

PREPARED BY: _____ DATE: _____	<h1 style="text-align: center;">SHARP</h1> <p style="text-align: center;">APPLIANCE SYSTEMS GROUP SHARP CORPORATION</p> <h2 style="text-align: center;">SPECIFICATION</h2>	No. YH-7888-03
APPROVED BY: _____ DATE: _____		FILE No. _____
		ISSUE: Aug. 5, 1996
		PAGE 11 Pages
		APPLICABLE DIVISION YAO PLANT APPLIANCE SYSTEMS GROUP

Model No.

SPECIFICATION FOR COLOR CCD CAMERA

YH-7B58 ; NTSC

YH-7B68 ; NTSC (with microphone)

YH-8B58 ; PAL

YH-8B68 ; PAL (with microphone)

☐ CUSTOMER'S APPROVAL

DATE _____

BY _____

PRESENTED

BY H. Madono

H. Madono

General Manager

House Electronics Business Promotion Dept.

Appliance Systems Group

SHARP CORPORATION

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 - Communications equipment for trunk lines
 - Control equipment for the nuclear power industry
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RECORDS OF REVISION

[illegible]

1. Application

This document describes the specifications of Color 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	Built-in microphone
YH-7B58	NTSC	Composite	Electronic Exposure (EE)	—
YH-7B68			1/100 sec.(fixed)	○
YH-8B58	PAL		Electronic Exposure (EE)	—
YH-8B68			1/120 sec.(fixed)	○

2. General Description

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

1) Focus ; manual adjustable

2) Structure ; Tilt base(up)45° ,(down)15°

3) Output signal; Composite

4) Connector ,Extension cable

Model No.	Connector (CCD camera side)	Extension Cable
YH-7B58	RCA pin jack (video)	RCA pin jack
YH-7B68	RCA pin jack × 2 (video,audio)	RCA pin jack × 2 (video,audio)
YH-8B58	RCA pin jack (video)	RCA pin jack
YH-8B68	RCA pin jack (video,audio)	RCA pin jack × 2 (video,audio)

DC power supply; power jack (EIAJ type A-2)

refer to see attached drawing (page YH7888-02-7)

5) Iris control; EE type

6) White balance; Auto (TTL auto tracing white balance)

7) Contrast control; Adjustable contrast (up/down), Backlight compensation

- When power on, contrast level comes to factory preset level.
(NTSC;714mV,PAL;700mV)
- Push "UP" button for level up.
- Push "DOWN" button for level down.

8) Agency Approval

- Radio interference

The camera's comply with "FCC standard's part 15,Other class B digital device and peripherals " ,and DOC(YH-7B58,YH-7B68).

The camera's comply with 89/336/EEC and 93/68/EEC (YH-8B58,YH-8B68).

- Safety

AC adapter is approved by "UL1310,Class 2 Power Units" and "CSA-C22.2 No.223-M91,Power Supplies with Extra-Low-Voltage Class 2 Outputs " (YH7B58,YH-7B68).

AC adapter is approved by TUV (EN60950) (YH-8B58,YH8B68)

9) Built-in microphone

- Microphone type ; No-directivity electret condenser microphone
- Output voltage(built-in) ; $150\text{mV}_{\text{rms}} \pm 6\text{dB}$ (input;0.1 Pa at 1KHz)
- Output impedance ; $1\text{K } \Omega \pm 30\%$
- S/N ratio (built-in) ; $\geq 36\text{dB}$ (input ; 0.2 Pa at 1KHz,weighting filter A)

