

DATE FOR MICROFILM

1. Features

- 1) Display Color : 16M Color (RGB)
- 2) Display Format : 4.95" qHD 960(W)×544(H)
- 3) Interface : SPI(3line), MIPI-DSI(2lane)
- 4) Driver IC : D53E6EA8966 by Magnachip
- 5) Polarizer : NZFUJDCVSRHCK(2 CoP) By NITTO

2. Mechanical Specification

Item	Specifications	Unit
Dimensional outline	116.54(W) X 73.92(H) X 1.66(T) (without FPCB)	mm
Number of dots	960(W) X RGB X 544(H)	Dots
Active area	109.44(W) X 62.02(H)	mm
Diagonal Inch	4.95	inch
Dots size	0.0423(W) X 0.0845(H)	mm

品名 子バリエーション

品名	子バリエーション		仕様
	A1h P3	A1h P4	
AMS4950A02	05h	08h	量産用
AMS4950A04	06h	08h	TiO2入り

DATE FOR MICROFILM

This specification refers to either or both Sony Technical Standards:SS, or Sony Technical Manuals:STM.

本仕様書は、ソニー技術標準:SS、ソニー技術マニュアル:STM を参照すること。

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REV.	REVISION	DATE	SIGN.
1	△x	-	-
2	△x	-	-
3	△x	-	-
4	△x 2	EC-E78703 12.3.8	P20 Packing 方法変更, P23 Marking Rule 更新 各頁改訂 高橋
5	△x 3	EC-E69540 11.12.13	P20 品名 子バリエーション追加, P23-P24 品名更新 高橋
6	△x	EC-E51852 11.9.28	P/N RELEASE K.I

IDENTIFYING PART NO	0-181-640-01	TITLE/DESCRIPTION	EL DISPLAY ELEMENT
			EL ヒョウソウ
P. DRAWN BY	11.9.25	APPROVED BY	11.9.25
1-811-493-11		DRAWING NO.	SB-AF071
			SHEET 1/26

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F spec - E40

3. Maximum Rating

Item	Symbol	Min.	Max.	Unit	Note	
Supply voltage	Logic Power	VDD	-0.3	4.0	V	(1),(2)
		VCI	-0.3	4.0	V	(1),(2)
	Power	ELVDD	-0.3	6.0	V	(3)
		ELVSS	-10	AGND+0.3	V	
Input voltage	VI	-0.3	VCCIO+0.3	V	(2)	
Operating temperature	Top	-20	70	°C	-	
Humidity	Hop	10	95	%(RH)	-	
Storage temperature	Tstg	-30	85	°C	-	

4. Electrical Characteristics

Ⓢ Test Conditions: VDD=1.8V, VCI=3.0V, VSS=0V, Temp.=25°C, Full White unless otherwise specified.

Item	Symbol	Condition	Min.	Typ.	Max.	Unit	Note	
Supply voltage	Logic	VDD	1.65	1.8	3.6	V	(4)	
			2.8	3.0	3.6			
	Power	ELVDD	4.554	4.6	4.646			
			ELVSS	-3.663	-3.7	-3.737		
Input Voltage	"H" level	VIH	1.65<VDD<2.30	0.7*VDD	VDD	V	(1)	
			2.30<VDD<3.0	0.8*VDD	VDD			
	"L" level	VIL	1.65<VDD<2.30	0	0.3*VDD			
			2.30<VDD<3.60	0	0.2*VDD			
Output Voltage	"H" level	VOH	IOH = -0.4mA	VDD-0.4V	-	V	(2)	
	"L" level	VOL	IOL = 0.4mA	-	0.4			
Leakage Current	Input leakage	ILI	VI= VSS or VDD	-1	-	1	uA	(3)
	output leakage	ILO		-1	-	1	uA	-
Supply Current (2)	EL Power 139cd/m ² Full White	IELVDD (IELVSS)	ELVDD = 4.6V ELVSS = -3.7V	-	75	99	mA	-
Module Current Consumption		IVDD	VDD=1.8V	-	2	4	mA	-
		IVCI	VCI=3.0V	-	40	72	mA	-
		Istby	VDD=1.8V	-	50	100	uA	-
			VCI=3.0V	-	150	300	uA	-

TITLE/DESCRIPTION (E) (D)	EL DISPLAY ELEMENT EL 発光素子	DRAWING NO.	SB- AF071	SHEET	2
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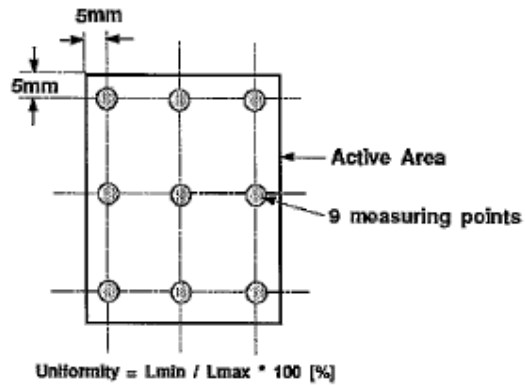
TENTATIVE PART NO. 0-181-840

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5. Electro-Optical characteristics

Item	Symbol	Temp	Condition	Min.	Typ.	Max.	Unit	Note
Brightness		25°C	Normal (White Mode)	109	139	169	cd/m ²	(1)
Uniformity		25°C	Normal (White Mode)	80	90	-	%	(1)
Contrast ratio	K	25°C	$\Phi=0^\circ, \theta=0^\circ$	3000	6500	-	-	(2)
Color of CIE coordinate	White	x	$\Phi=0^\circ, \theta=0^\circ$	0.277	0.297	0.317	-	(1),(2),(3) (4)
		y		0.286	0.306	0.326	-	
	Red	x		0.64	0.67	0.7	-	
		y		0.298	0.328	0.358	-	
	Green	x		0.2	0.26	0.3	-	
		y		0.65	0.7	0.75	-	
	Blue	x		0.097	0.137	0.177	-	
		y		0.02	0.06	0.1	-	
Color Gamut		25°C	vs. NTSC	85	100	-	%	-
Crosstalk		25°C		-	-	4%	%	(5)
Viewing angle		25°C	Upper/Down/Right/Left CR ratio ≥ 200	Over 80°				-
Response Time		25°C		-	-	1	ms	-
Gamma		25°C		-	2.2	-		(6)

Note (1) Uniformity measuring point



<small>TYPE/DESCRIPTION</small> (E) EL DISPLAY ELEMENT (J) EL 液晶素子	<small>DRAWING NO.</small> SB- AF071	<small>SHEET</small> 3
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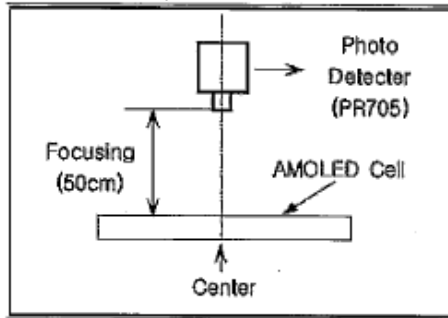
TEMPERATURE PART NO. 0-181-640

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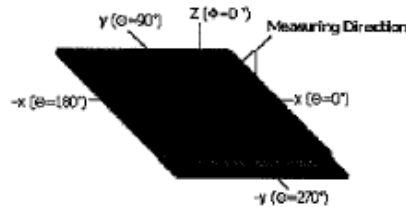
Note (2) Definition of contrast ratio (K)

$$\text{Contrast Ratio}(K) = \frac{\text{Brightness of White pattern center at } 139\text{cd/m}^2}{\text{Brightness of black pattern center at } 139\text{cd/m}^2}$$

Note (3) Optical measuring system, temperature regulated chamber
external Light : dark state



Note (4) Define of Φ and θ



Note (5) Less than 4%, unless detected by visual.

If Crosstalk is detected by visual, we shall negotiate and agree to solution with customer.

Note) If Flicker is detected by visual, we shall negotiate and agree to solution with customer.

