Iris control	EE
Gamma correction	approx.0.7
Auto gain control	Auto
Sync. system	Internal only
Output video signal Composite type ・Y signal amplitude *(Condition 1) ・Sync. amplitude	 1.0Vp-p/75Ω 714mV±70mV 286mV±40mV
Lens(plastic) focal length F number viewing angle	 approx.1.8mm(fixed) approx.2.8 Horizontal:approx.114°
DC power supply	DC 9V ± 0.5V,≦150mA
Operating temperature	-10 to +60°C
Storage temperature	-20 to +70°C
Dimension	Refer to R40M-002

*Condition 1: ITE gray scale chart (Gamma=1.0)

4.Connector

1) Power input , Signal Output , other

2) Pin assignment

No.	Name
1	Normal/Mirror select input
2	Back light compensation/Normal select input
3	GND(Power)
4	Power input
5	Video output (composite)
6	GND(Video)

3)Connector used in the module SMK CHP2506-0101

4) Mating connector SMK CHP1106-0101

5. Module control

1) Input level Hi : more than 5.0V
Low : less than 0.5V

2) Normal/Mirror select

Pin No.	1	Mode
Input level	L or OPEN	Mirror
	H	Normal

3) Back light compensation

Pin No.	2	Mode
Input level	L or OPEN	Normal
	H	Back light conpensation

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6. Reliability Tests

Unless otherwise stated, the following reliability tests are conducted (sampling base) to confirm the reliability of the module in the testing room kept in normal temp. and humidity.

1) Low temp. storage test

To prove that the module shows no abnormal operation and function after it is stored at ambient temp. of -20℃ for 72H and then left at room temp. for 2H min.

2) Low temp. operation test

To prove that the module normally operates for continuously 24H at the ambient temp. of -10℃.

3) High temp. storage test

To prove that the module shows no abnormal operation and function after it is stored at ambient temp. of 70℃ for 72H and then left at room temp. for 2H min.

4) High temp. operation test

To prove that the module normally operates for continuously 24H at the ambient temp. of 60℃.

5) High humidity test

To prove that the module normally operates for 240H at ambient temperature of 40℃ and relative humidity of 90%RH.

6) Vibration test

To prove that the module shows no abnormal operation and function after vibration test under the condition of 10~55~10Hz/min. at acceleration speed 3.6G and up/down for 4H and left/right for 2H and back/forward for 2H.

7) Shock test

Three successive shocks shall be applied in both direction of 3 mutually perpendicular axes (a total of 18 shocks).

Peak acceleration : 60G , Duration of pulse : 10msec

7. Pixel Defect

	Shield light	CCD Output level 150mV	
	White defect	White detect	Black detect
Defect specification	10mV <	12mV <	12mV <
Tolerated number of defect	0	M	N

M+N≦10

Condition: Temperature 25℃

*10 pixels in both horizontal edges and 9 pixels in both vertical edges shall be disregarded as a void area.

8. Precautions & Notes

1) Care shall be used not to damage the components during installation or removed of the extension cable.

2) Since EMI and CE vary depending on various systems, these agency approvals need to be taken at customer side.

3) Any agency approval for safety is not applicable to these components.

4) An earth band or conductive mat shall be used to avoid the generation of static electricity that easily damages the CCD sensors.

Please note that Sharp cannot guarantee the performance and quality under any use other than the conditions stated above, such as circumstances where vibrations are constant as in a moving vehicle, where shocks may occur as in a moving vehicle or where shocks exceed ordinary house-hold or office use.

5) Don't touch lens.

Keep lens away from dirt and dust.
Please don't touch lens. Cause it's made from plastic, it's scratched easily.
In case of dust sticking, please blow it off in blower and never touch lens.
As lens is spoiled, use of the solvent such as alcohol is strict prohibition.

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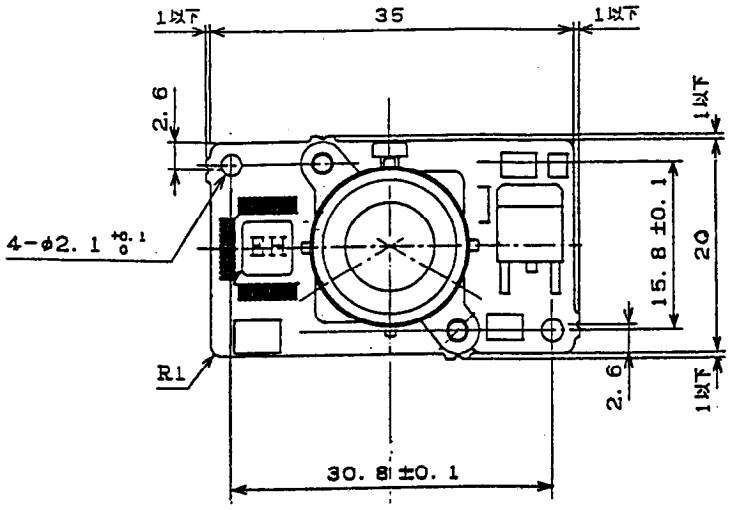

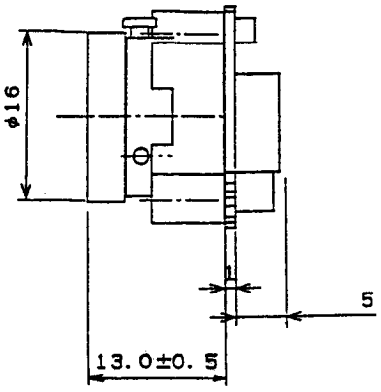

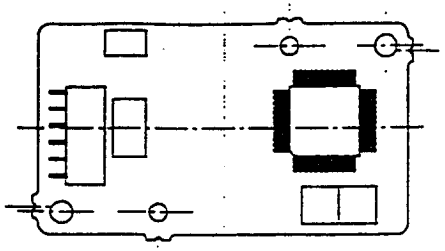

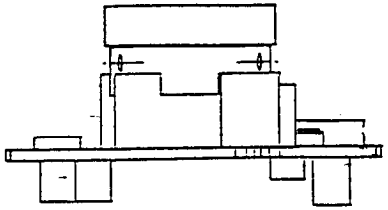

YH-250GE					CAMERA
PARTS CODE	PROCESS	PIECES	MATERIAL	FINISH	NAME

			APPROVE	CHECK	DESIGN	DRAW	CHARGE
			K. Minami		Y. Kumagai		
DATE	NO.	REVISE	ASSIGN NO.		DRAWING NO.		
DATE Jul. 7. 1999	HE Business Promotion Dept.						

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