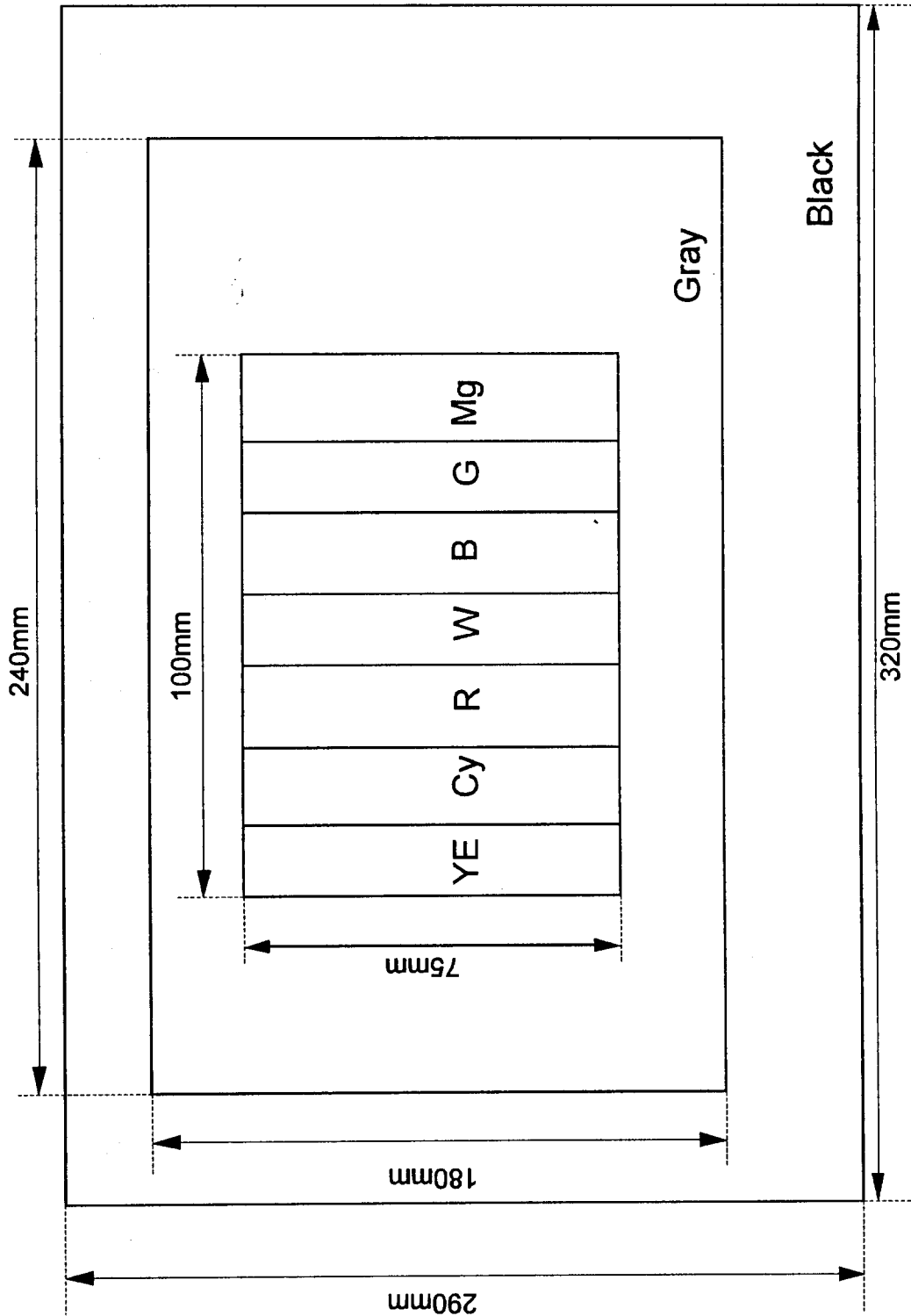
4. Specification

TV system	NTSC	PAL
Image sensor	1/4" Inter-line transfer CCD	
Total pixels	542(H)x492(V)(Total;270K)	542(H)x582(V)(Total;320K)
Effective pixels	512(H)x492(V)(Total;250K)	512(H)x582(V)(Total;300K)
Resolution	Horizontal : 310 TV lines	Horizontal : 310 TV lines
Distance from chart to camera : 70cm	Vertical : 280 TV lines	Vertical : 350 TV lines
Focus	manual adjustable (50mm to infinity)	
S/N ratio	$\geq 46\text{dB}$ Condition: AGC off High pass filter 10KHz Fsc trap Weighting filter on Low pass filter(NTSC;4.2MHz,PAL;5.0KHz) Light shield	
Minimum illumination	$\leq 20\text{ lx}$ Condition: ITE gray scale chart(Gamma=1.0) Y signal amplitude 350mV	
White balance	TTL auto tracing white balance,Range;2,800 to 6,800° K	
Iris control	EE, 1/100 sec.(fixed)	EE, 1/120 sec.(fixed)
Gamma correction	approx.0.6	
Auto gain control	auto only	
Sub-carrier frequency	3.57945MHz \pm 200Hz	4.43361875MHz \pm 200Hz
Sync. system	Internal only	
Output video signal		
Composite type	1.0Vp-p/75 Ω	1.0Vp-p/75 Ω
• Y signal amplitude	714mV \pm 100mV	700mV \pm 100mV
*(Condition 1)		
• Color signal*(Condition 2)		
R amplitude	88.25 IRE \pm 25%	94.8 IRE \pm 25%
R phase	103.4° \pm 15	103.4° \pm 15
B amplitude	62.2 IRE \pm 25%	67.2 IRE \pm 25%
B phase	347.1° \pm 15	347.1° \pm 15
• Sync.amplitude	286mV \pm 80mV	300mV \pm 80mV
• Burst amplitude	286mV \pm 90mV	300mV \pm 90mV
Lens		
focal length	approx.4.3mm(fixed)	
F number	approx.2.4	
viewing angle	Horizontal:approx.46° Vertical :approx.35°	
TV distortion	approx.2%	
DC power supply	DC 4.5V - DC7.0V, \leq 2W	
AC adapter input voltage	AC120V \pm 10% / 60Hz	AC220~240V \pm 10%/50Hz
Power consumption	\leq 7.0 W	
Operating temperature	-10 to +40° C	
Storage temperature	-20 to +60° C	
Case size	74(W) x58(H) x93(D)mm (without connector)	
Weight	approx.190g (excluding AC adapter)	

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

*Condition 2: Exclusive color chart (YH-7888-03-4)
 Line select ; 141 lines (NTSC),166lines(PAL)
 Y (white) amplitude ; 714mV (NTSC),700mV(PAL)
 Color temp ; 5,100° K

Proprietary color chart; Transmissive type
Transmissivity of Gray part; 27%



5. Reliability Tests

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

1) Low temp. storage test

To prove that the camera shows no abnormal operation and function after it is stored at ambient temp. of -20°C for 24H and then left at room temp. for 2H min.

2) Low temp. operation test

To prove that the camera normally operates for continuously 5H at the ambient temp. of -10°C .

