

PREPARED BY: _____ DATE: _____	<div data-bbox="635 257 963 315" data-label="Text"> <h1>SHARP</h1> </div> <div data-bbox="638 349 960 412" data-label="Text"> <p>APPLIANCE SYSTEMS GROUP SHARP CORPORATION</p> </div> <div data-bbox="608 479 992 526" data-label="Section-Header"> <h2>SPECIFICATION</h2> </div>	No. <b>YH-7B58G-02</b>
APPROVED BY: _____ DATE: _____		FILE No. _____
		ISSUE: <b>Jan. 6, 1998</b>
		PAGE <b>15 Pages</b>
	APPLICABLE DIVISION  <b>YAO PLANT</b> <b>APPLIANCE SYSTEMS GROUP</b>	

Model No.

## SPECIFICATION FOR COLOR CCD CAMERA

**YH-7B58G ; NTSC**  
**YH-7B68G ; NTSC (with microphone)**  
**YH-8B58G ; PAL**  
**YH-8B68G ; PAL (with microphone)**

☐ CUSTOMER'S APPROVAL

DATE \_\_\_\_\_

BY \_\_\_\_\_

PRESENTED

BY J. Aoki

J. Aoki

Vice President

Department 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
  - Medical equipment related to life support, etc.
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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-7B58G	NTSC	Composite	Electronic Exposure (EE) 1/100 sec.(fixed)	—
YH-7B68G				○
YH-8B58G	PAL		Electronic Exposure (EE) 1/120 sec.(fixed)	—
YH-8B68G				○

## 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-7B58G	RCA pin jack (video)	RCA pin jack
YH-7B68G	RCA pin jack × 2 (video,audio)	RCA pin jack × 2 (video,audio)
YH-8B58G	RCA pin jack (video)	RCA pin jack
YH-8B68G	RCA pin jack × 2 (video,audio)	RCA pin jack × 2 (video,audio)

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

- 5) Iris control; EE type
- 6) White balance; Auto (TTL auto tracing white balance)
- 7) Contrast control; Adjustable contrast (up/down), Backlight compensation
  - Freeze or Auto Mode is selective.
  - Factory default mode is Freeze Mode.
  - Push "UP" button for level up.
  - Push "DOWN" button for level down.

8) Sequence of AGC ;

- When power is turned on again, mode returns the one selected at the last operation.

(Freeze mode)

- Pressing Contrast up or down buttons changes the gain of AGC.
- When power is turned off, Camera remembers last value of AGC in Freeze mode.
- Pressing both Contrast up and down buttons at the same time turns to Auto mode.

(Auto mode)

- Pressing Contrast up or down buttons changes contrast.
- When power is turned off, level of AGC in Auto mode returns to factory preset level.
- Pressing again both buttons at the same time turns to Freeze mode.

9) Agency Approval

- Radio interference

The camera's comply with "FCC standard's part 15, Other class B digital device and peripherals ", and DOC(YH-7B58G, YH-7B68G).

The camera's comply with 89/336/EEC and 93/68/EEC (YH-8B58G).

- 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 " (YH-7B58G, YH-7B68G).

AC adapter is approved by TUV (EN60950) (YH-8B58G, YH-8B68G)

10) Built-in microphone

- Microphone type ; Non-directional electret condenser microphone
- Output voltage(built-in) ;  $150\text{mVrms} \pm 6\text{dB}$  (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)