Note (6) gamma is calculated value

- gamma calculation formula

$$\log(L - L_b) = \gamma \log(V) + \log(a)$$

L_b = black luminance level, V = gray level

- Measurement point for gamma calculation

48gray, 72gray, 104gray, 132gray, 164gray, 192gray, 224gray, 252gray, 255gray

MODEL/DESCRIPTION (E)	EL DISPLAY ELEMENT	drawing no.	SB- AF071	sheet	4
(J)	EL 液晶素子				

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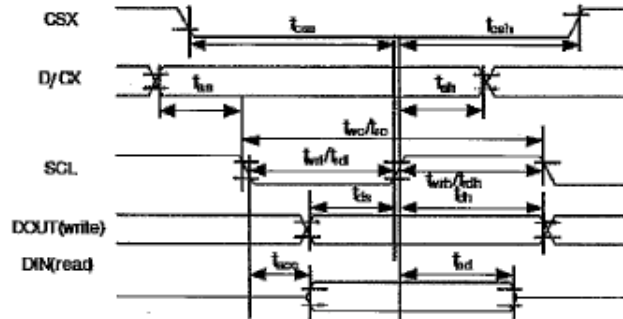
6. Input/Output Terminal Assignment
8-1. I/O Connection

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 DRAWING
 CONF. STANDARD

#	Pin name	Description	I/O	#	Pin name	Description	I/O
1	VCI	Power pin for analog	I	2	GND	Low voltage ground pin	I
3	VCI			4	AVDD	for TP	I
5	VDD	Power pin for logic I/O		6	AVDD	for TP	I
7	VDD			8	GND	Low voltage ground pin	I
9	GND	Low voltage ground pin	I	10	ELVDD	Power pin for module analog	I
11	ELON	Module DCDC(ELVDD/ELVSS) on/off control signal(VCI level)	O	12	ELVDD		
13	RESX	Reset pin Initializing when RESX="L"	I	14	ELVSS	Power pin for module analog	I
15	SEL_REG	Command & parameter transfer selection "1" transfer by DSI type C(SPI) "L" transfer by DSI type	I	15	ELVSS		
17	GND	Low voltage ground pin	I	18	GND	Low voltage ground pin	I
19	MDN0	DSI interface Data Line 0-	I	20	CSX	Chip selection pin Data/Command In/out is possible when CSX="L"	I
21	MDP0	DSI interface Data Line 0+	I	22	DOUT	Serial data input pin	I
23	GND	Low voltage ground pin	I	24	DIN	Serial data output pin	O
25	MGN	DSI interface Strobe clock-	I	25	SCL	Serial data transfer clock input pin	I
27	MCP	DSI interface Strobe clock+	I	28	OTPV	for SMD internal use only. Open when is not used	-
29	GND	Low voltage ground pin	I	30	GND	Low voltage ground pin	I
31	MDN1	DSI interface Data Line 1-	I	32	TP_SPL_CS	for TP	I
33	MDP1	DSI interface Data Line 1+	I	34	TP_SPL_MOSI	for TP	I
35	GND	Low voltage ground pin	I	36	TP_SPL_MISO	for TP	O
37	TP_RESET	for TP	I	38	TP_SPL_CLK	for TP	I
39	TP_INT	for TP	I	40	GND	Low voltage ground pin	I

TYPE/DESCRIPTION (E)	EL DISPLAY ELEMENT	DRAWING NO.	SB- AF071	SHEET	5
(J)	EL 液晶パネル				

7 Recommended Operating Sequence
SPI-3line timing



.Figure 56 Type C interface Timing

.Table 51 AC characteristics T= 10ns

Signal	Symbol	Parameter	min	max	Unit	Reference
CSX	t _{css}	Chip Select setup time (Write)	4XT	-	ns	
	t _{csh}	Chip Select setup time (Read)	4XT	-	ns	
D/CX (optional)	t _{as}	Address setup time	T	-	ns	
	t _{ah}	Address holdtime(Write/Read)	T	-	ns	
SCL(write)	t _{wc}	Write cycle	10XT	-	ns	
	t _{wh}	SCL H duration (write)	4XT	-	ns	
	t _{wl}	SCL L duration (write)	4XT	-	ns	
SCL(read)	t _{rc}	Read cycle	15XT	-	ns	
	t _{rh}	SCL H duration (read)	6XT	-	ns	
	t _{rl}	SCL L duration (read)	6XT	-	ns	
DOUT(write)	t _{rs}	Data setup time	3XT	-	ns	For maximum C _L =30pF For minimum C _L =8pF
	t _{rd}	Data hold time	3XT	-	ns	
DIN(read)	t _{aoc}	Access time	10	-	ns	
	t _{dc}	Output disable time	T	5XT	ns	

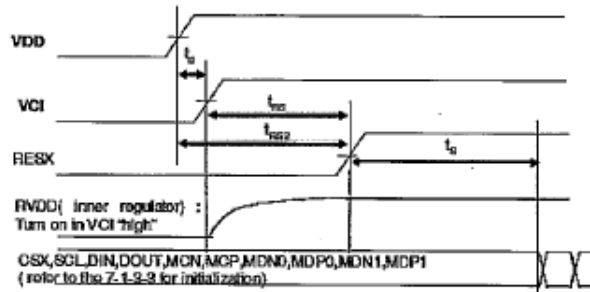
FILE/DESCRIPTION (E) (J)	EL DISPLAY ELEMENT EL 液晶パネル	DRAWING NO. SB- AF071	SHEET 6
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TENTATIVE PART NO. 0-181-660

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Power On Timing



ITEM	SYMBOL	MIN	MAX	UNIT
Delay time	t_d	non	non	ms
RVDD Stable time	t_{rs}	50		ms
Stable time	t_{ms}	1		ms
Stable time	t_s	20		ms

TITLE/DESCRIPTION (E)	EL DISPLAY ELEMENT	DRAWING NO.	SB- AF071	SHEET	7
(J)	EL 液晶パネル				

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TENTATIVE PART NO. 0-181-840

F spec - E45

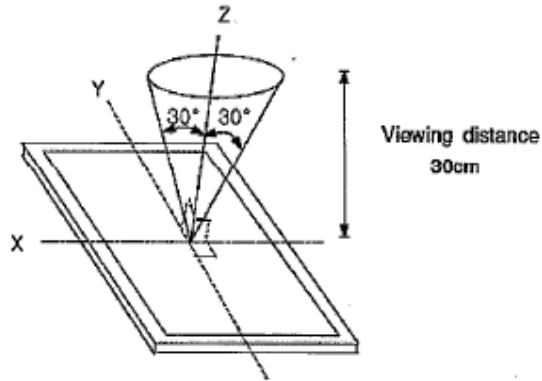
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8. Quality Level

10-1. Environment Condition

The environmental conditions for inspection shall be as follows.

- ① Temperature & Humidity
 - Room temperature : $22 \pm 3^{\circ}\text{C}$
 - Humidity : $65 \pm 20\%RH$
- ② Viewing distance : $30 \pm 5\text{cm}$
Viewing angle(tolerance) : $90^{\circ} \pm 30^{\circ}$
- ③ Ambient light
 - Display visual inspection : $150 \pm 50\text{ lux}$
 - Cosmetic inspection : $1000 \sim 1500\text{ lux}$



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TITLE/CLASSIFICATION (E)	EL DISPLAY ELEMENT	DRAWING NO.	8
(J)	EL 液晶パネル	SB- AF071	

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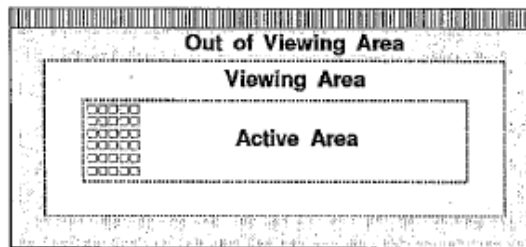
TENTATIVE PART NO. 0-161-640

F spec - E45

Sampling Procedures for each item's acceptance table

Defect type	Sampling Procedures	AQL
Major Defect	MIL-STD-105D Inspection level I normal inspection single sample inspection	0.65
Minor Defect	MIL-STD-105D Inspection level I normal inspection single sample inspection	1.5

- ① Major defect
: A major defect refers to a defect which may substantially degrade usability for product applications.
- ② Minor defect
: A minor defects refers to a defect which is not considered to substantially degrade product application, or a defect which deviates from existing standards almost unrelated to the effective use of the product or its operation.
- ③ Display visual defect application zone : Viewing Area



- Display visual defect in "Out of View Area" Zone should not be judged.

