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DATA SHEET

PART NO. : C-2AA0SRDT

REV : A / 1

CUSTOMER'S APPROVAL : _____

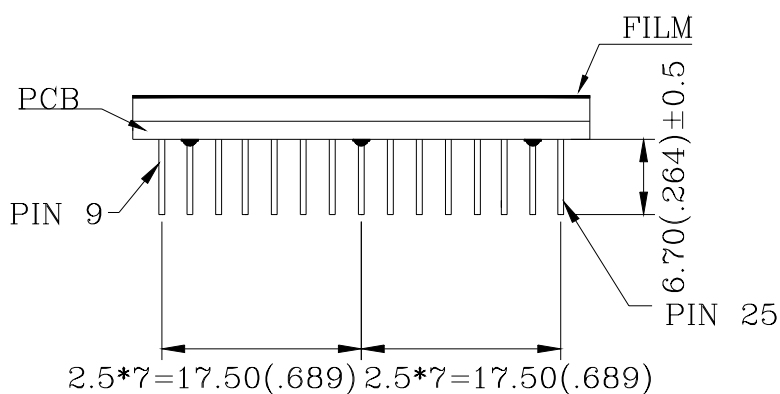
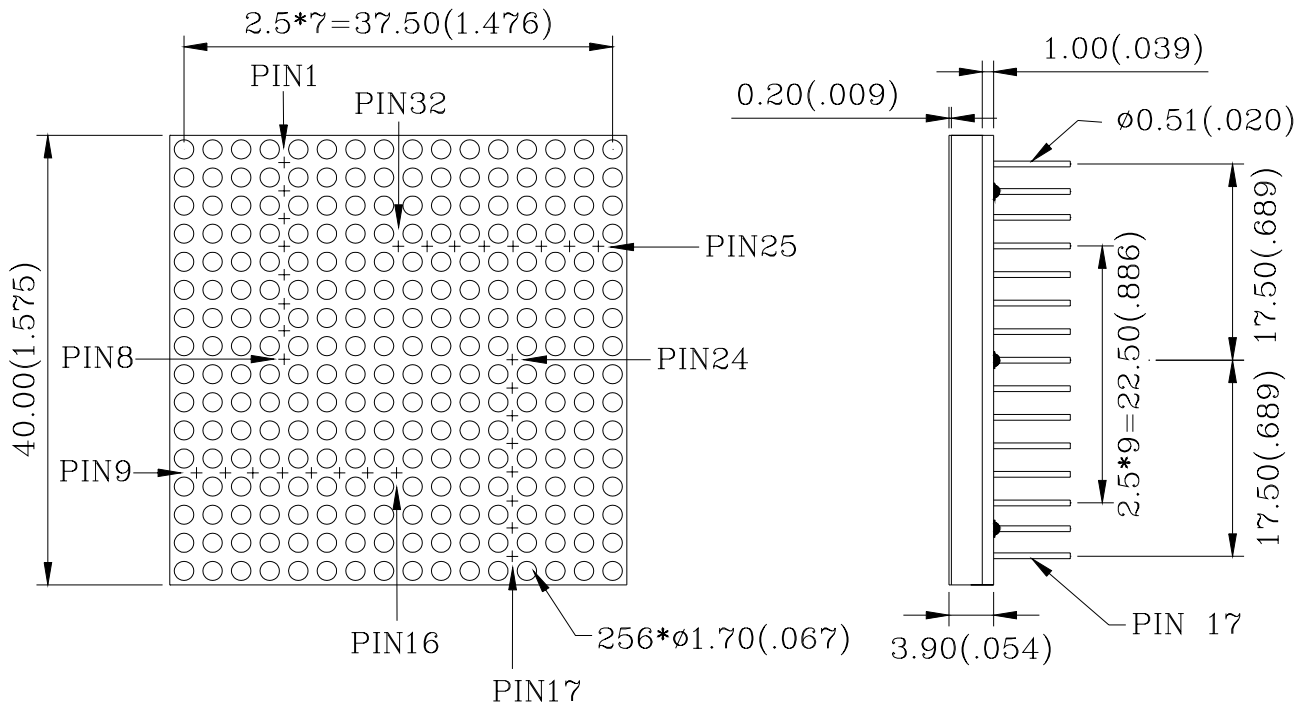
DCC : _____

