

PREPARED BY: DATE:	<div data-bbox="632 264 960 320" data-label="Text"> <h1>SHARP</h1> </div> <div data-bbox="635 356 957 416" data-label="Text"> <p>APPLIANCE SYSTEMS GROUP SHARP CORPORATION</p> </div> <div data-bbox="604 486 989 533" data-label="Section-Header"> <h2>SPECIFICATION</h2> </div>	No. YH-7787G-02
		FILE No.
APPROVED BY: DATE:		ISSUE: Dec. 25, 1997
		PAGE 12 Pages
		APPLICABLE DIVISION
		YAO PLANT APPLIANCE SYSTEMS GROUP

Model No.

SPECIFICATION FOR COLOR CCD CAMERA

YH-7B57G ; NTSC
YH-7B67G ; NTSC (with microphone)
YH-8B57G ; PAL
YH-8B67G ; 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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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-7B57G	NTSC	Composite	Electronic Exposure (EE)	-----
YH-7B67G			1/100 sec.(fixed)	○
YH-8B57G	PAL		Electronic Exposure (EE)	-----
YH-8B67G			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 (Audio,Video)

Model No.	Connector
YH-7B57G	RCA pin jack (video)
YH-7B67G	RCA pin jack x 2 (video,audio)
YH-8B57G	RCA pin jack (video)
YH-8B67G	RCA pin jack x 2 (video,audio)

DC power supply; power jack (EIAJ type A-2)
refer to see attached drawing (page YH-7787G-02-9)

- 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) Built-in microphone

- Microphone type; Non-directional 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)