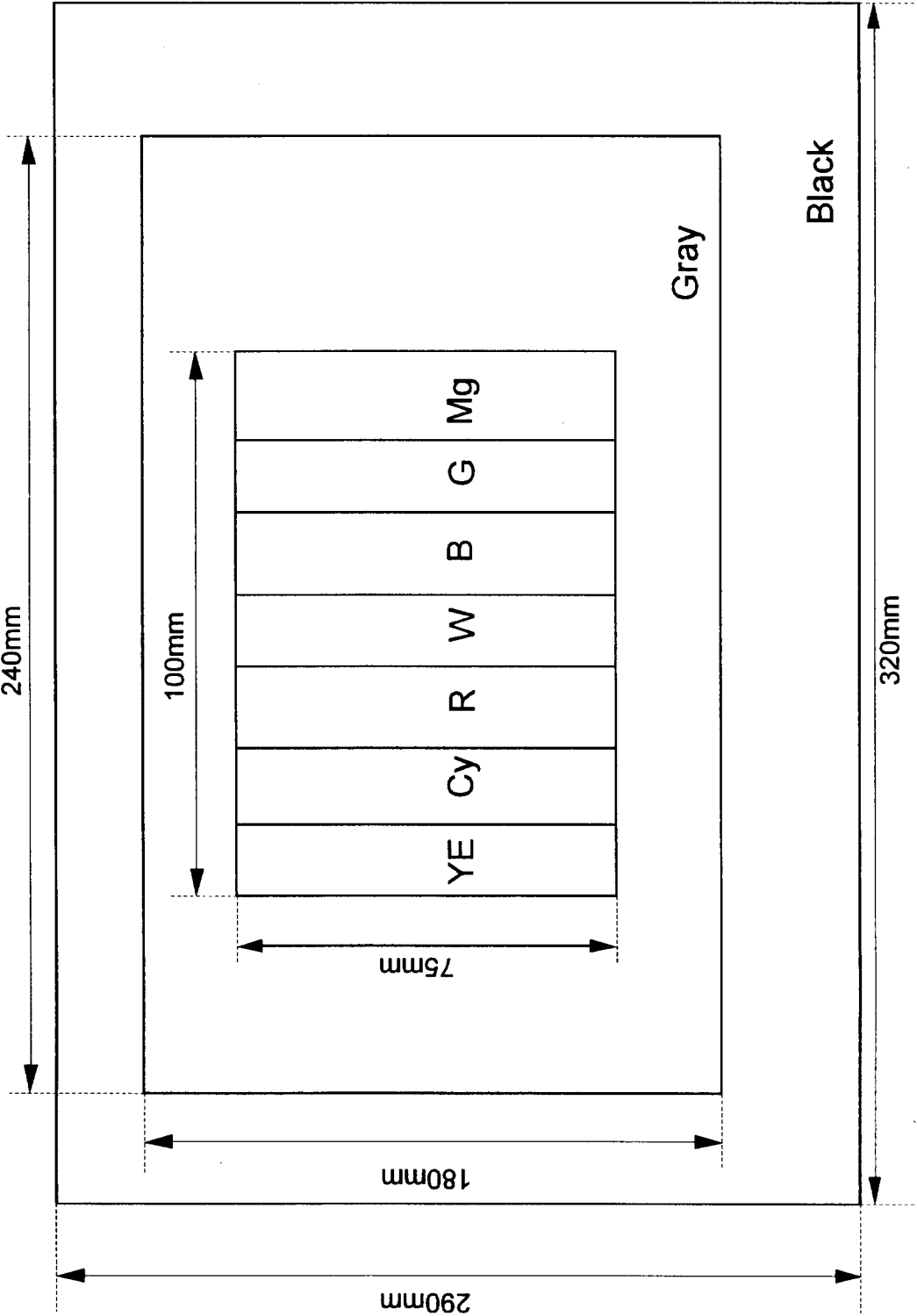
## 4. Specifications

4. Specifications		
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	≥46dB Condition: AGC off High pass filter 10KHz Fsc trap on Weighting filter on Low pass filter(NTSC;4.2MHz,PAL;5.0MHz) Light shield	
Minimum illumination	≤20 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	Freeze/Auto (refer to 2.8 in page 2)	
Sub-carrier frequency	3.579545MHz±200Hz	4.43361875MHz±200Hz
Sync. system	Internal only	
Output video signal		
Composite type	1.0Vp-p/75 Ω	1.0Vp-p/75 Ω
• Y signal amplitude	714mV±100mV	700mV±100mV
•*(Condition 1)		
• Color signal*(Condition 2)		
R amplitude	88.25 IRE±25%	94.8 IRE±25%
R phase	103.4°±15°	103.4°±15°
B amplitude	62.2 IRE±25%	67.2 IRE±25%
B phase	347.1°±15°	347.1°±15°
• Sync.amplitude	286mV±80mV	300mV±80mV
• Burst amplitude	286mV±90mV	300mV±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, ≤2W	
AC adapter input voltage	AC120V±10% / 60Hz	AC220~240V±10%/50Hz
Power consumption	≤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-7B58G-02-4)  
 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  $-20^{\circ}\text{C}$  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  $-10^{\circ}\text{C}$ .

### 3) High temp. storage test

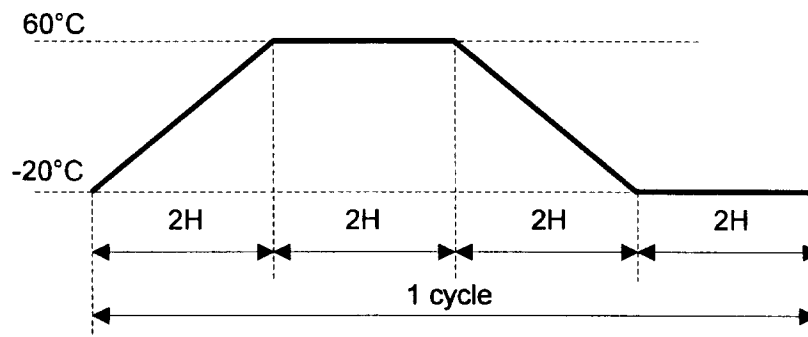
To prove that the camera shows no abnormal operation and function after it is stored at ambient temp. of  $60^{\circ}\text{C}$  for 24H and then left at room temp. for 2H min.

### 4) High temp. operation test

To prove that the camera normally operates for continuously 5H at the ambient temp. of  $40^{\circ}\text{C}$ .

### 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  $30^{\circ}\text{C}$  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 10~55~10Hz/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)