DRAWING NO. : DS-16-04-0034

DATE : 2004-09-11

Page : 1

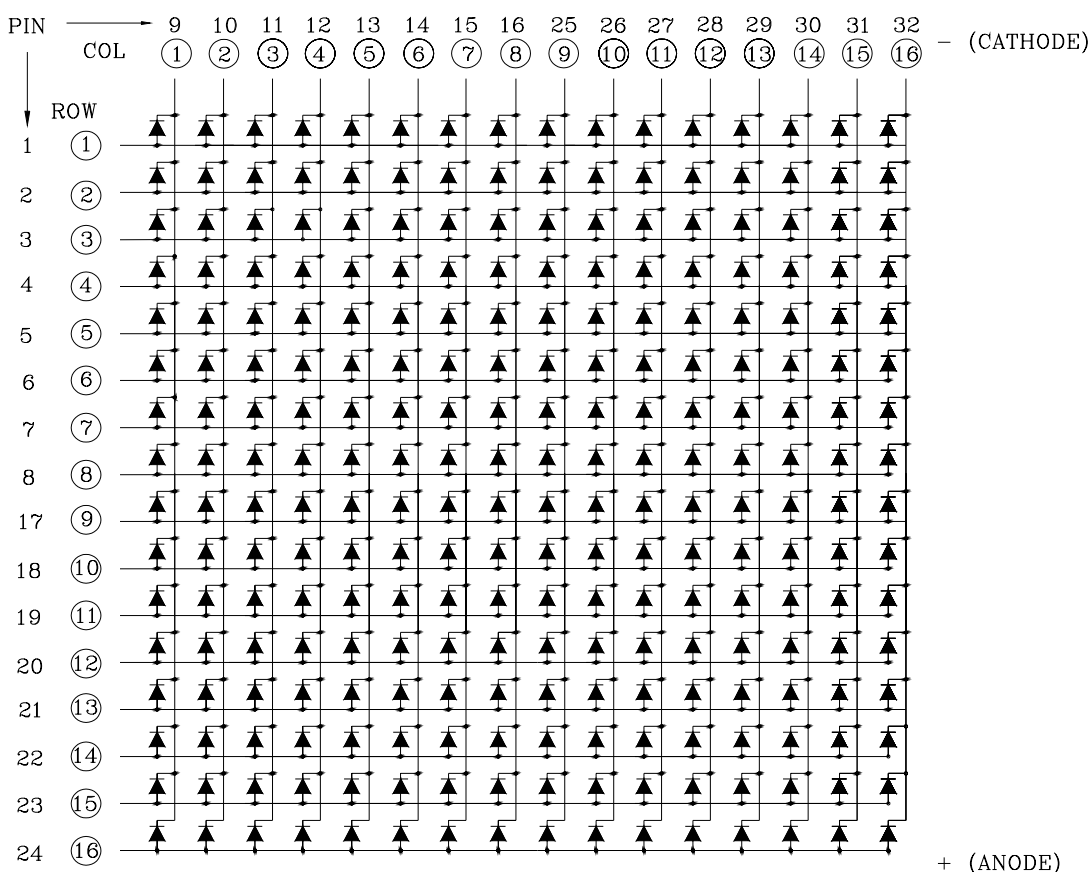
PACKAGE DIMENSIONS



COL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ROW	16	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	15	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	14	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	13	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	12	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	11	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	10	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	9	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	7	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	6	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	5	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	3	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	1	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

- NOTES :
1. All dimensions are in millimeters. (inches)
 2. Tolerance is $\pm 0.25(0.010)$ unless otherwise specified.
 3. We would like to offer you samples and mass production after you confirmed the DS and signed to return us

TYPICAL INTERNAL EQUIVALENT CIRCUIT



C-2AA0SRDT

PIN NO	FUNCTION	PIN NO	FUNCTION	PIN NO	FUNCTION	PIN NO	FUNCTION
1	Anode Row 1	9	Cathode Column 1	17	Anode Row 9	25	Cathode Column 9
2	Anode Row 2	10	Cathode Column 2	18	Anode Row 10	26	Cathode Column 10
3	Anode Row 3	11	Cathode Column 3	19	Anode Row 11	27	Cathode Column 11
4	Anode Row 4	12	Cathode Column 4	20	Anode Row 12	28	Cathode Column 12
5	Anode Row 5	13	Cathode Column 5	21	Anode Row 13	29	Cathode Column 13
6	Anode Row 6	14	Cathode Column 6	22	Anode Row 14	30	Cathode Column 14
7	Anode Row 7	15	Cathode Column 7	23	Anode Row 15	31	Cathode Column 15
8	Anode Row 8	16	Cathode Column 8	24	Anode Row 16	32	Cathode Column 16