TITLE/DESCRIPTION (E) (J)	EL DISPLAY ELEMENT EL 液晶パネル	DRAWING NO. SB- AF071	Sheet 9
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TENTATIVE PART NO. 0-181-840

F spec - E45

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 SHEET STATUS

9 . Reliability

Test item

- Ⓒ All test result of items should be judged in 2 hours recovery time at room temperature.
- Ⓓ Without Touch+Window ass'y. For AMOLED module.

No	Item	Condition	Qty.	Judgment Criterion
1	High Temperature Operation	70℃ 240hours	6	- After testing, Cosmetic defects should not happen. - After testing, the defective of brightness should be less than 40% of the initial value. - After testing, total current consumption should be in the range of initial Spec. - After testing, color coordinate value should be in the range of initial Spec. - In case of malfunction defect caused by ESD damage,if it would be recovered to normal state after resetting, it would be judged as a good part. - After testing,cosmetic and electrical defects should not happen
2	High Temperature Storage	70℃ 240hours	6	
3	Low Temperature Operation	-10℃ 240hours	6	
4	Low Temperature Storage	-30℃ 240hours	6	
5	High Humidity Operation	40℃ 95%RH 240hours	6	
6	High Humidity Storage	60℃ 90%RH 240hours	6	
7	Temperature Cycle	-30/80℃ 30 minute 50Cycle	6	
8	ESD (Contact)	± 6kV, 150pF/330Ω, Center, 2 times (Non-operation)	3	
9	ESD (Air)	± 8kV, 150pF/330Ω, Center, 2 times (Non-operation)	3	
10	Vibration Test (Packing)	Random, 1.047Grms, 6-200Hz Z:60min, X,Y each 30min	32	

FILE DESCRIPTION (E) (J)	EL DISPLAY ELEMENT EL 発光素子	DRAWING NO.	SHEET
		SB- AF071	10

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10. Handling Precautions

Mounting Method

The AMOLED-TSP-Window of SAMSUNG Mobile Display CO.,LTD. module consists of two slim glasses with polarizer which can easily get damaged. Since the module is constructed as to be fixed by utilizing fitting holes in the printed circuit board. Extreme care should be used when handling the AMOLED modules.

Caution of AMOLED Handling and Cleaning

When cleaning the display surface, use soft cloth solvent as recommended below and wipe gently.

- Ⓞ Isopropyl alcohol
- Ⓞ Ethyl alcohol
- Ⓞ Trichlorotrifluoroethane

Do not wipe the display surface with dry or hard materials that will damage the polarizer surface. Do not use the following solvent.

- Ⓞ Water
- Ⓞ Ketone
- Ⓞ Aromatics

Do not wipe ITO pad area with the dry or hard materials that will damage the ITO patterns.

Do not use the following solvent on the pad and prevent it from being contaminated.

- Ⓞ HCFC
- Ⓞ Soldering flux
- Ⓞ Chlorine(Cl), Sulfur(S)
- Ⓞ Spittle, Fingerprint

If the product is not wrapped with a desiccant added pad, ITO pattern can be damaged by corrosion. SAMSUNG Mobile Display CO.,LTD. suggests wrapping a product with a desiccant unless customers particularly indicate that they do not want it. In case ITO pattern corrodes due to the usage of chlorine, sulfur or customer's mishandling of the product, the responsibility lies with the customer.

Caution Against Static Charge

For AMOLED module, use C-MOS LSI drivers, therefore we recommend that you ;
 Connect any unused input terminal to VDD or VSS, do not input any signals before power is turned on, and ground your body, work/assembly areas, assembly equipment to protect against static electricity. It could occur static electricity when taping off the film which protects AMOLED.
 Against static charge, you should make sure that the product is safe or not by experiment in advance.

TITLE/DESCRIPTION (E) EL DISPLAY ELEMENT (J) EL 七ヨクツ'ツ	DRAWING NO. SB- AF071	SHEET 11
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Packing

- ① The packing principle is that AMOLED module should keep its packing condition at the time of delivery. When storing the AMOLED after unpacking, note the followings.
- ② AMOLED module is consisted of GLASS and assemblies. It should avoid pressure, strong impact, and being dropped from a height.
- ③ To prevent modules from degradation, do not operate or store them in a place where they are directly exposed to sunlight or high temperature/humidity.

Caution for Operation

- ① If you do not follow normal POWER ON , OFF sequence or abnormal operating, then AMOLED module can be damaged Electro-optically and does not recover.
- ② Response time may extremely delay at a temperature lower than operating range, AMOLED does not normally operate at a high temperature. But this may recover at a proper temperature.
- ③ When you set optimal operating voltage to AMOLED module, you can see the optimal contrast of AMOLED. So, add voltage controllable function at SET Module.
- ④ AMOLED module may not display normally when twisting power or pressing power is added. Therefore you should secure AMOLED module maximum thickness at set assembly not to have any pressure affect AMOLED module.
- ⑤ Electro-chemical reaction may occur when there is humidity on pad, therefore, you should use AMOLED Module below maximum operating humidity.
- ⑥ AMOLED Module Power Vcd should be designed to protect surge current at SET Module.
- ⑦ You should not damage connector and cable for AMOLED module assembly by force folding or by applying extreme power.
- ⑧ AMOLED may not display normally when it is interfered by surrounding elements, therefore you should consider setting design not to damage AMOLED module by surrounding elements.
- ⑨ To satisfy EMI standards, you should plan your design after considering emitting energy.
- ⑩ We can not guarantee display characteristics outside viewing area, therefore your set window should be fixed into viewing area.
- ⑪ Image-sticking may occur if AMOLED displays same image for a long time, so you need to make a pattern change for AMOLED.

Storage

- ① Place in a dark place where neither exposure to direct sunlight or any fluorescent light is permitted and keep at room temperature & room humidity.
- ② Store with no contact with polarizer surface.
 [It is recommended to store them as they have been contained in the inner container when we delivered them.

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(J)	EL 液晶パネル		12

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Safety Precautions

- Ⓢ Disassembly or modification may cause electric shock, damages to sensitive part inside of the AMOLED module, dust adhesion, or scratches on the display part.
- Ⓢ In the event that the contents of AMOLED module are on skin, wipe them with a paper towel or gauge and wash the part well, and receive medical attention if necessary.
- Ⓢ Do not use the AMOLED module for the Special purpose besides display units.
- Ⓢ Be careful of the glass chips that may cause injury to fingers of skin, when the display part is broken.

Precautions before Use

You should discuss the following case with SAMSUNG Mobile Display CO.,LTD.

- Ⓢ in case of any questions about contents of this "Specification For Approval".
- Ⓢ in case of occurring new problems not mentioned at this "Specification For Approval".
- Ⓢ in case of your request about income inspection Specification change.
- Ⓢ in case of occurring new problem at your driving test.