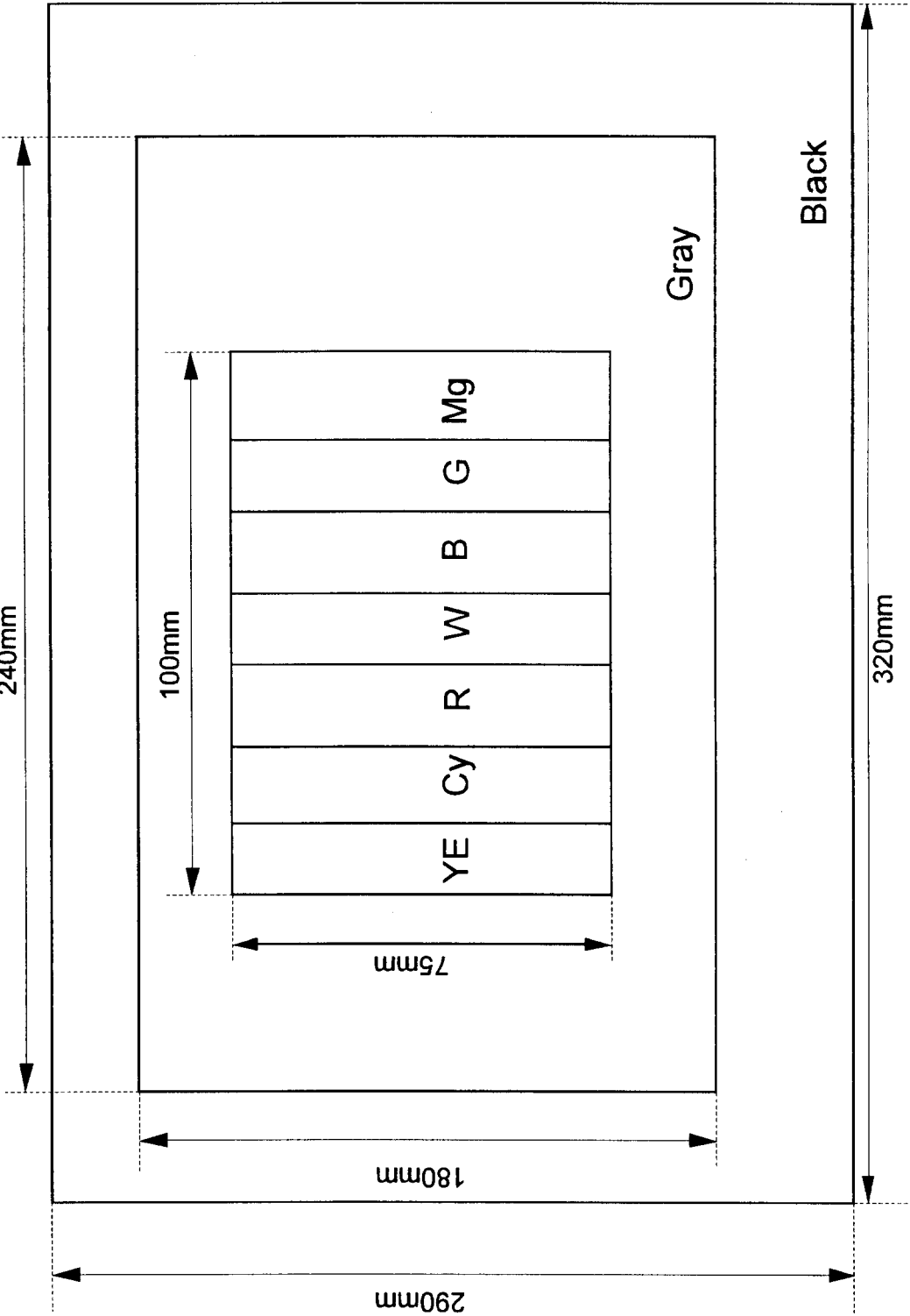
4. Specifications

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 Distance from chart to camera : 70cm	Horizontal : 310 TV lines Vertical : 280 TV lines	Horizontal : 310 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 on Weighting filter on Low pass filter(NTSC;4.2MHz,PAL;5.0MHz) 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	1/100 sec.(fixed)	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 \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	
Operating temperature	-10 to +40° C	
Storage temperature	-20 to +60° C	
Humidity	8% to 80%(Non-condensing)	
Case size	74(W) x58(H) x93(D)mm (without connector)	
Weight	approx.190g	

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

*Condition 2: Exclusive color chart (YH-7787G-02-5)
Line select ; 141lines (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

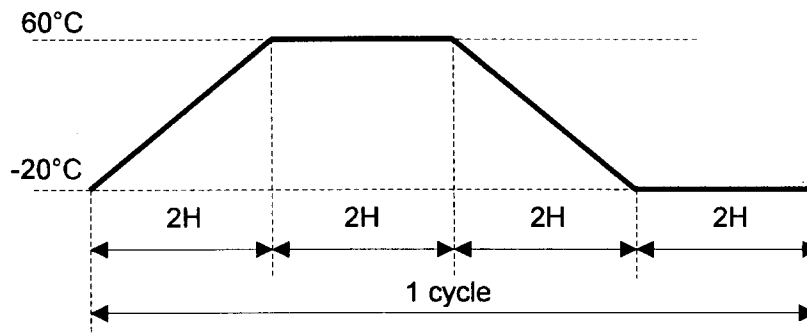
To prove that the camera shows no abnormal operation and function after it is stored at ambient temp. of 60°C for 24H and then left at room temp. for 2H min.

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 10~55~10Hz/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; 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.