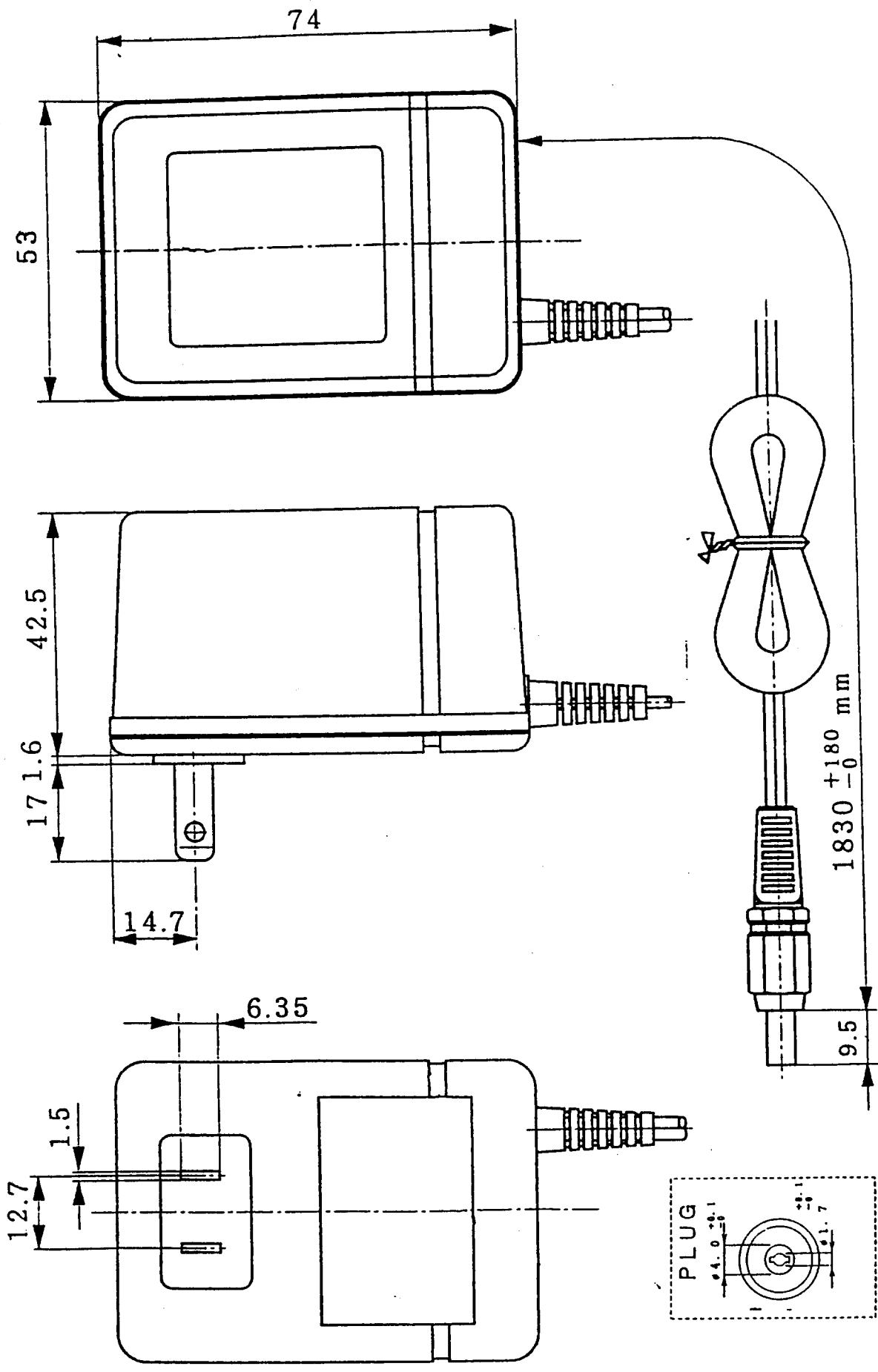
\*10 pixels in both horizontal edges and 9 pixels in both vertical edges shall be disregarded as a void area.

**7. Operating manual; Included**

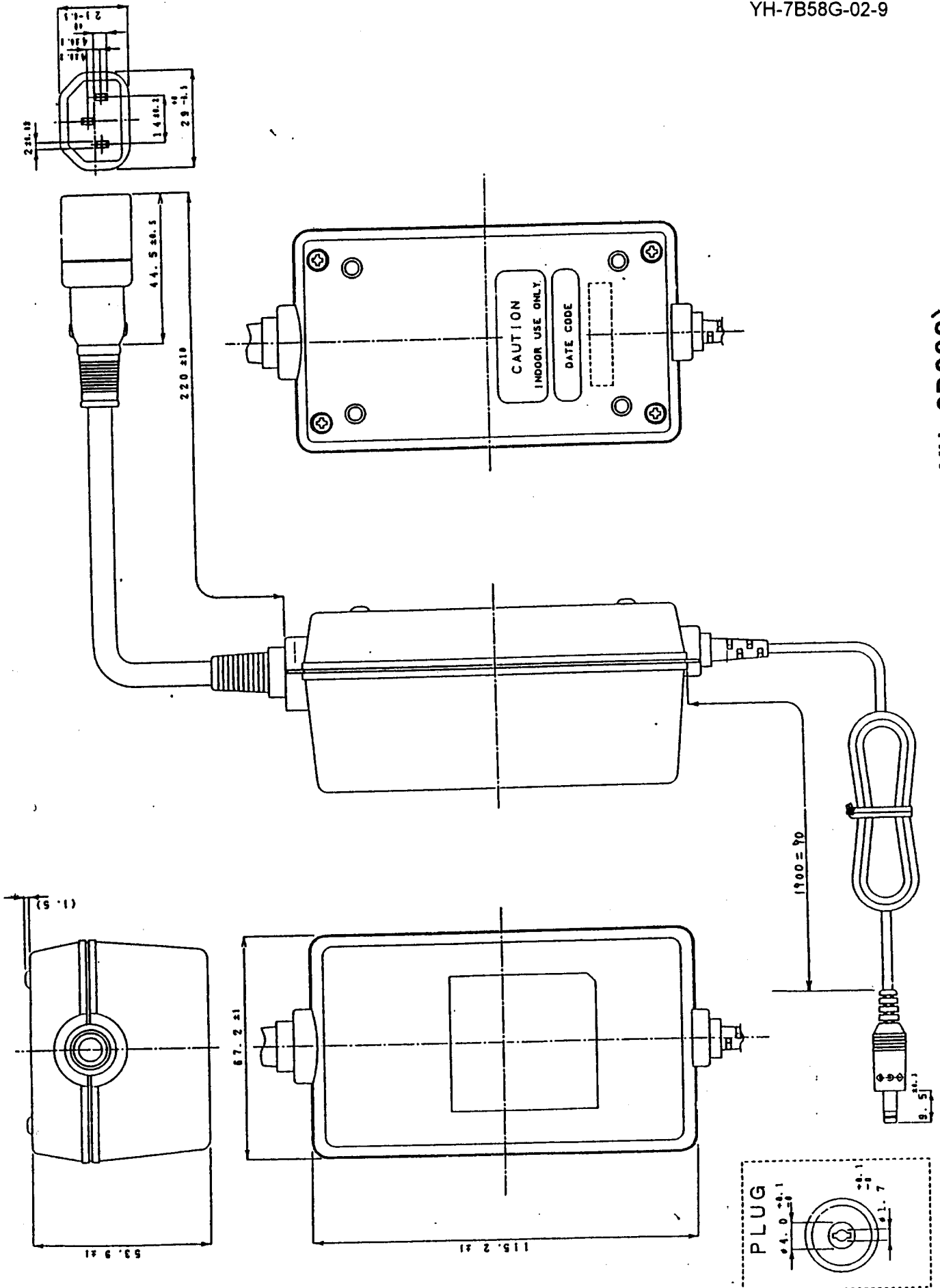
**8. Precautions & Notes**

- 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.