3) High temp. storage test

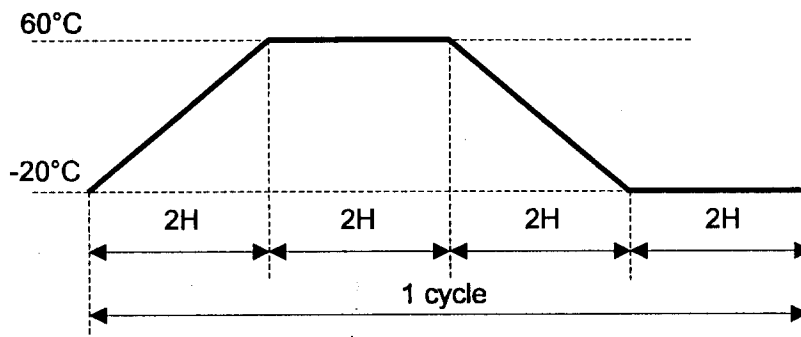
To prove that the camera shows no abnormal operation and function after it is stored at ambient temp. of 60°C for 24H and then left at room temp. for 2H min.

4) High temp. operation test

To prove that the camera normally operates for continuously 5H at the ambient temp. of 40°C .

5) Temp. cycle test

To prove that the camera shows no abnormal operation and function during 5 cycles as stipulated in the following pattern and, then 2H storage at room temp.



6) High humidity test

To prove that the camera shows no abnormal operation and function after the camera has been operated for 24H at ambient temp. of 30°C and relative humidity of 90%RH, and take out from test chamber with water drop removed.

7) Vibration test for unpackaged unit

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

8) Shock test

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

Peak acceleration : 50G , Duration of pulse : 10msec

6. Pixel Defect

Number of defective pixels

not more than 10

Condition:

Temperature 25°C

Shield the light

AGC off

Standard monitor (NTSC/PAL)

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

7. Operating manual; Not included

8. Precautions & Notes

1) Do not shoot at direct sunlight.

The display picture disappears in case of shooting at direct sunlight.

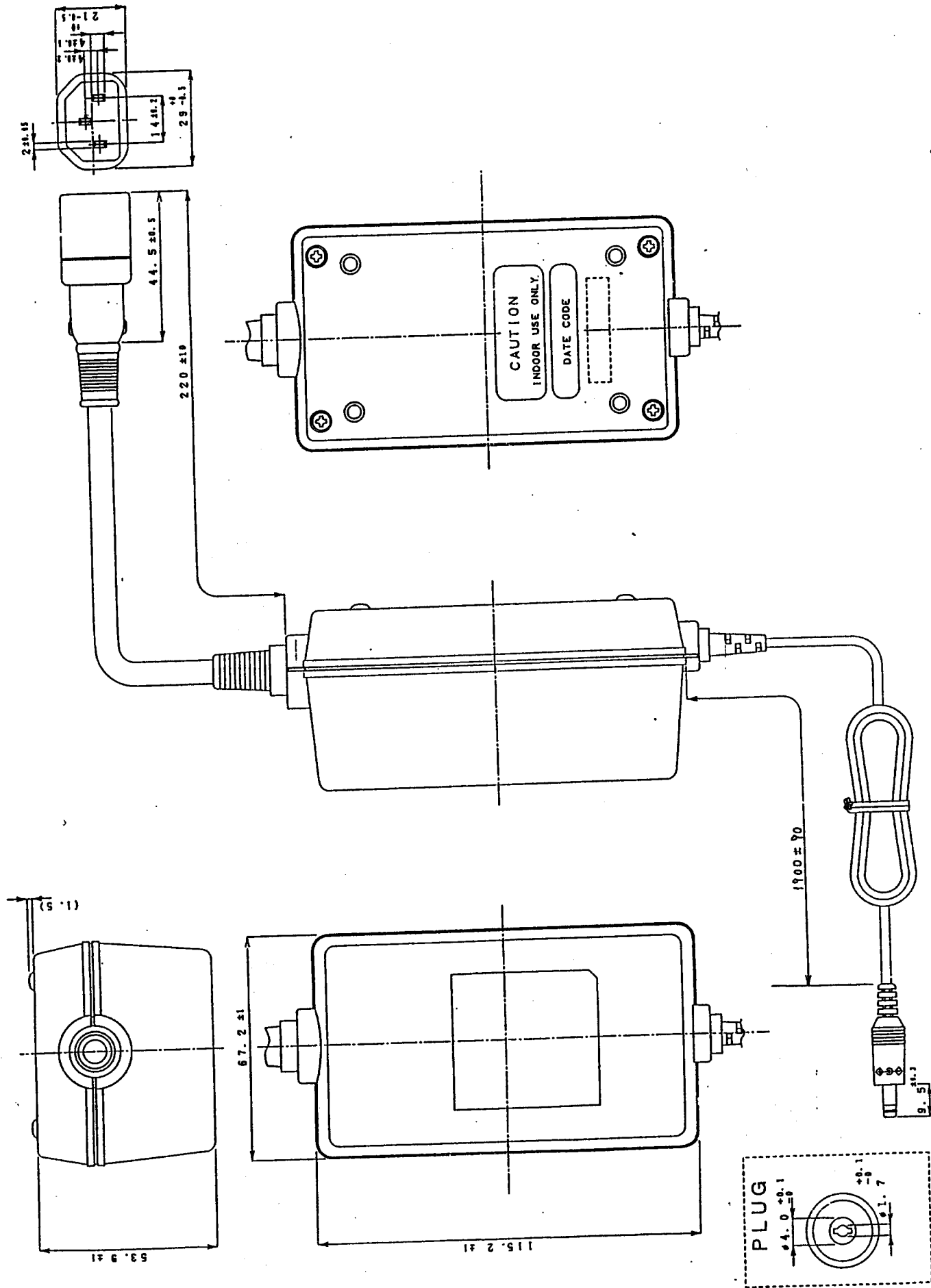
2) Care shall be used not to damage the camera during installation or removed of the extension cable.