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発行日付

仮発行図面

見積用図面

金型製作用図面

製造打合図面

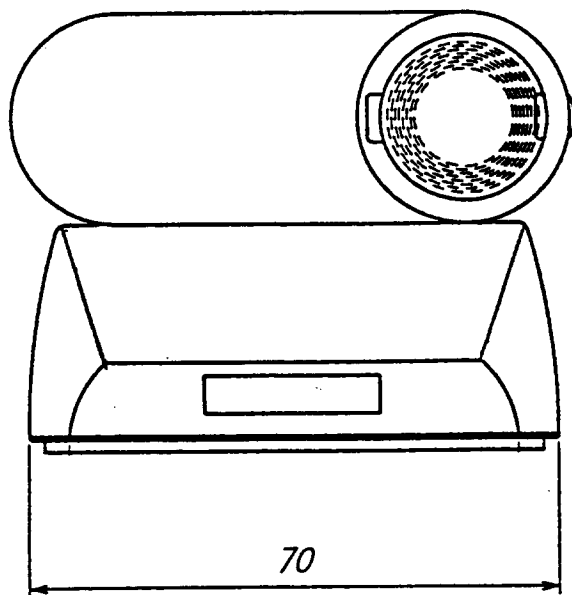
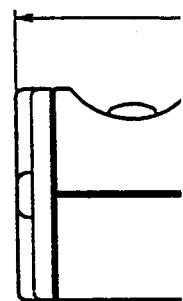
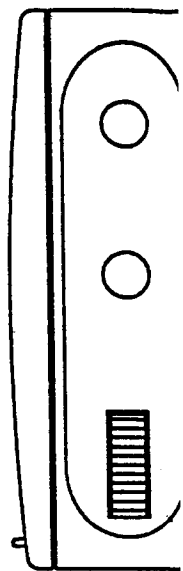
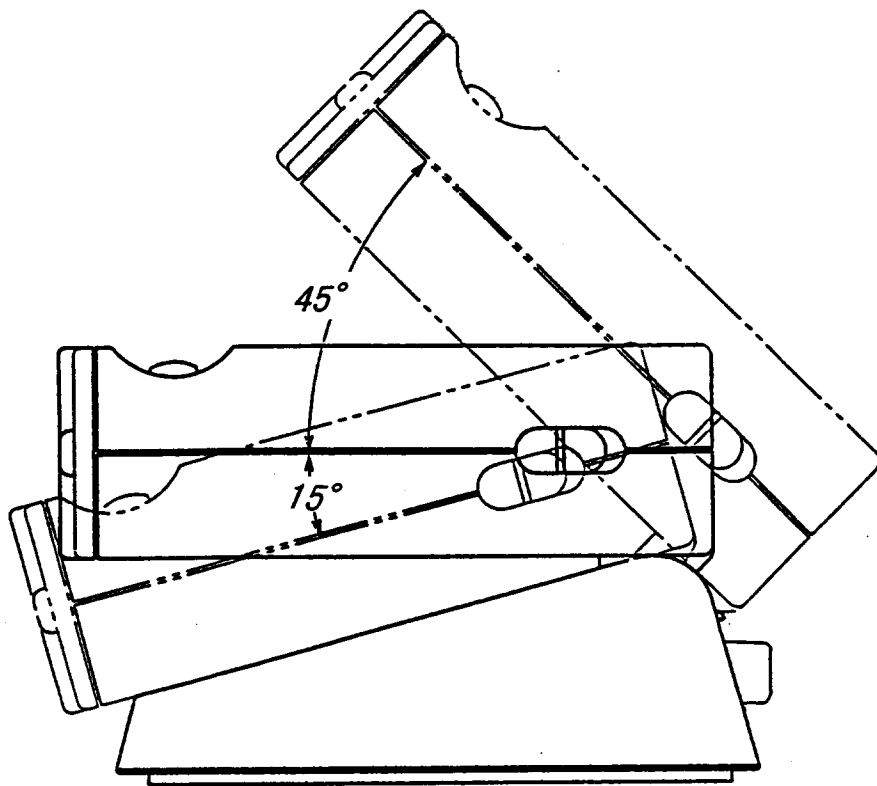
設計通報図面