*** If SMD has to change the conditions specified in the specification, previously the negotiation shall be held and decided.**

DRAWING

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TITLE/DESCRIPTION (E)	EL DISPLAY ELEMENT	DRAWING NO.	SHEET
(J)	EL 発光素子	SB- AF071	13

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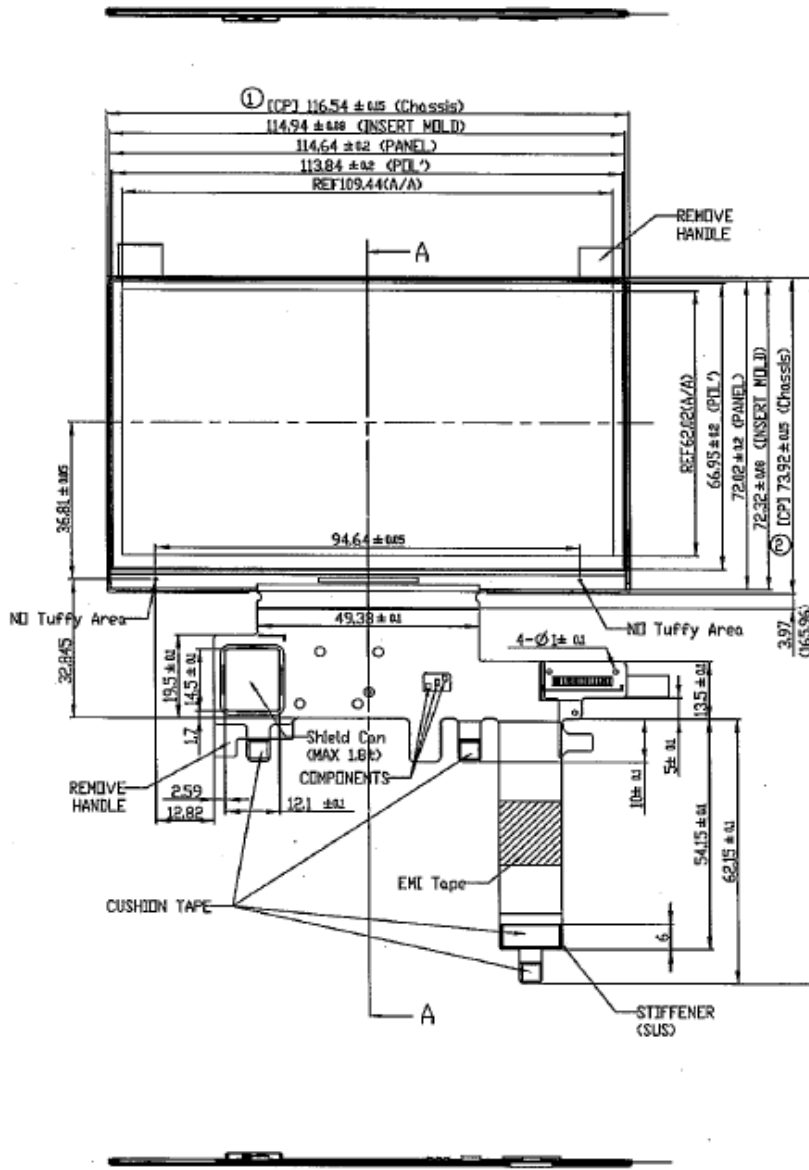
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TENTATIVE PART NO. 0-181-840

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11. Drawing
Product Drawing

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SERIAL STANDARDS

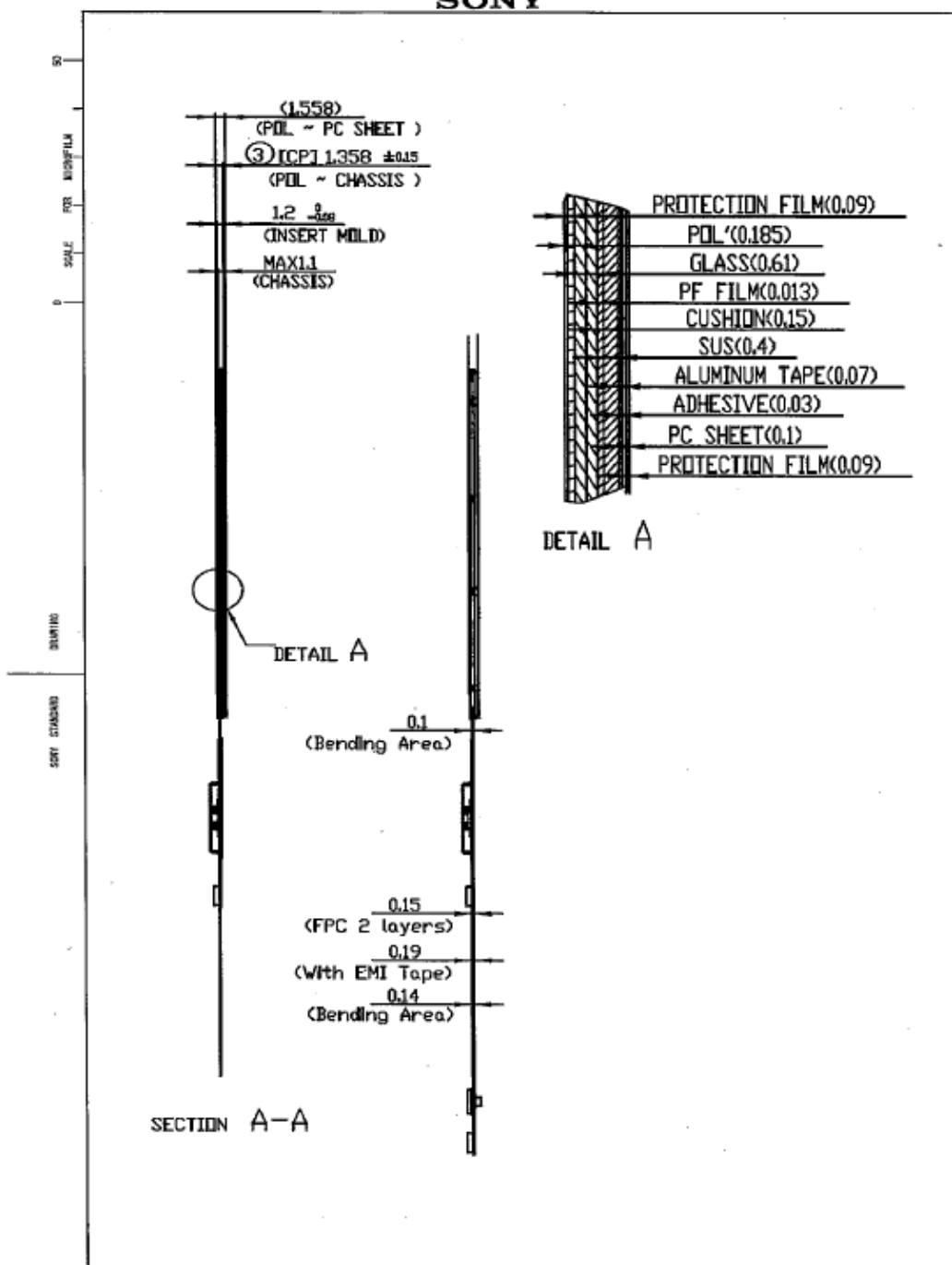


FILE/DESCRIPTION (E)	EL DISPLAY ELEMENT	SHIPPING NO.	
(J)	EL 七ヨウシツ	SB- AF071	14

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TENTATIVE PART NO. 0-181-840

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FILE/DESCRIPTION	EL DISPLAY ELEMENT	FORMING NO.	15
	(E)	SB- AF071	
(J)	EL 発光素子		