3) These products are made specifically for indoor use.
(Office and ordinary home-use environment.)

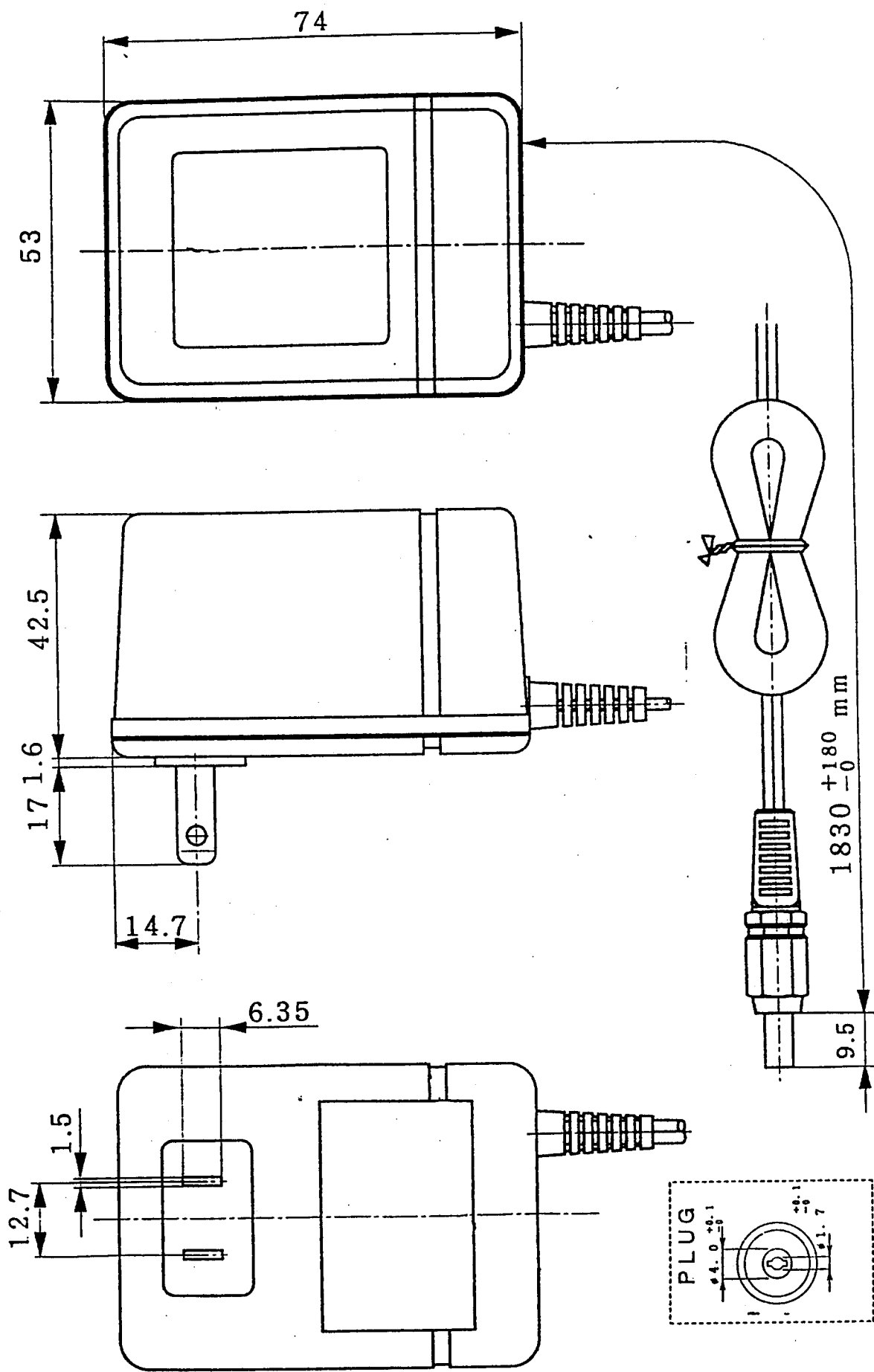
4) Since EMI and CE vary depending on various systems, these agency approvals need to be taken at customer side.

5) Any agency approval for safety is not applicable to this color CCD camera.

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.