1.57 INCH 16x16 DOT MATRIX DISPLAY

C-2AA0SRDT

REV:A / 1

FEATURES

- * 40.0mm (1.57 inch) MATRIX HEIGHT
- * 16x16ARRAY WITH X-Y SELECT
- * LOW POWER , HIGH CONTRAST & BRIGHTNESS
- * MATRIX ORIENTATION OF CATHODE COLUMN AND ANODE ROW
- * STACKABLE VERTICAL AND HORIZONTAL

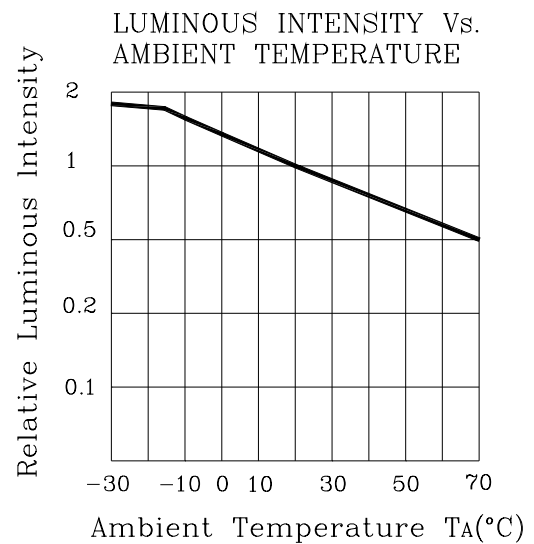
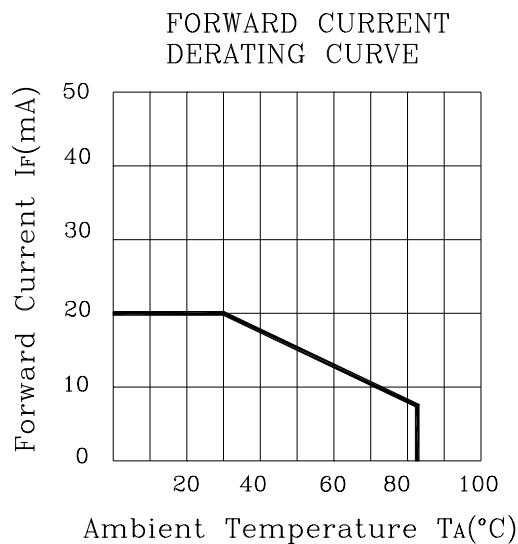
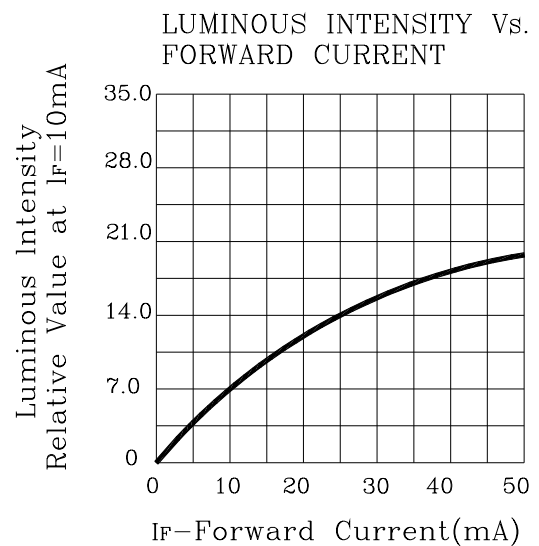
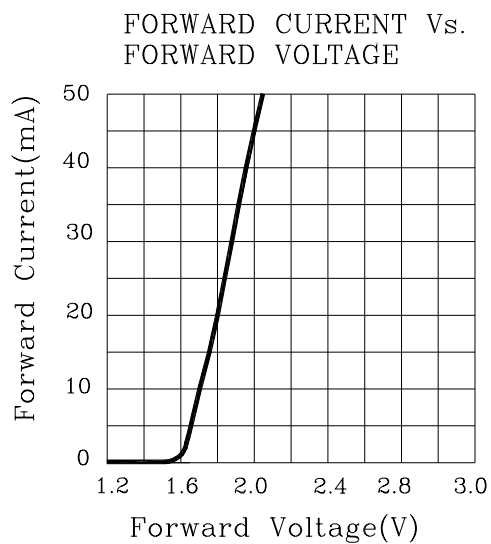
Raw Material : GaAlAs/GaAs