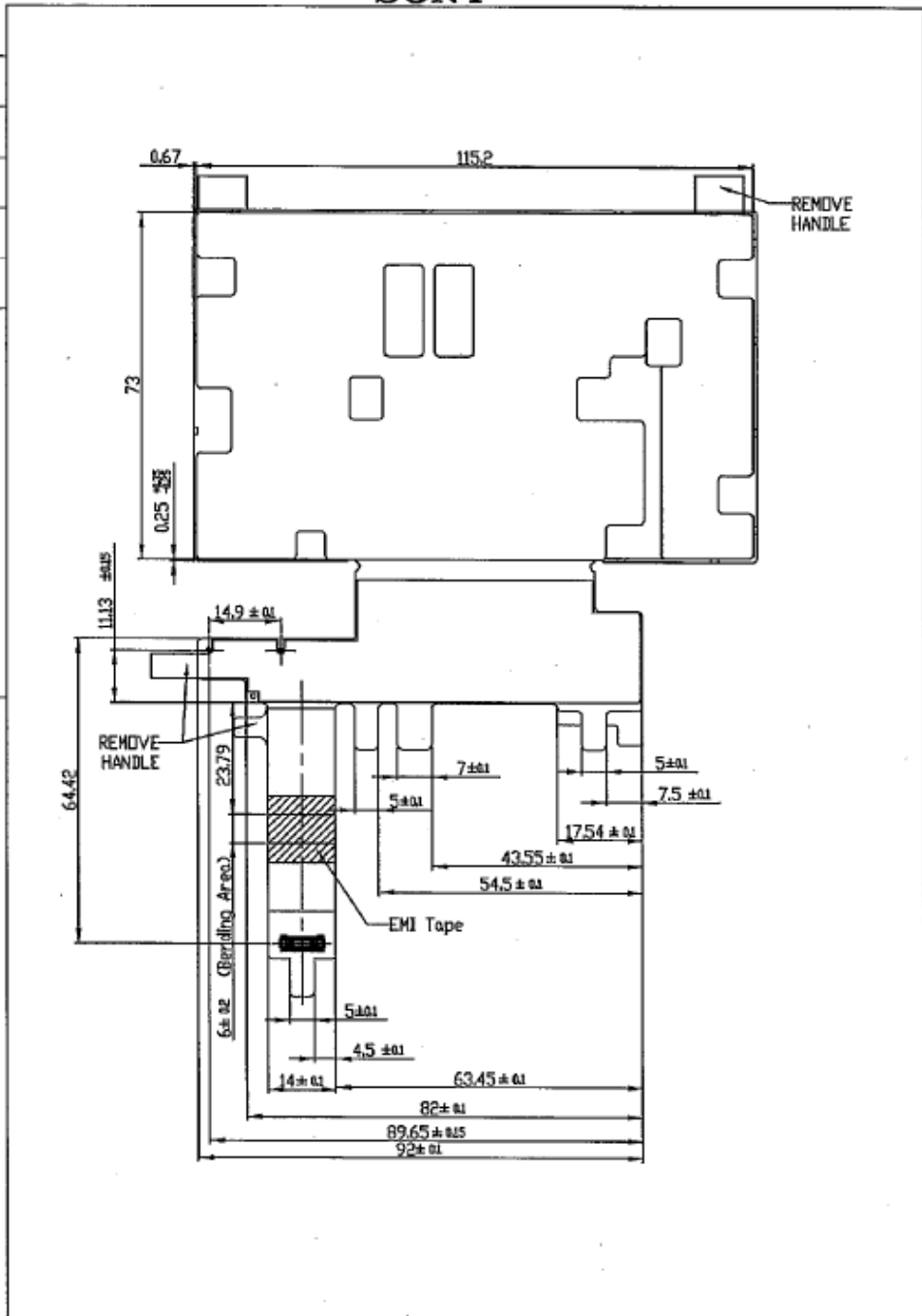
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TITLE/DESCRIPTION (E) (J)	EL DISPLAY ELEMENT EL 電光管	DRAWING NO. SB- AF071	SHEET 16
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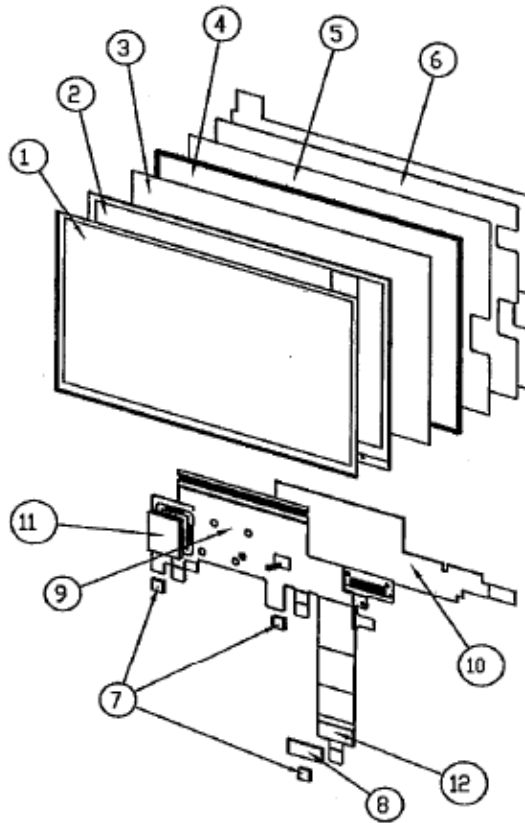
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No.	PART NAME	MATERIAL	THICKNESS	Q'TY
1	PDL		t0.185	1
2	GLASS + PF FILM		t0.623	1
3	CUSHION TAPE	DIC 84015B	t0.15	1
4	BOTTOM CHASSIS	SUS301 CSP 1/2H + PC	t0.4	1
5	ALUMINUM TAPE	STN1070AL	t0.07	1
6	PC SHEET	PHF860MAB-0.1T + SY5103	t0.13	1
7	CUSHION TAPE	SCF500-1.0T + SY5103	t1.03	3
8	CUSHION TAPE	SCF500-0.7T + SY5103	t0.73	1
9	FPCA			1
10	ADHESIVE	SY5103 (0.03T) + PET	t0.03	1
11	SHIELD CAN	SUS304 1/2H		1
12	STIFFENER	SUS304(0.2t) 1/2H + ADHESIVE	t0.23	1

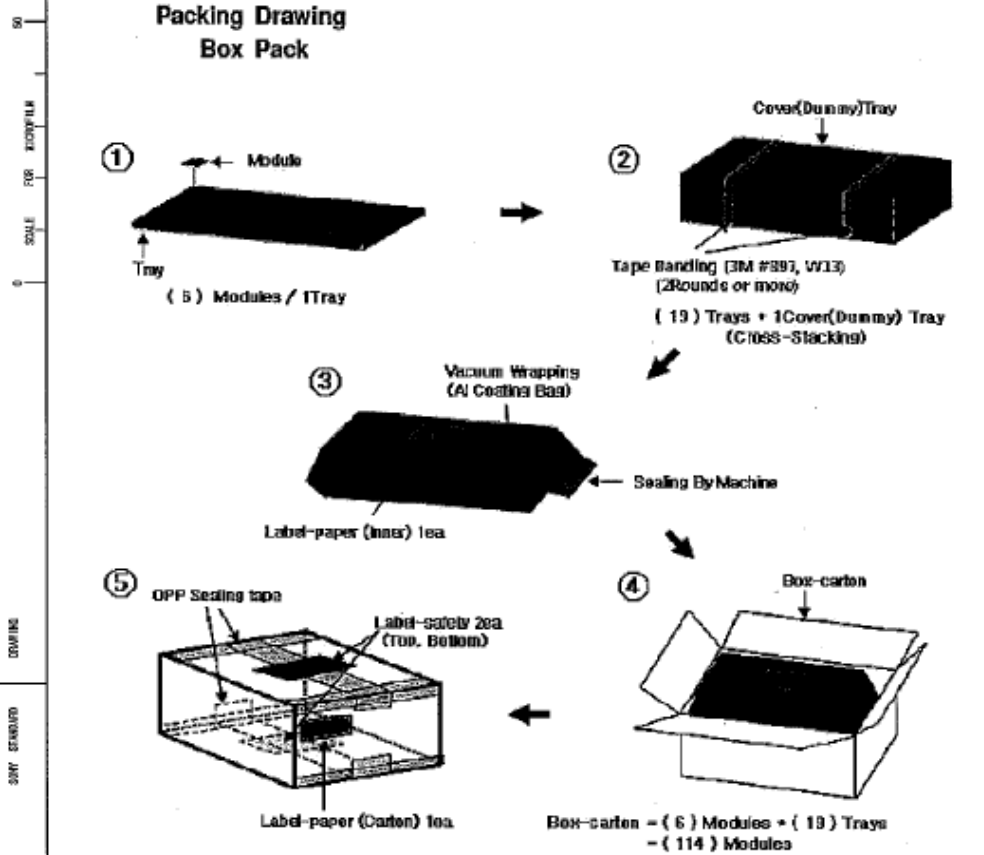
TITLE/DESCRIPTION (E) (J)	EL DISPLAY ELEMENT	DRAWING NO. SB- AF071	SHEET 17
	EL 七ヨウシツ		