AC adapter (YH-8B58, YH-8B68)



AC adapter (YH-7B58, YH-7B68)

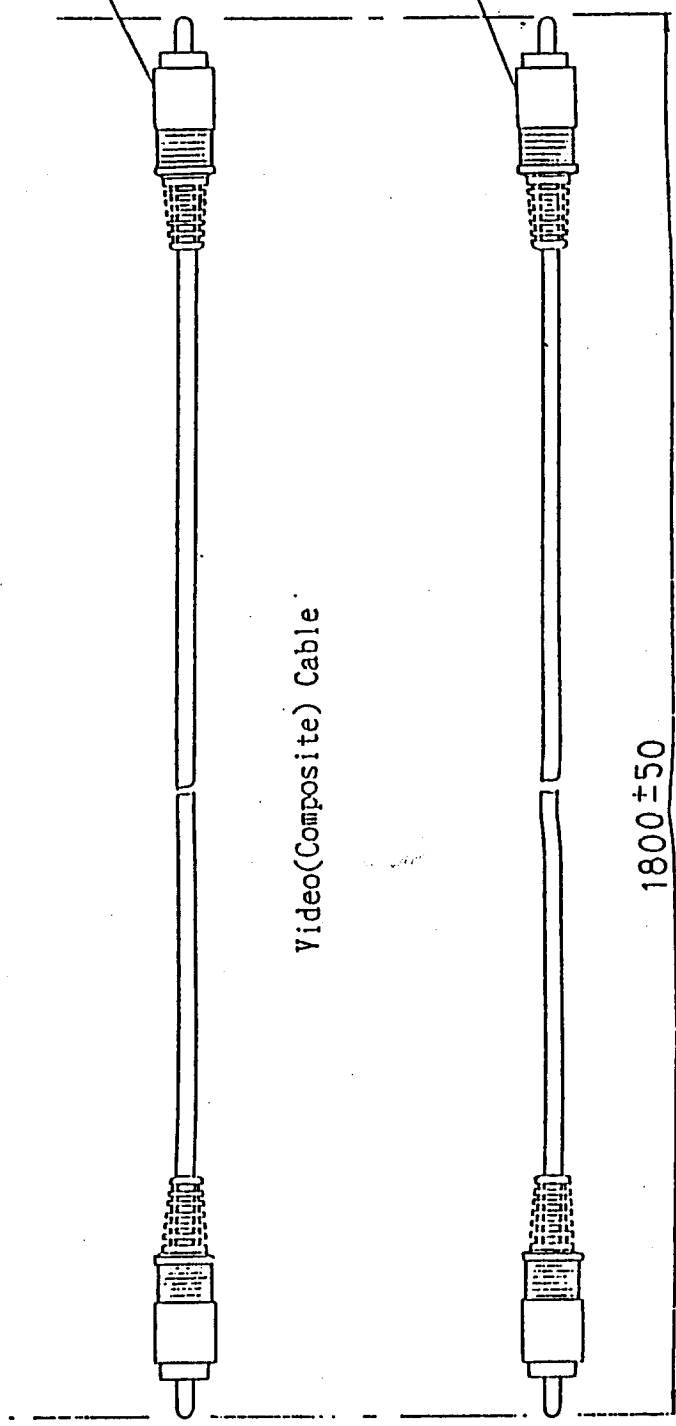
yellow

white

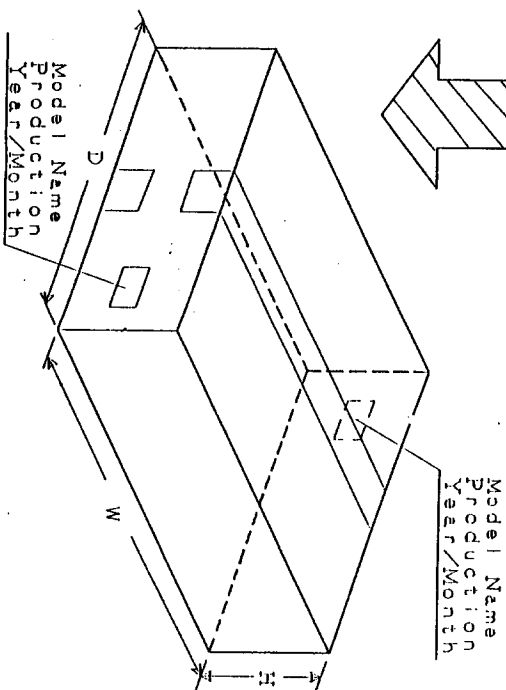
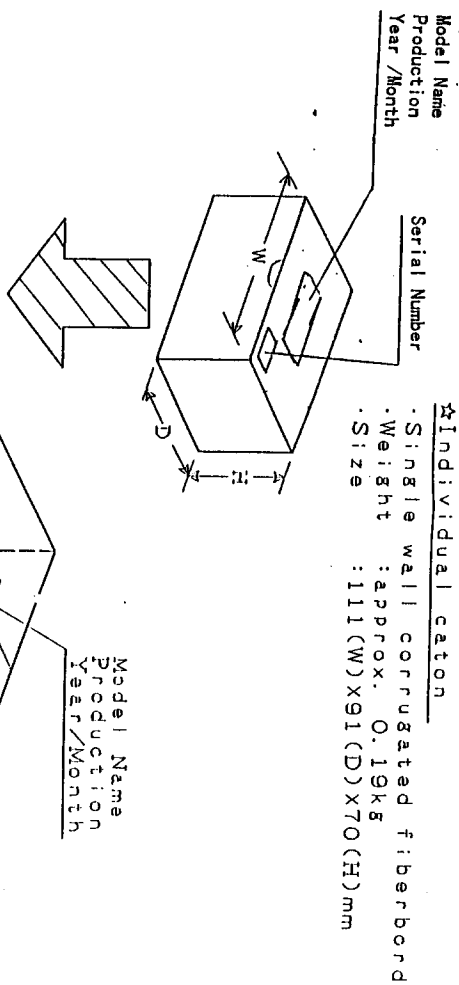
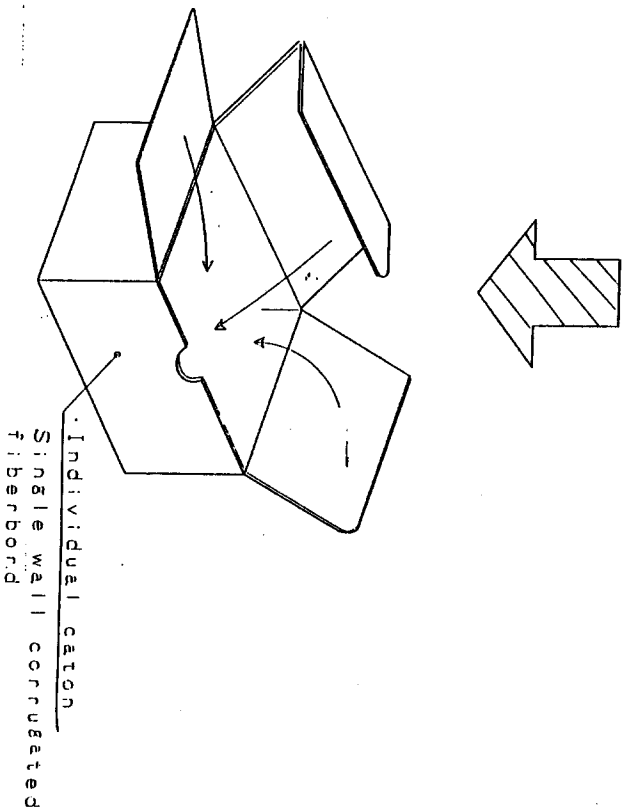
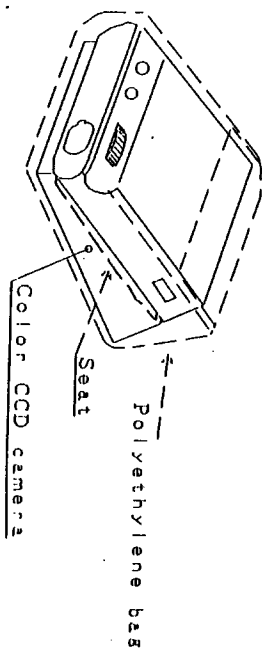
Video(Composite) Cable