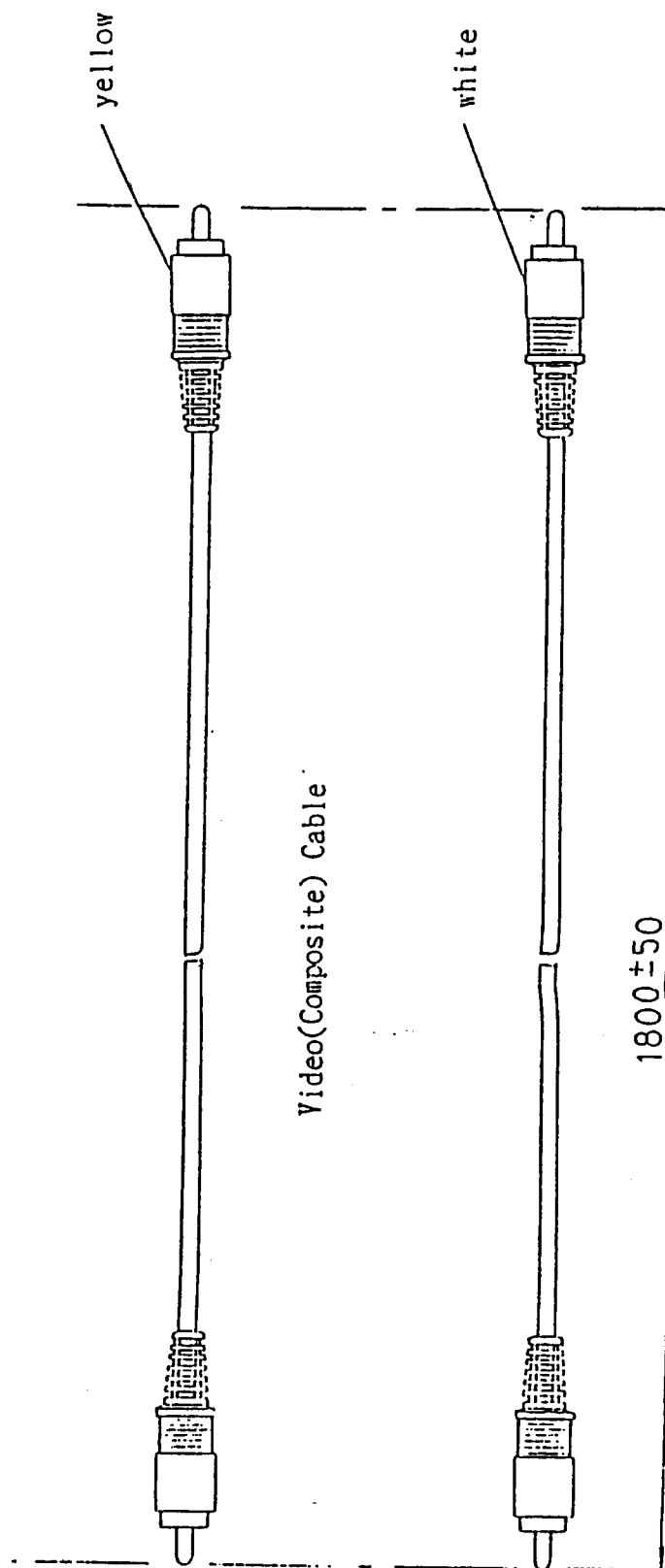
Please note that Sharp cannot guarantee the performance and quality under any use other than the conditions stated above, such as circumstances where vibrations are constant as in a moving vehicle, where shocks may occur as in a moving vehicle or where shocks exceed ordinary house-hold or office use.






AC adapter (YH-7B58G, YH-7B68G)











AC adapter (YH-8B58G, YH-8B68G)




<p><b>HANDLE WITH CARE</b></p>	<p><b>SHARP.</b> COLOR CCD CAMERA</p>	<p></p> <p><b>SHARP.</b> COLOR CCD CAMERA</p> <p><b>20PIECES</b></p>
		<p></p> <p><b>SHARP.</b> COLOR CCD CAMERA</p> <p></p> <p><b>20PIECES</b></p> <p>SHARP CORPORATION MADE IN JAPAN</p>

Master carton(YH-7B58G, YH-7B68G)