設計連絡図面

新設図面

参考図面

坑増図面



製図一般検図

組合寸法検図

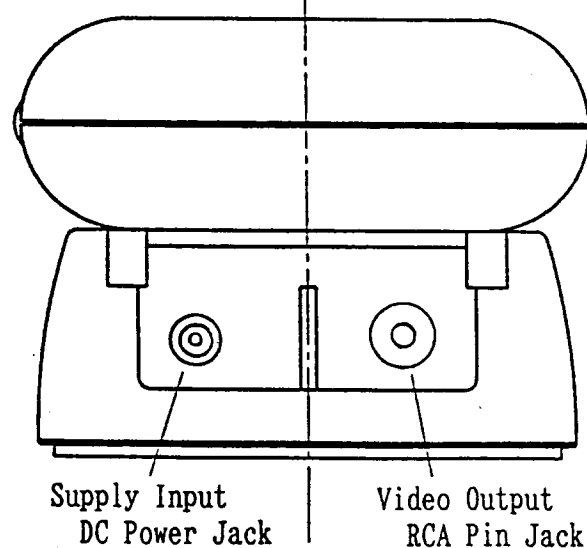
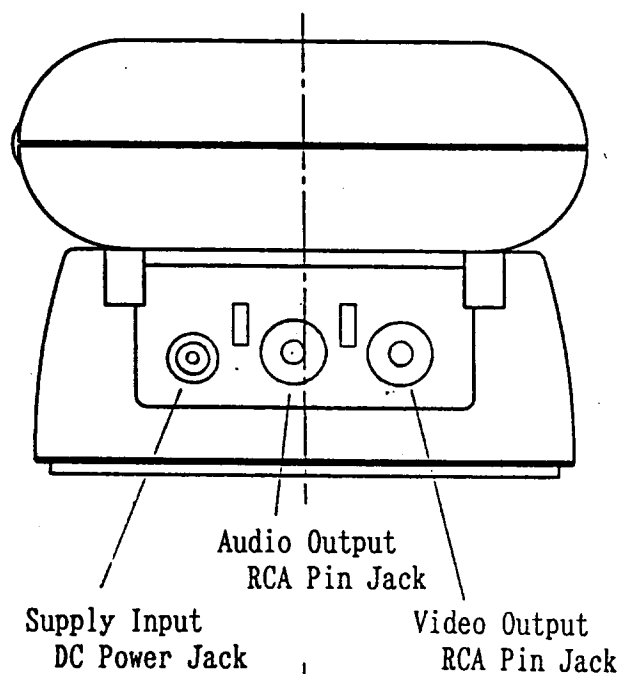
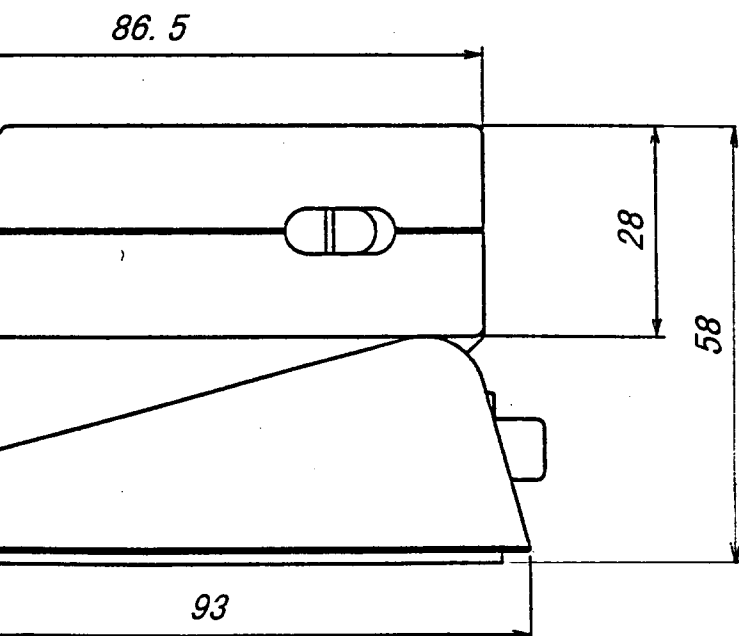
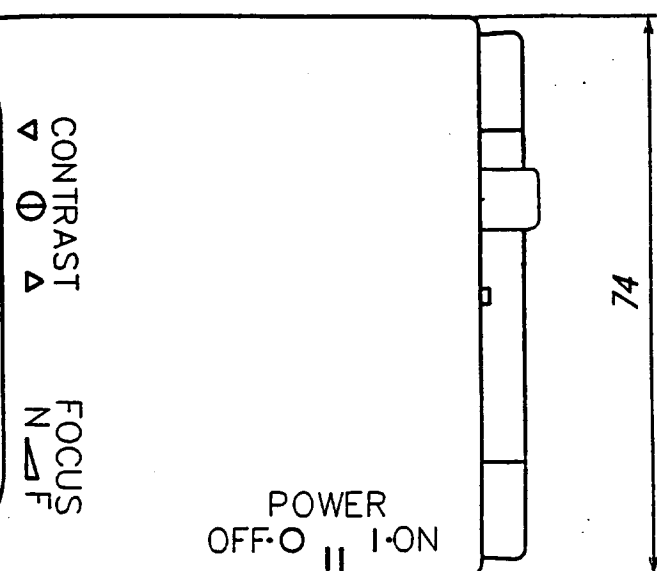
設計一般検図