1800±50

Audio Cable



PACKAGE SPECIFICATION(Colour CCD camera)

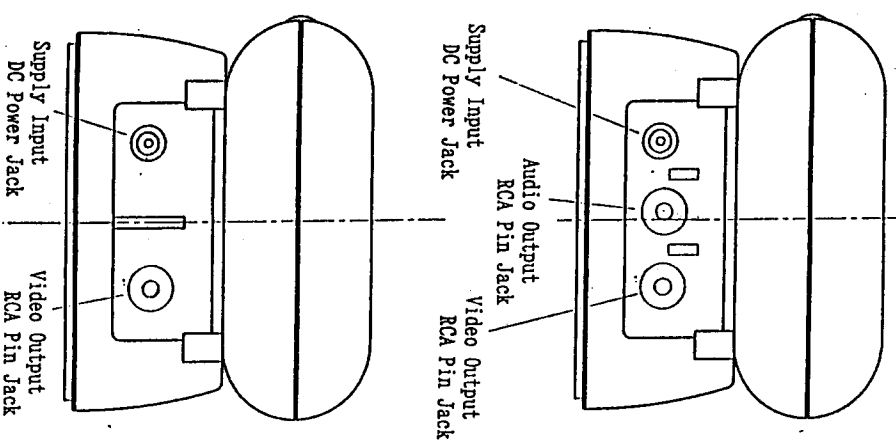
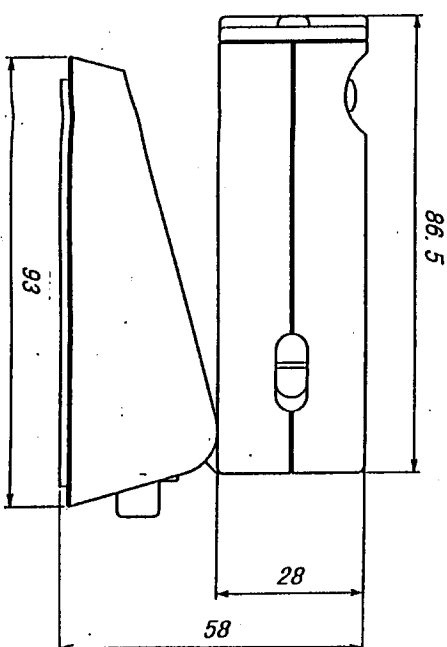
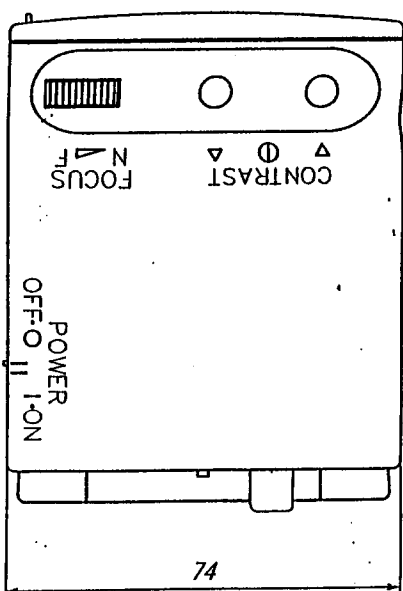
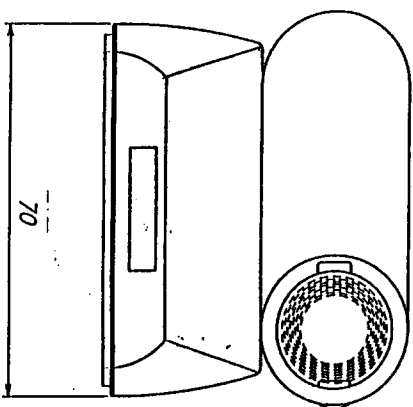