A4
07.5

TENTATIVE PART NO. 0-101-840

F spec - E45

**Packing Drawing
Box Pack**



Note

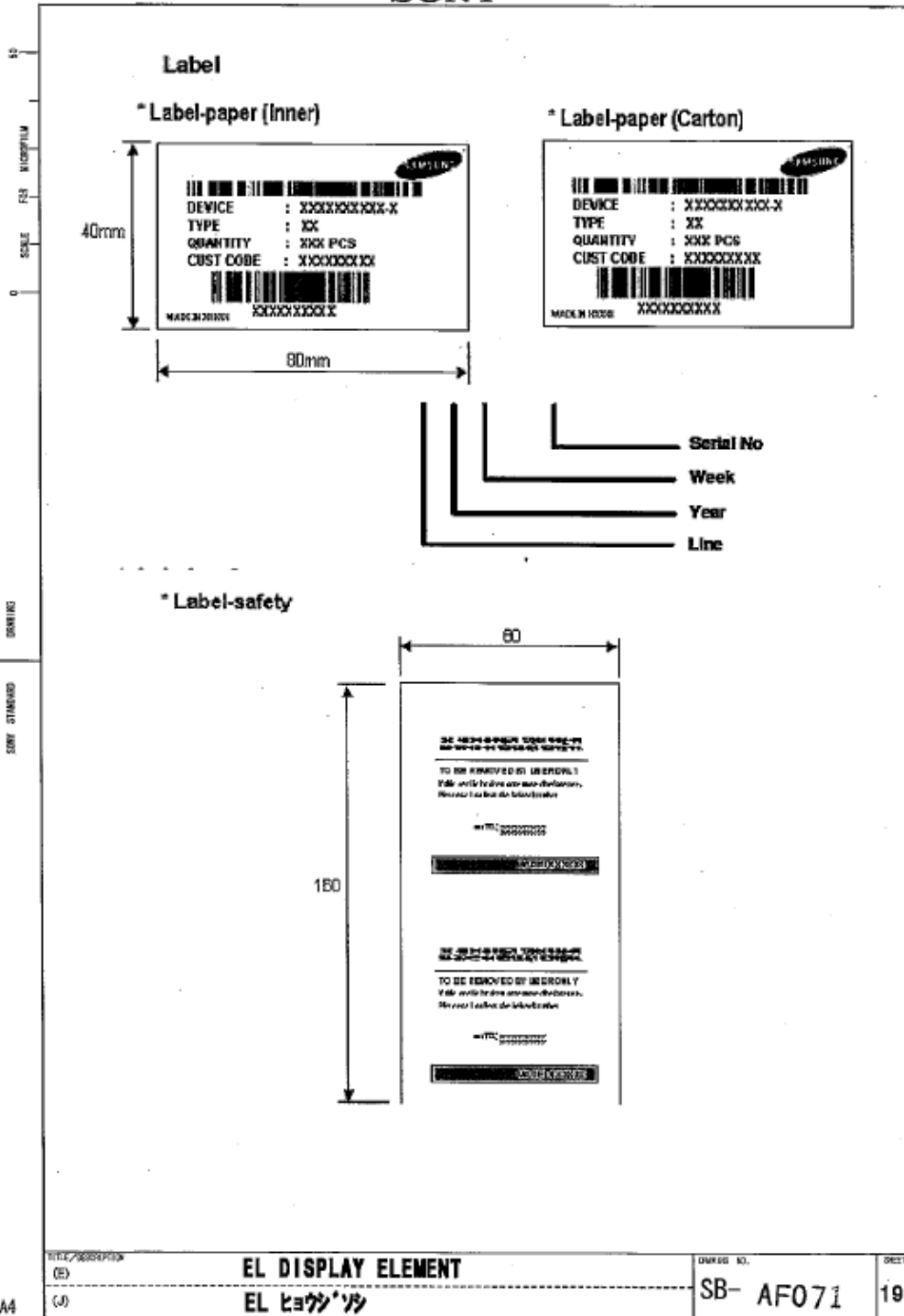
- (1) Total Box-carton approx. : { 10.39 }kg
- (2) Size : 583(L) x 388(W) x 210(H)
- (3) Place the OLED Module in the tray facing the active area direction.
- (4) Stack the trays and cover (dummy) tray.
- (5) Resistance of tray surface : $10^8 \sim 10^9 \Omega$
- (6) Wrap the AI coating bag by vacuum sealing machine.
- (7) Put the bag in the Box-carton .
- (8) Seal the Box-carton and affix the Label-safety & Label-paper.

TITLE/DESCRIPTION (E)	EL DISPLAY ELEMENT	SHINKO NO.	SB- AF071	9901
(J)	EL 七ヨウ'シ			18

A4
'07.5

TENTATIVE PART NO. 0-181-840

F spec - E45



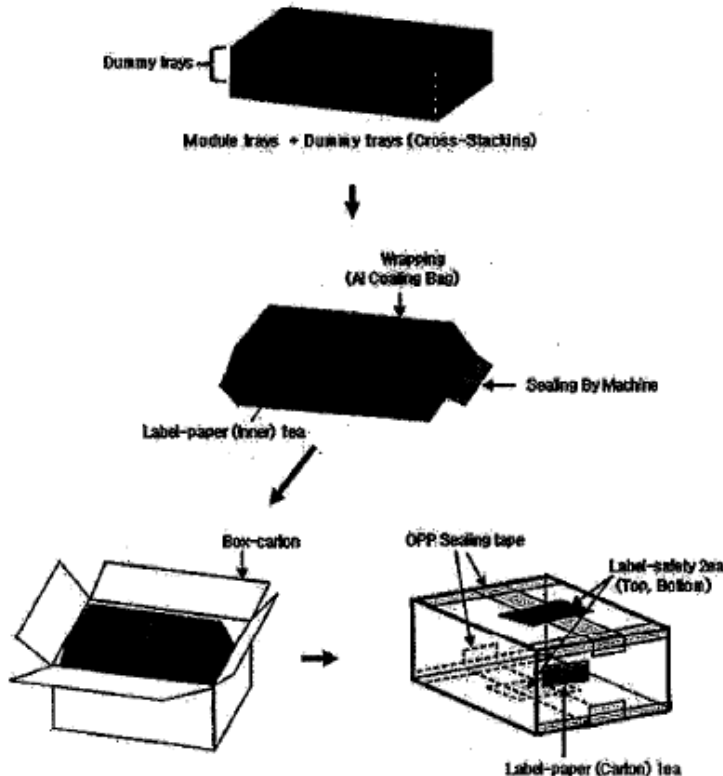
A4
07.5

TENTATIVE PART NO. 0-181-840

F spec - E45

Packing for small quantities

90
FOR
SOLE
9
DRAWING
CENT STANDARDS



Note

When package quantity is small, OLED Modules containing trays are stacked the bottom, and dummy trays are stacked at the top of package. then wrap the Al coating bag by sealing machine.