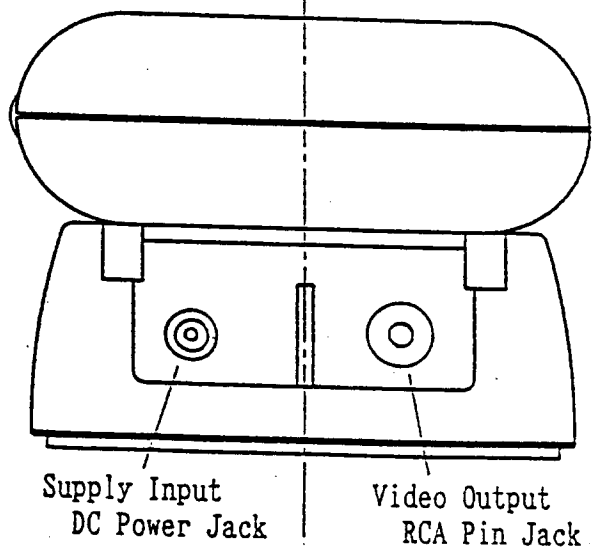
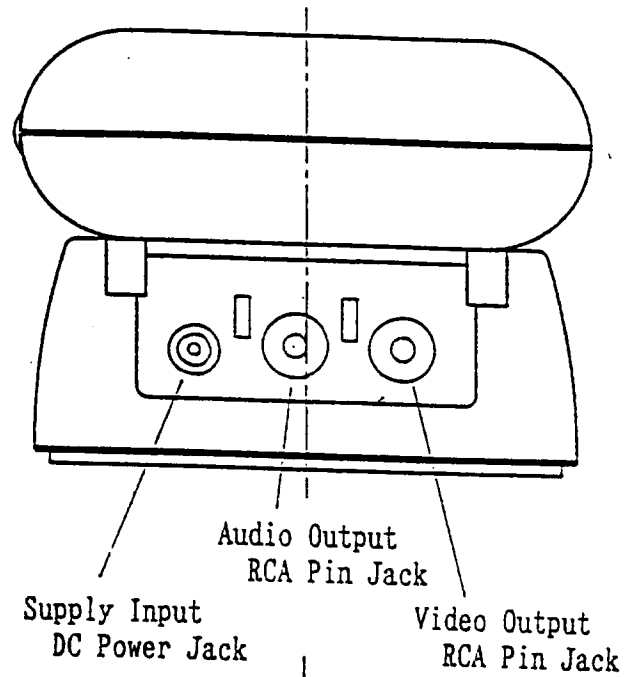
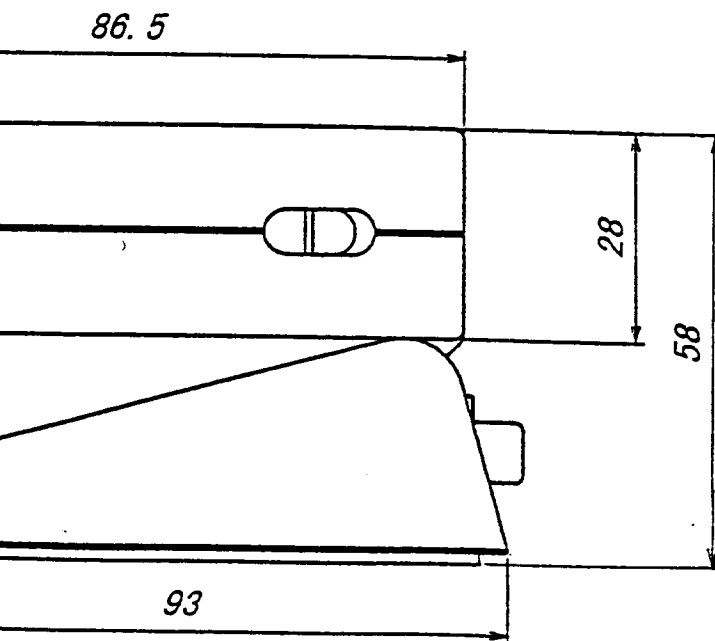
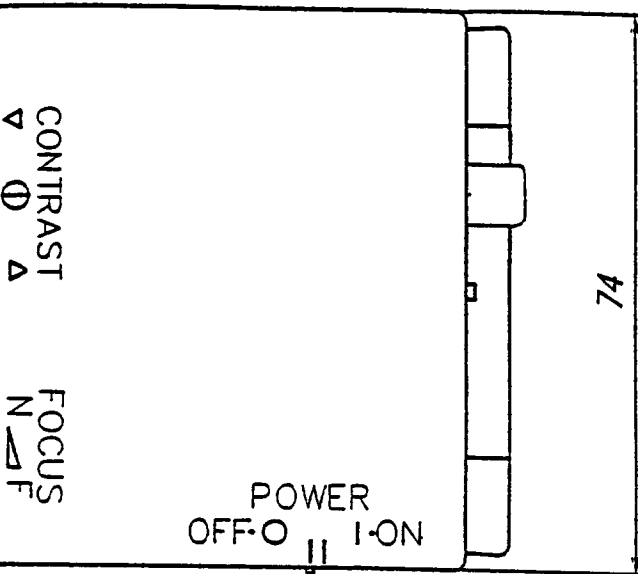
HANDLE WITH CARE	
<div>SHARP® COLOR CCD CAMERA</div>	<div><div><div><div></div><div></div></div><div></div><div></div></div><div>SHARP® COLOR CCD CAMERA</div><div></div><div>10 PIECES</div></div>
	<div><div><div><div></div><div></div></div><div></div><div></div></div><div>SHARP® COLOR CCD CAMERA</div><div></div><div>10 PIECES</div><div>SHARP CORPORATION MADE IN JAPAN</div></div>

Master carton(YH-8B58G, YH-8B68G)

<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>ATTENTION</p> <p>Never fail to read the enclosed operation manual before using.</p> </div> <div style="text-align: center;">  <p><b>SHARP®</b></p> <p>COLOR CCD CAMERA</p> </div> <div style="border: 1px solid black; width: 40px; height: 30px;"></div> </div>	
<p><b>SHARP®</b></p>	<p><b>SHARP®</b></p>
<p>COLOR CCD CAMERA</p>	
<p>CE</p>	<p>SHARP CORPORATION MADE IN JAPAN</p>

Individual carton(YH-8B58G, YH-8B68G)

共用部品	発注品番		適用取付番号	番数	設計通報、連絡書 号による	新設 変更 書換
	部品名称					
	部品コード				実施	一次試作、量産試作、量産 から
	共用部品工程	共用型（後加工・コア入れ換え）・押出型 外形改色・穴明け・折曲・絞り・その他				