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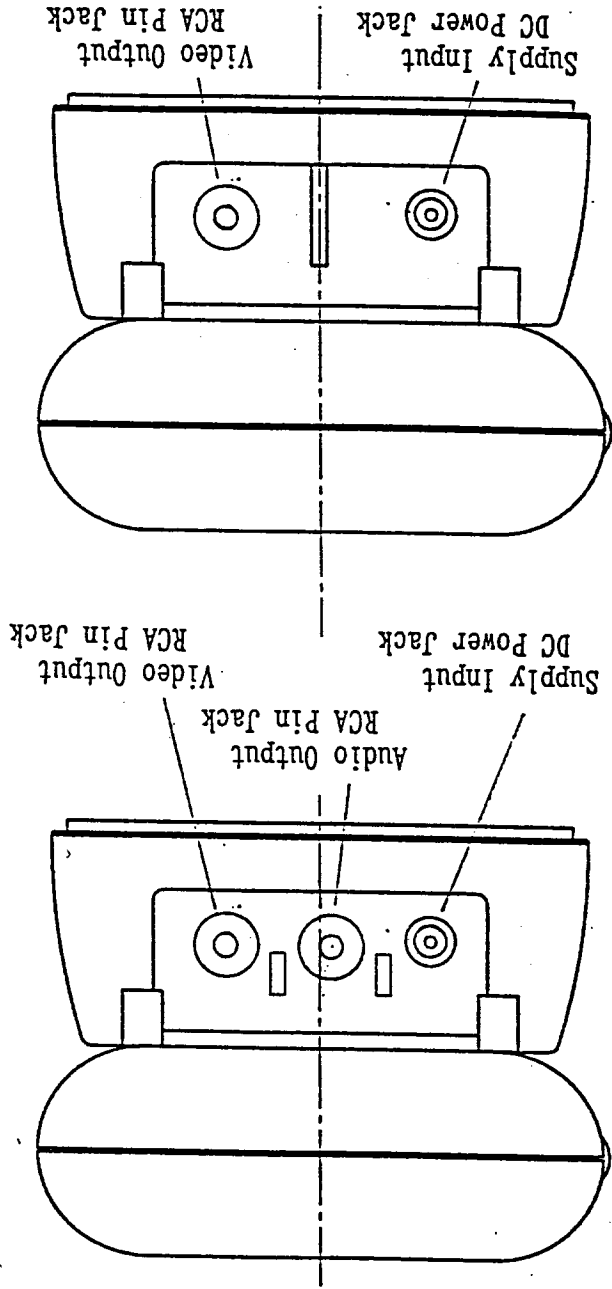
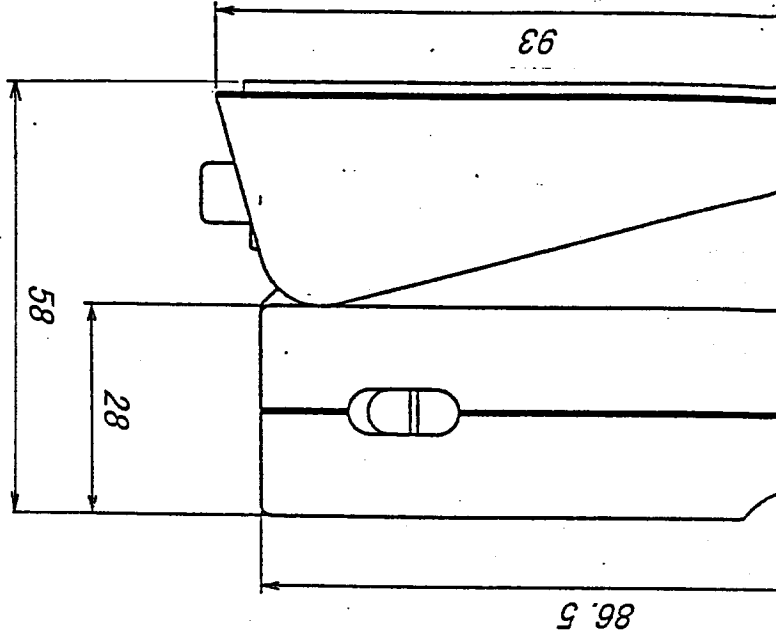
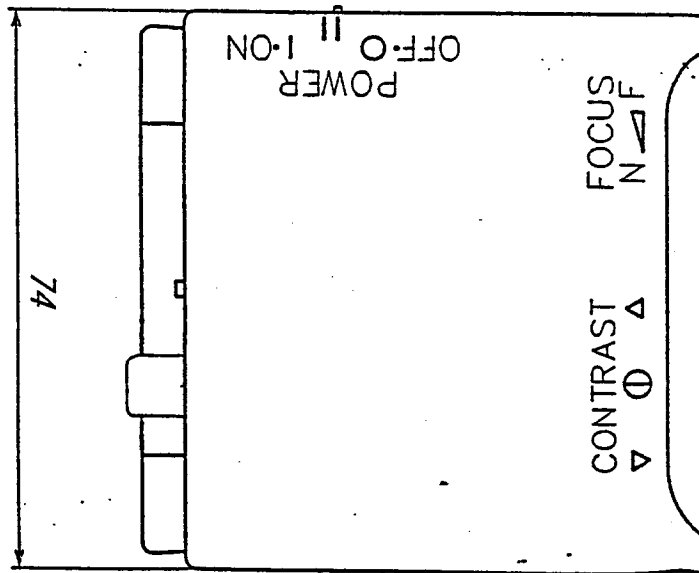
- A-1 type (Regular Slotted Container)
- I-Seal (Double wall corrugated fiberboard)
- Weight : approx. 5.5 kg
- Size : 481 (W) x 247 (D) x 181 (H) mm
- Quantity : 20 pieces/CTN