計

配布先

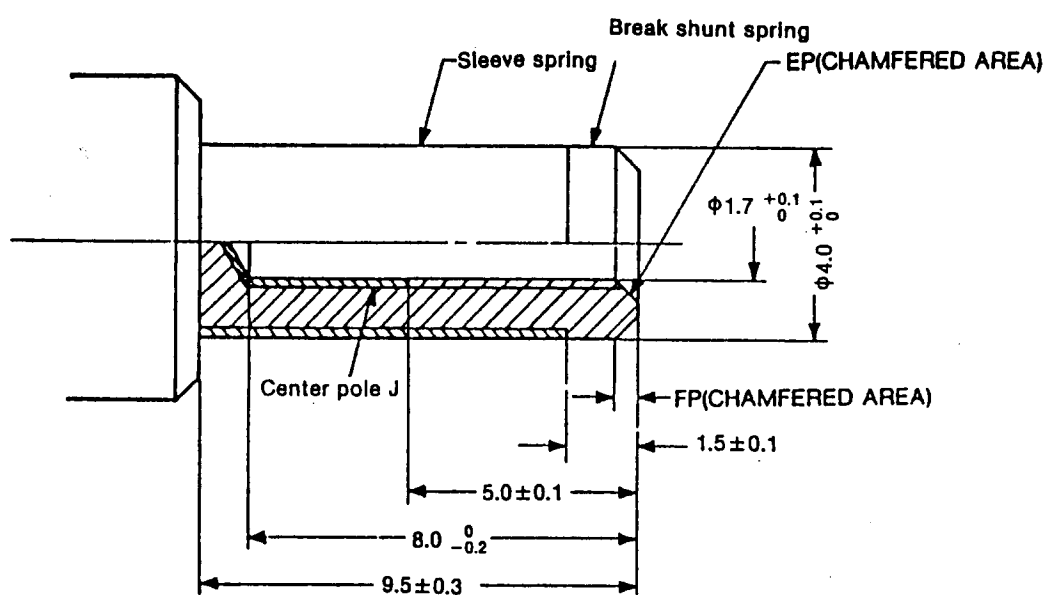
枚数

共用金型	発 生 品 番		適用取得番号	部数	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						
	共用金型工程	共用型（後加工・コア入れ換え）・押出型 外形抜き・穴明け・折曲・絞り・その他			実施	一次試作、量産試作、量産 から	