						Color CCD Camera	
NO.	部品コード PARTS CODE	加工経路 PROCESS	数量 PIECES	材質 MATERIAL	仕上 FINISH	部品名称 NAME	
△				原図尺 SCALE	単位 UNIT	コピーサイズ A1, A2, A4 (mm)	3M 3M
△				承認 APPROVE	検回 CHECK	設計 DESIGN	製図 DRAW
△				H. Minami Y. Kumagai		担当 CHARGE	
△				取得番号 ASSIGN NO.	図番 DRAWING NO.		
年月日 DATE 1996.3.1		訂正記事 REVISE		APPLIANCE SYSTEM P.D.LAB		発行	



# SHARP

19

発行已付

板発行図面

見補用図面

全用新機用図面

製造打合図面

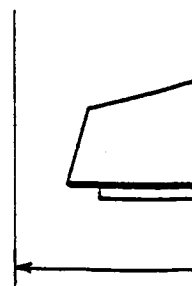
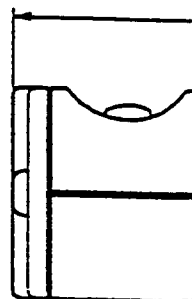
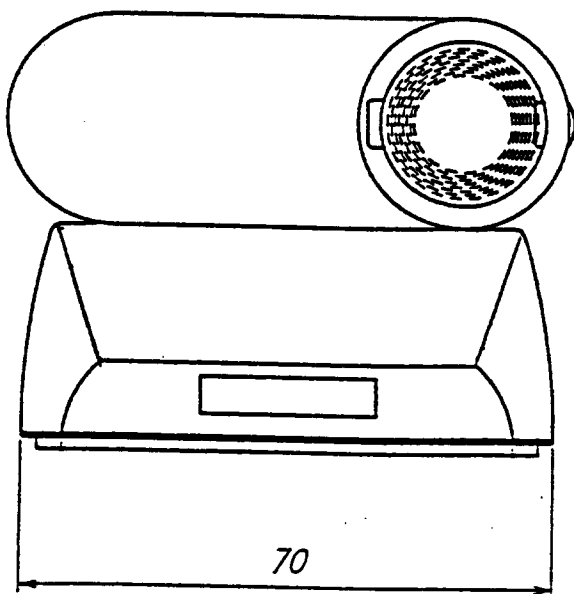
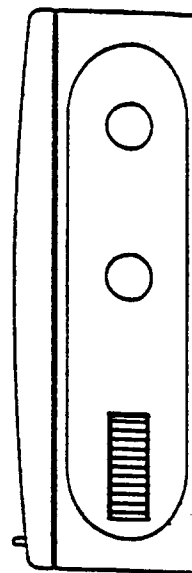
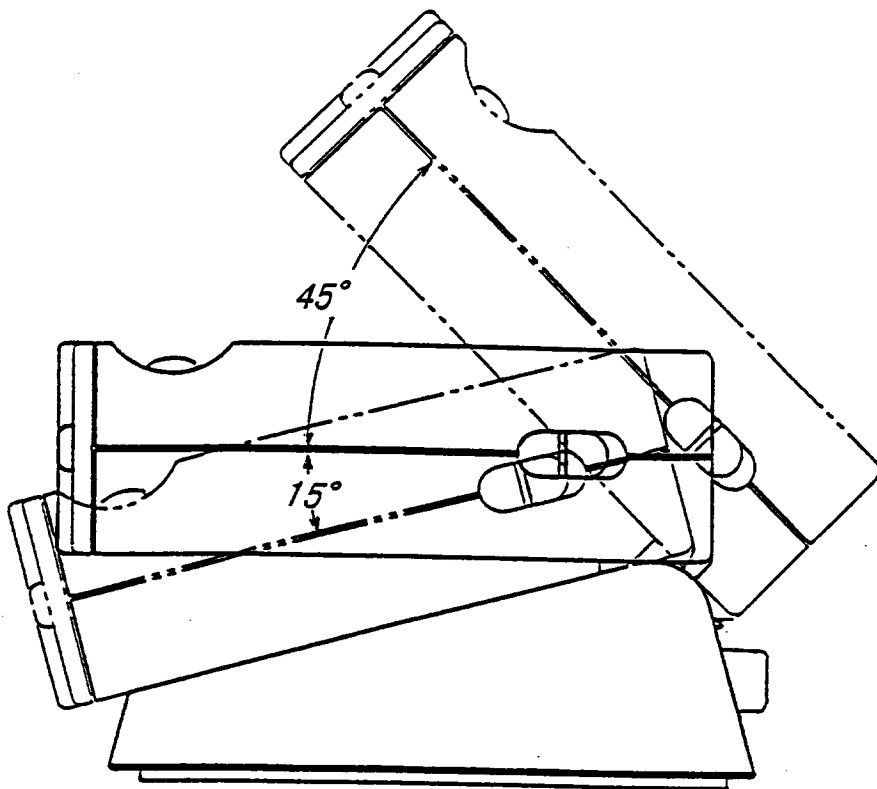
設計通帳図面