PARTS CODE		PROCESS	PIECES	MATERIAL	FINISH	PACKAGE SPEC.	
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DATE	NO.	REVISE		ACTION NO.	DRAWING NO.		
DATE 8. APR 1956					YH-7307/1157		
BUSINESS				YH-7307/1157			
Promotion Dept.							

A technical drawing showing a mechanical assembly. It includes a central vertical component with a slot, a horizontal plate on the left, and a diagonal plate on the right. A dashed line indicates a 15° angle between the vertical component and the horizontal plate. Another dashed line indicates a 45° angle between the vertical component and the diagonal plate. The drawing is a line drawing with no shading.



シャープ株式会社 電化システム事業本部 SHARP CORPORATION 国 J15 A3 297X42C



NO.		部品コード		加工経路		数量		原図/尺規		SCALE		単位		JIS-サイズ		3mmE	
PARTS CODE		PROCESS		PIECES		原図/尺規		SCALE		単位		JIS-サイズ		3mmE		3mmE	
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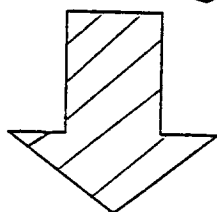
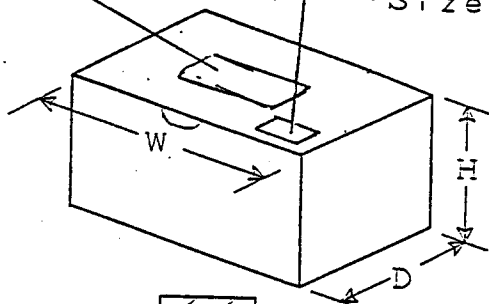
N(Color CCD camera)

Model Name
Production
Year /Month

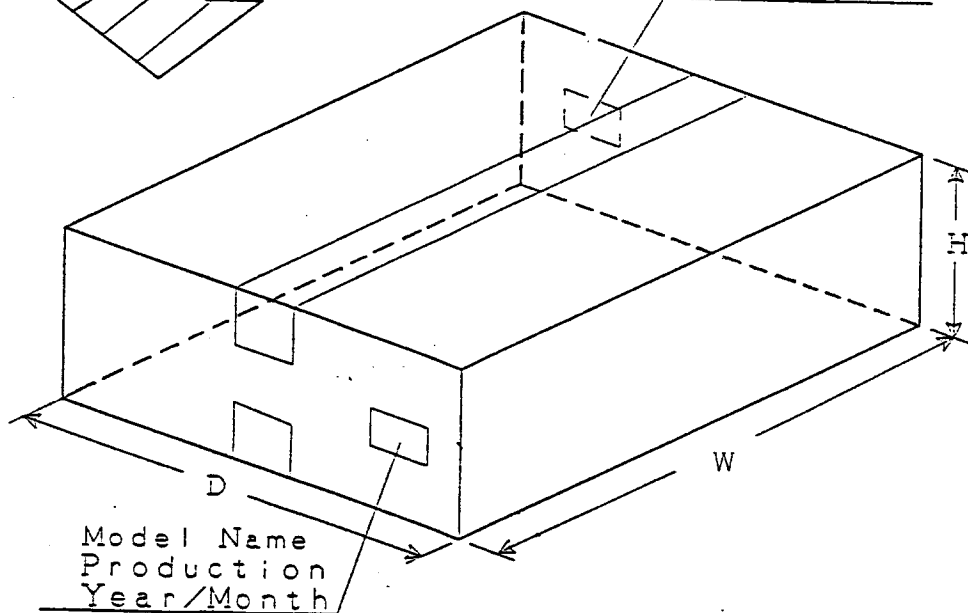
Serial Number

☆Individual cation

- Single wall corrugated fiberbord
- Weight : approx. 0.19kg
- Size : 111(W)X91(D)X70(H)mm



Model Name
Production
Year /Month



☆Master cation

- A-1 type (Regular Slotted Container)
- I-Seal (Double wall corrugated fiberbord)
- Weight : approx. 5.5 kg
- Size : 481(W)X247(D)X181(H)mm
- Quantity: 20 pieces/CTN

PARTS CODE		PROCESS	PIECES	MATERIAL		FINISH		PACKAGE SPEC.	
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DATE		NO.	REVISE	APPROVE		CHECK	DESIGN	DRAW	CHARGE
DATE 9. APR 1996		HE Business Promotion Dept.		ASSIGN NO.		DRAWING NO.		YH-7B57/7E57	

PACKAGE SPECIFICATION