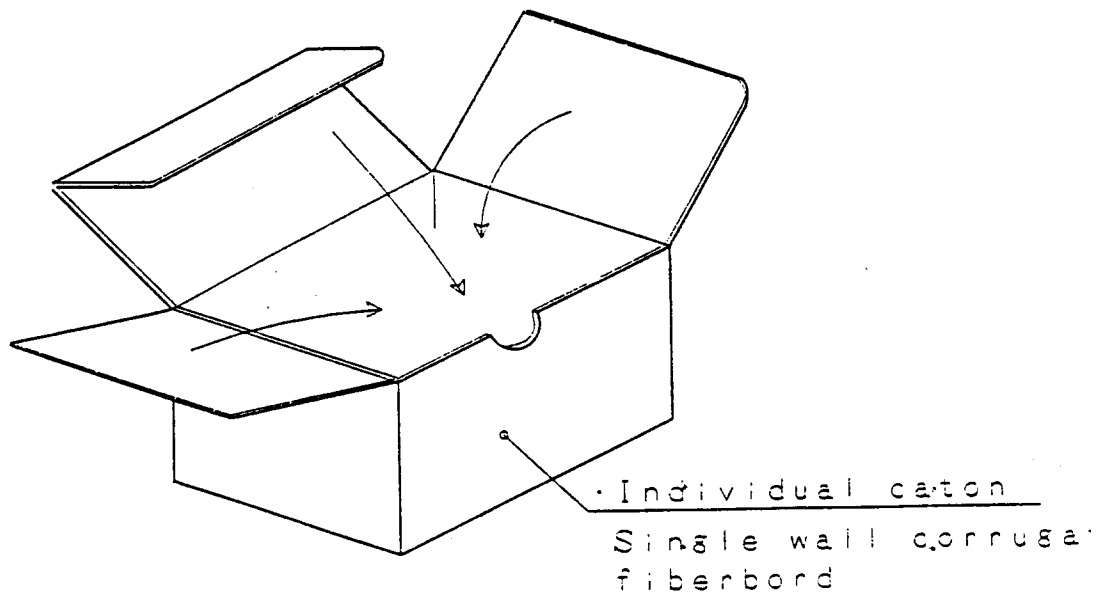
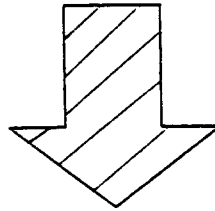
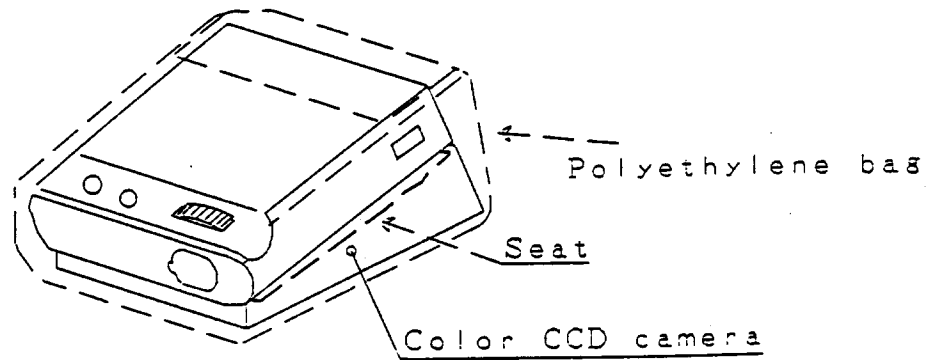


						Color CCD Camera	
NO.	部 品 コ ー ド PARTS CODE	加 工 経 路 PROCESS	部 数 PIECES	材 質 MATERIAL	仕 上 FINISH	部 品 名 称 NAME	
△				原図尺法 SCALE	単位 UNIT	コピーサイズ A1, A2, A4 (mm)	3 作図法 3 作図法
△				承認 APPROVE	検 閲 CHECK	設 計 DESIGN	製 図 DRAW
△				取得番号 ASSIGN NO.		団 番 DRAWING NO.	担 当 CHARGE
△	年 月 日 DATE	設 計 番 号 NO.	訂 正 記 事 REVISE	H. Kumagai		H. Kumagai	
作成日付 DATE		APPLIANCE SYSTEM P.D.LAB		発行			
1996.3.1							