設計通帳図面

新設図面

参考図面

机増図面



製図一般換図

組合寸法換図

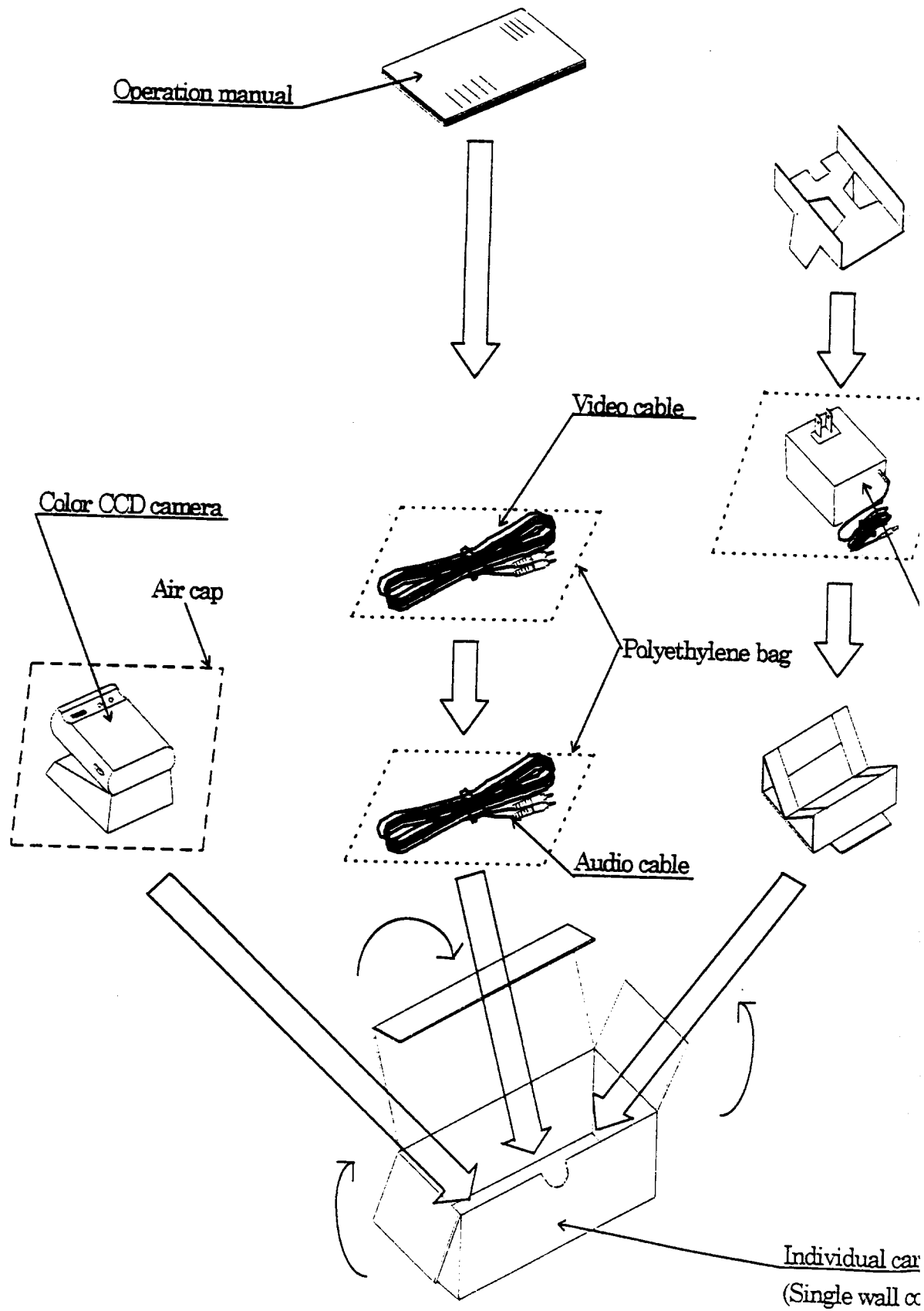
設計一般換図

計

配布完

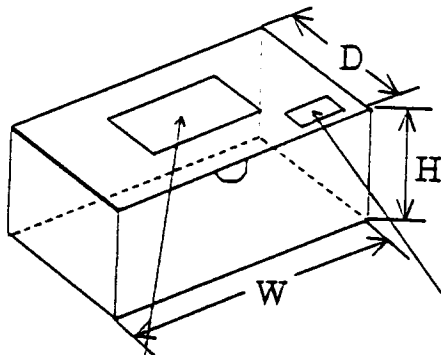
枚数

# PACKAGE SPECIFICA



## TION (Color CCD Camera)

YH-7B58G, YH-7B68G



## ☆Individual carton

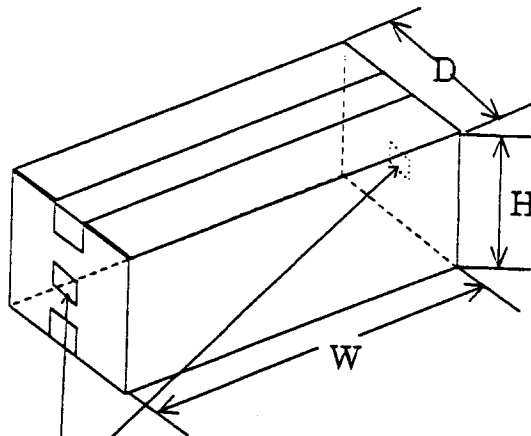
- Weight : approx. 650 g
- Size : 185(W) × 120(D) × 85(H)mm

Serial NO

Model Name  
Production  
Year / Month

Polyethylene bag

AC adaptor



Model Name  
Production  
Year / Month  
Serial NO.