△改版

TITLE/DESCRIPTION (E)	EL DISPLAY ELEMENT	FORM NO.	REV.
(J)	EL ヒヨウシ	SB-AF071	20

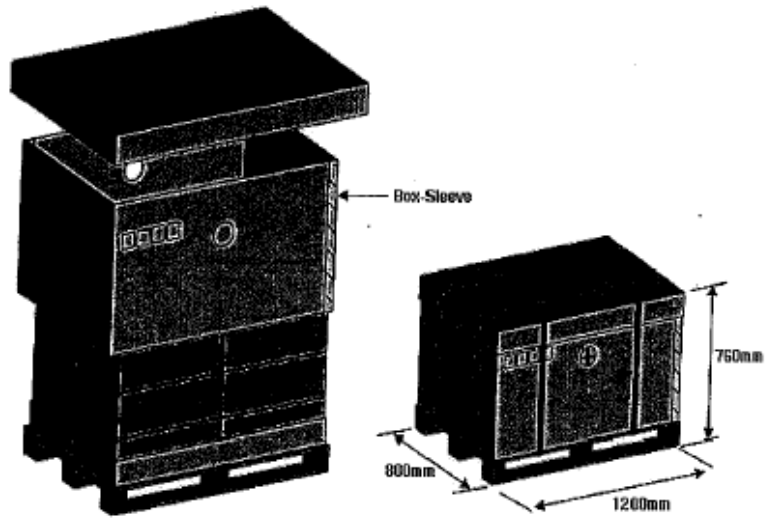
A4
07.5

TENTATIVE PART NO. D-181-640

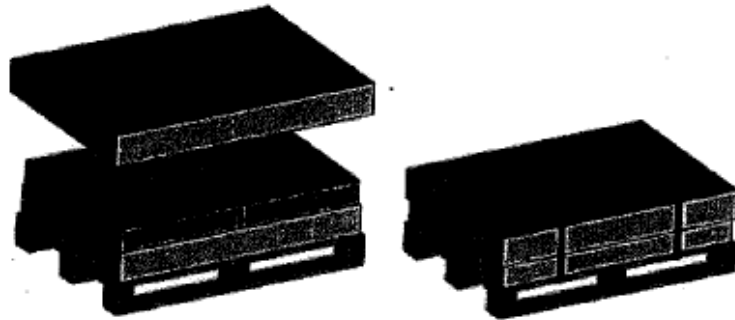
F spec - E45

ISO
FOR MICROFILM
SCALE
0
DRAWING
SONY STANDARD

Over pack



Packing for small quantities



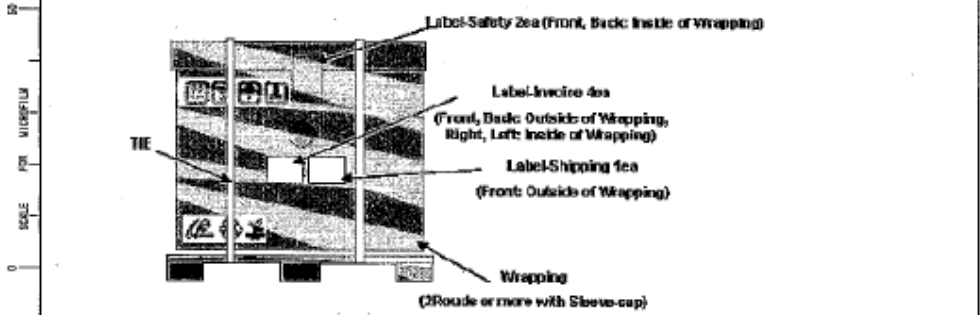
TITLE/DESCRIPTION	EL DISPLAY ELEMENT	DESIGN NO.	9621
(E)		SB- AF071	21
(J)	EL 液晶パネル		

A4
07.5

TEMPERATURE PART NO. 0-181-640

F spec - E45

Over pack attach



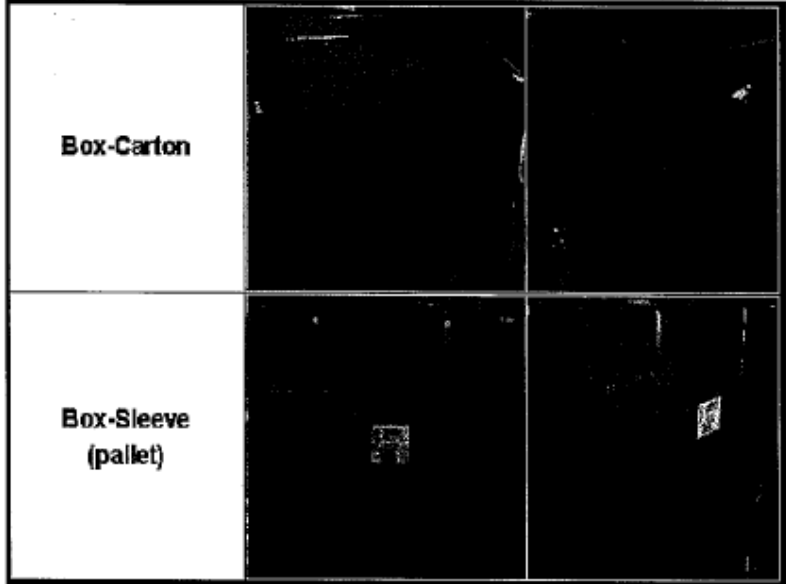
* Label-invoice



* Label-shipping



DRAWING
COPY STANDARD



TITLE/DESCRIPTION (E) (J)	EL DISPLAY ELEMENT EL 七ヶツ'ツ	MARKING NO. SB- AF071	SHEET 22
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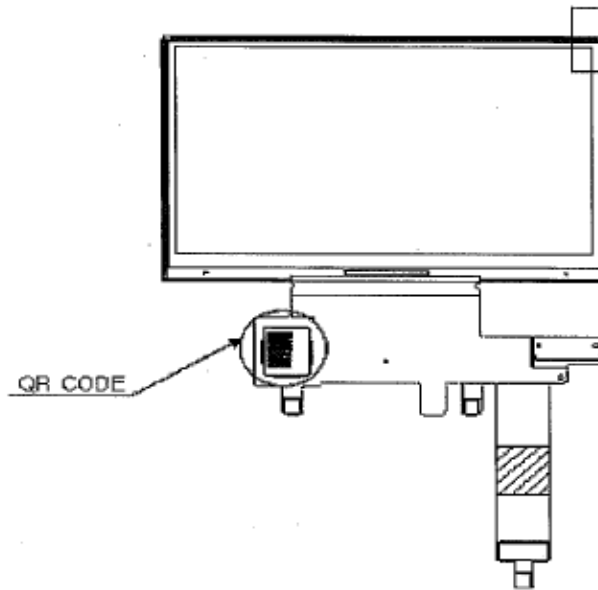
Module Marking Rule



<Marking Rule>

- (1)Module site : ex) D(DONGGUAN)/ T(TIANJIN)
- (2)Date : ex) 110715 (2011/ 07/ 15)
- (3)Product code : QA04
- (4)FPCB Maker : ex) 1 → SIFlex/ 2 → InterFlex