DC POWER SUPPLY MATING PLUG



PACKAGE SPECIFICATION



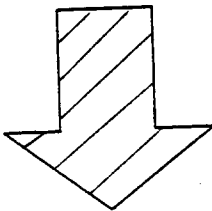
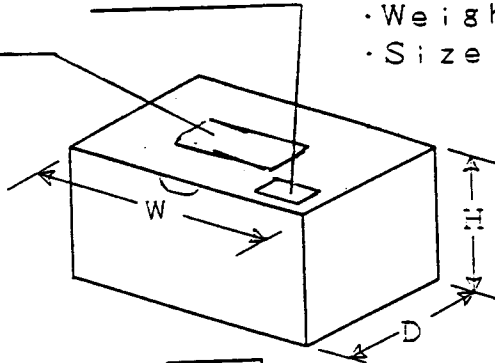
for CCD camera)

☆Individual cation

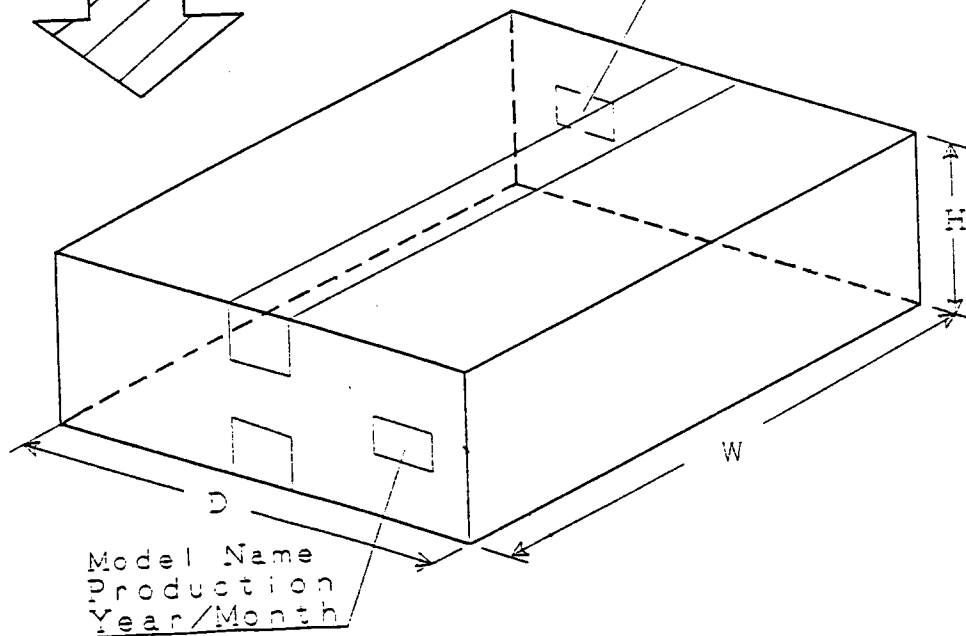
- Single wall corrugated fiberbord
- Weight : approx. 0.19kg
- Size : 111(W) x 91(D) x 70(H) mm