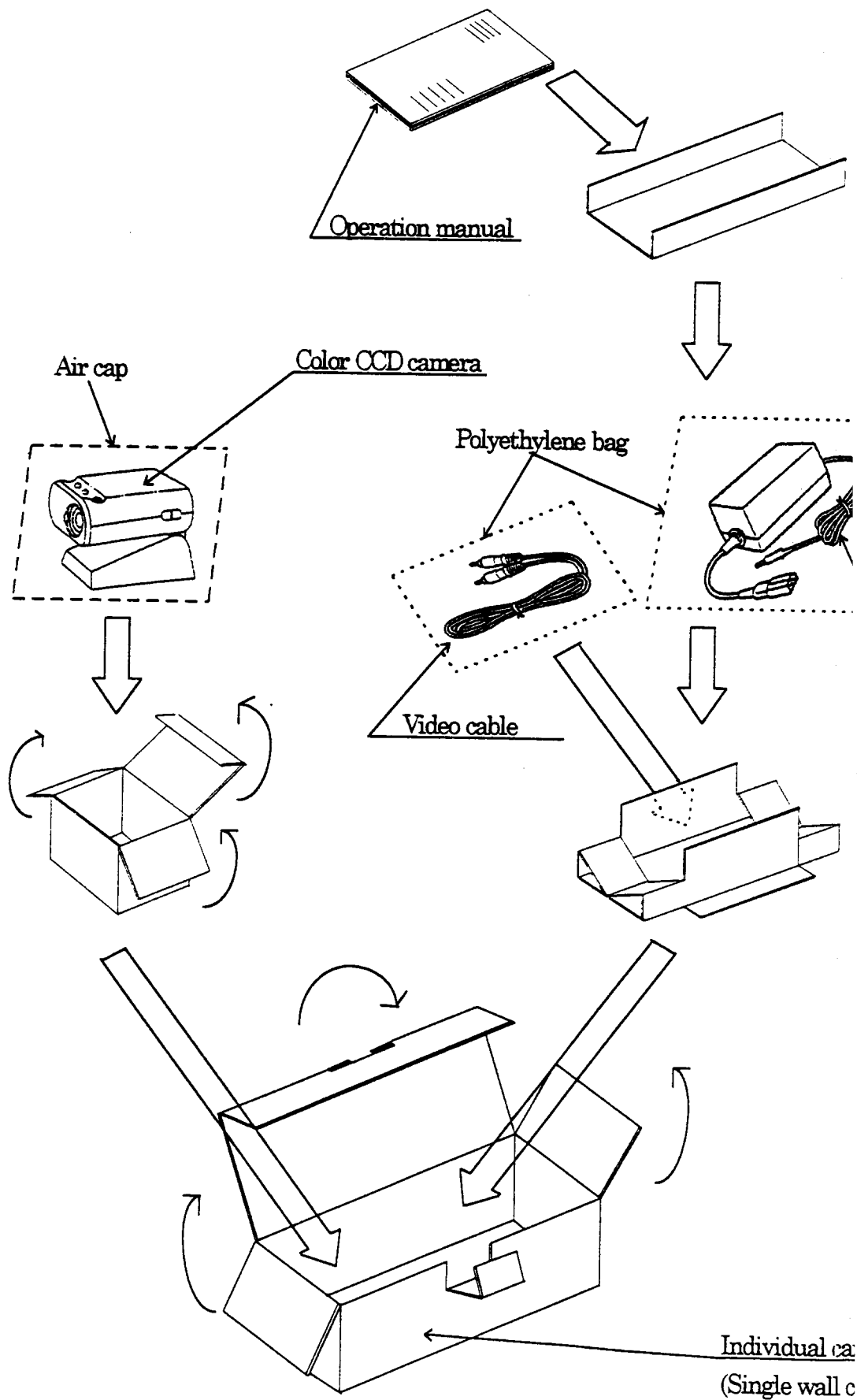
## ☆Master carton

- A-1 type (Regular Slotted Container) (I-Seal)  
(Double wall corrugated fiberboard)
- Weight : approx. 8 Kg
- Size : 640(W) × 210(D) × 190(H)mm
- Quantity : 10 pieces/CTN

ton

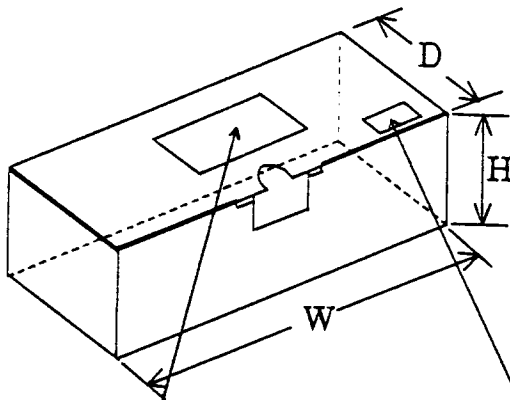
corrugated fiberboard)

# PACKAGE SPECIFICATIONS



## TION (Color CCD Camera)

YH-8B58G, YH-8B68G



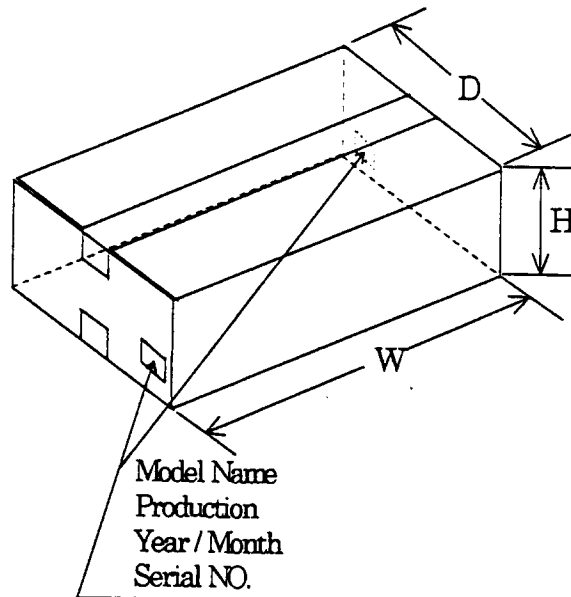
## ☆Individual carton

- Flap insertion sealing  
(Single wall corrugated fiberboard)
- Weight : approx. 1,000 g
- Size : 295(W) × 120(D) × 90(H)mm

Serial NO

Model Name  
Production  
Year / Month

AC adaptor



Model Name  
Production  
Year / Month  
Serial NO.

## ☆Master carton

- A-1 type (Regular Slotted Container) (I-Seal)  
(Double wall corrugated fiberboard)
- Weight : approx. 11 kg
- Size : 640(W) × 320(D) × 220(H)mm
- Quantity : 10 pieces/CTN

ton

corrugated fiberboard)