<Position>



△改版

TITLE/DESCRIPTION (E)	EL DISPLAY ELEMENT	DRAWING NO.	SHEET
(J)	EL 表示素子	SB-AF071	23

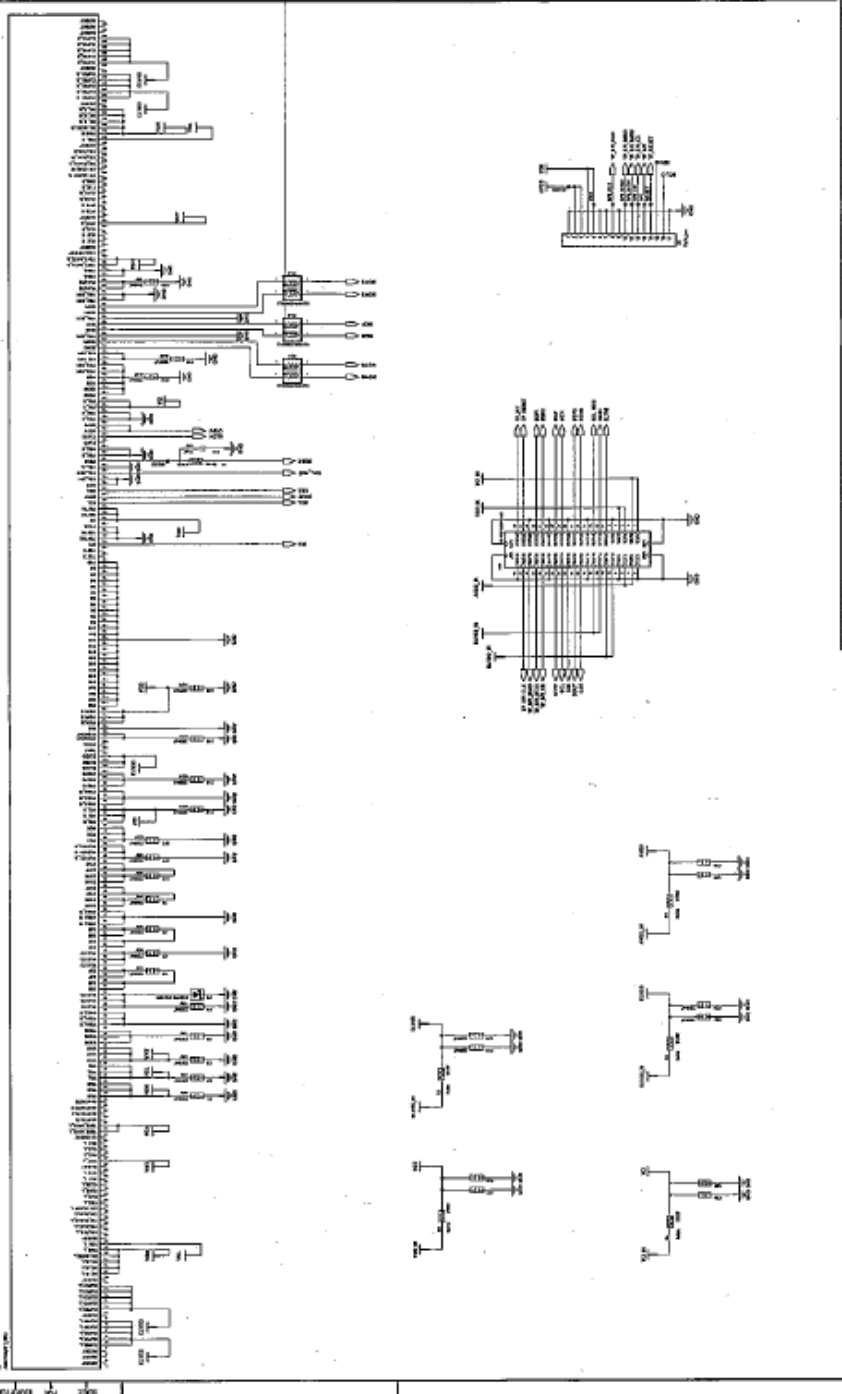
A4
07.5

TENTATIVE PART NO. 0-181-640

F spec - E45

SONY

12. Schematic
AMS495QA0# REV14.2



TELEVISION
EL DISPLAY ELEMENT
EL 4377-7P
PART NO. SB-AF071
24
F. app - 128

DRAWING
SCALE
FORM
MICROFILM

13. Marking

The following items shall be marked indelibly and legibly on the parts or each unit pack.

- 1 Manufacturer's name (abbreviated manufacturer's name permitted) or trade-mark.
- 2 Date of production or code (including Lot No.)
- 3 Country of origin
- 4 Part number of Sony
- 5
- 6
- 7
- 8

13. 表示

部品の表面または最小梱包単位毎に次の事項を容易に消えない方法で表示すること。

- 1 製造者名または商標あるいは略号
- 2 製造年月日または略号 (ロット番号も含む)
- 3 原産地
- 4 部品番号
- 5
- 6
- 7
- 8

14. Approval

1 Prior to delivery, supplier shall submit the following to the local purchasing department for approval:

- Approval sheets 納入仕様書 : 4 copies 部
- Samples サンプル : 4 pieces 個
- Theoretical data データ : 2 copies 部
- QC process chart (process control sheet) QC工程表 (工程管理図) : 1 copy 部

14. 検定

1 納入者は納入に先立ち、下記のものを担当資材部門に提出し、検定を受けること。

Approval sheets shall list the following items:

- a) All items designated in the specification. Furthermore, dimensions in detail, materials employed, finish and specifications.
- b) When materials such as plastics, rubber, fiber and other inflammables are used, the following shall be clearly indicated.
 - 1) Names of materials and manufacture's name
 - 2) Trade name and type
 - 3) Flammability classification in UL
 - 4) UL file No.
- c) For tin or zinc plated (including chrome treatment) products, specify whiskers prevention methods.
- d) If requested by Sony, include name of manufacturing plant and person(s) responsible for quality control in the approval sheet or in an attached sheet.
- e) Specifications, which are different from those requested by Sony, shall be marked with Δ and also listed on the cover of the approval sheets.

また納入仕様書は、次の事項を満足すること。

- 本仕様書に規定された各項目について記載し、細部の寸法、構成部品の材質・規格・公差について明記する。
- プラスチック、ゴム、ファイバ等の可燃性材料については材料名・材料メーカーと商品名と型番・ULの難燃性グレード・UL File No. を明記する。

- すずめっき・亜鉛めっき (クロメートも含む) した場合は、ウイスカ対策の内容について明記する。
- 指定する場合には製造所・品質管理責任者を明記または添付する。
- 本仕様書の要求と異なる箇所はΔ印を付け、さらに表紙にも表記する。

2 Prior to the alterations of specifications (including materials and construction) and/or manufacturing plant and/or production process etc., supplier shall consult with Sony and acquire approval as specified in clause 14.1.

2 仕様 (材料・構造も含む)、製造所・製造工程等の変更を希望する場合は、事前協議の上 14.1項の要領にて検定を受けること。

3 For procedures for filling out approval sheets (approval application documents), refer to SH-1233 "Supplier Specification - Electrical Parts -"

3 検定申請に関する手続きについては、SH-1233-01 「納入仕様書-電気部品-PART 1: 提出要領」を参照のこと。

TITLE/DESCRIPTION (E)	EL DISPLAY ELEMENT	DRAWING NO.	SB- AF071	SHEET	25
(J)	EL 電光管				

A4
10.10

TENTATIVE PART NO. 0-181-640

F spec - B05

SONY

NOTICE ON MATERIALS AND MANUFACTURING PROCESS 構成部品の材料・処理に関する注意事項

● Don't change written contents and append them. ● 記載内容を変更せず添付すること

SCALE FOR MICROFILM
0
SONY STACKING
DRAWING

1. この部品には SS-00259-01^{※1}に指定する物質を含んだ材料は、使用してはならない
 2. SS-00259-01^{※1}に指定する物質の使用有無については、納入仕様書にて明らかにすること
 3. 部品の分別処理を容易にする為、プラスチック材料部に材料記号を表示すること
表示する記号と詳細は、STM-1195-01^{※2}を参照すること
ただし、表示が困難な場合は除く
[困難な例]
・表示記号を入れる場所がない
・表示を入れることにより性能、機能を損なう恐れがある
・製造方法により表示が困難
 4. 再生樹脂・被覆電線はグリーンパートナー認定取引先から調達すること
-
1. This part should not contain any substances which are specified in SS-00259-01^{※1}.
 2. Clarify by delivery specifications about the existence of use of the substance which are specified in SS-00259-01^{※1}.
 3. In order to make sorting of plastic waste easy, material symbols is marked on the plastic part. For details on marking symbols, refer to STM-1195-01^{※2}.
Marking may be omitted in the following cases:
・ Not enough space to apply the marking
・ Marking would interfere with performance or functional requirements
・ Marking technically not feasible due to the specific production method
 4. Purchase recycled resins and wire rods only from the business partners that Sony approves as Green Partners.

※1 SS-00259-01 : Management Standards for the Restrictively-used Substances included in Parts and Devices
: 部品・デバイス等に含有される使用制限物質の管理基準
※2 STM-1195-01 : Markings of Plastics Parts and Packaging Materials Part 1: Markings of Plastic Parts
: プラスチック製部品・包装材の材料表示規定 PART 1: プラスチック製部品の材料表示規定

Remarks: When the supplier does not have SS-00259-01^{※1} and STM-1195-01^{※2}, ask the local purchasing department for sending them.
備考 : 納入者はSS-00259-01^{※1}, STM-1195-01^{※2}を有していない場合、担当資材部門に要求すること

TITLE/DESCRIPTION	EL DISPLAY ELEMENT	Drawing No.	SB- AF071
(E)			26
(J)	EL 表示素子		

A4
10.7

TENTATIVE PART NO. 0-181-840

Notice on materials and manufacturing process F spec - B02
構成部品の材料・処理に関する注意事項