Model Name
Production
Year / Month

Serial Number



Model Name
Production
Year / Month



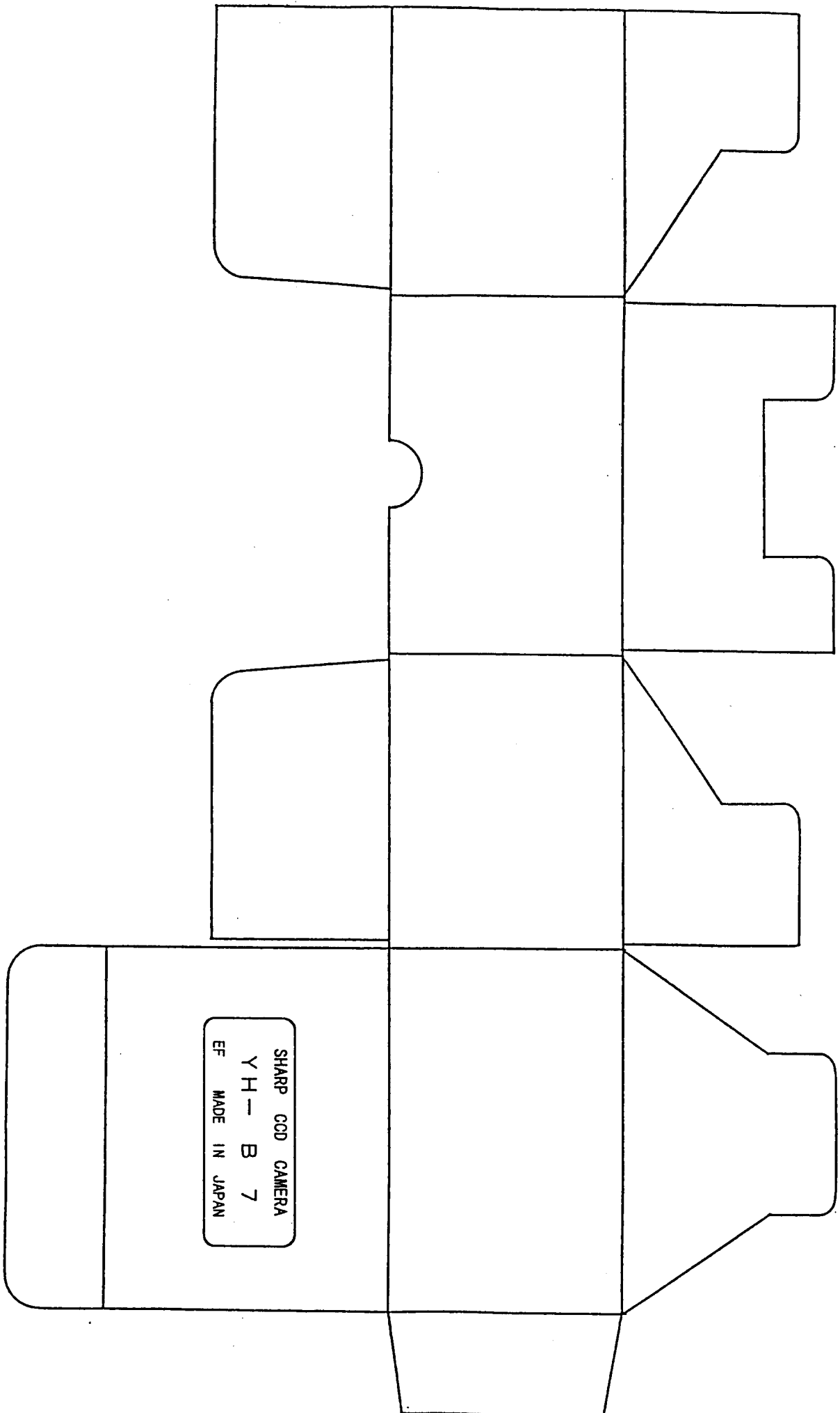
☆Master cation

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

PARTS CODE		PROCESS	PIECES	MATERIAL	FINISH	PACKAGE SPEC.		
						NAME		
APPROVE	CHECK	DESIGN		DRAW	CHARGE			
DATE		NO.	REVISE		ASSIGN NO.		DRAWING NO.	
DATE 9. APR 1996		HE Business Promotion Dept.						

Handwritten signatures: M. Yamamoto, M. Yamamoto

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