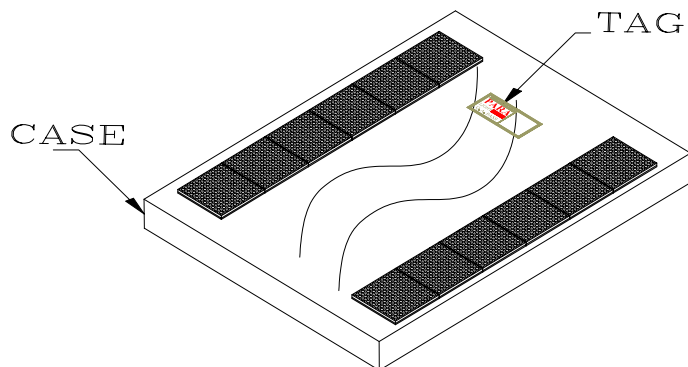
ABSOLUTE MAXIMUM RATING : (Ta = 25°C)

SYMBOL	PARAMETER	SUPER RED	UNIT
PAD	Power Dissipation Per Dot	60	mW
VR	Reverse Voltage Per Dot	5	V
IAF	Continuous Forward Current Per Dot	20	mA
IPF	Peak Forward Current Per Dot (Duty—0.1,1KHz)	100	mA
—	Derating Linear From 25°C Per Dot	0.33	mA/°C
Topr	Operating Temperature	—35°C to 85°C	
Tstg	Storage Temperature	—35°C to 85°C	
Solder Temperature 1/16 inch Below Seating Plane for 3 Seconds at 250°C			

ELECTRO-OPTICAL CHARACTERISTICS : (Ta = 25°C)

SYMBOL	PARAMETER	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
VF	Forward Voltage Any Dot	IF = 20mA		1.8	2.2	V
IR	Reverse Current Any Dot	VR = 5V			100	μA
λP	Peak Emission Wavelength	IF = 20mA		660		nm
λD	Dominant Wavelength	IF = 20mA		643		nm
Δλ	Spectral Line Half-Width	IF = 20mA		20		nm
IV	Luminous Intensity Per Dot	IF = 10mA		7.0		mcd

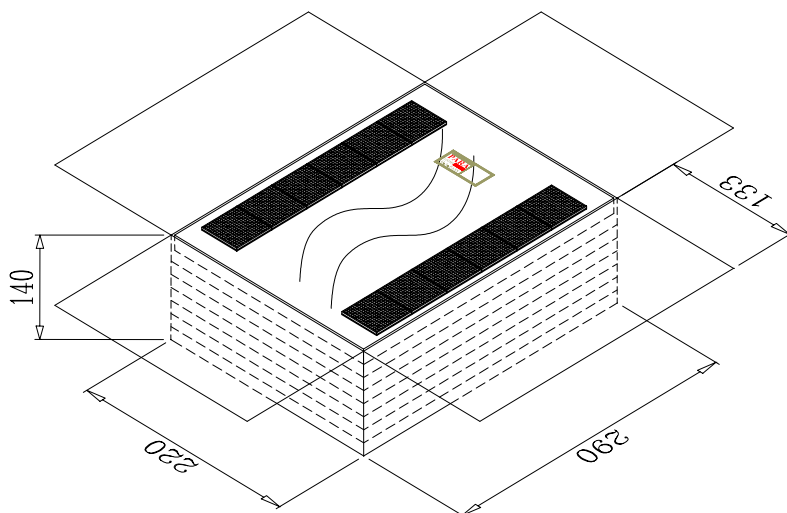




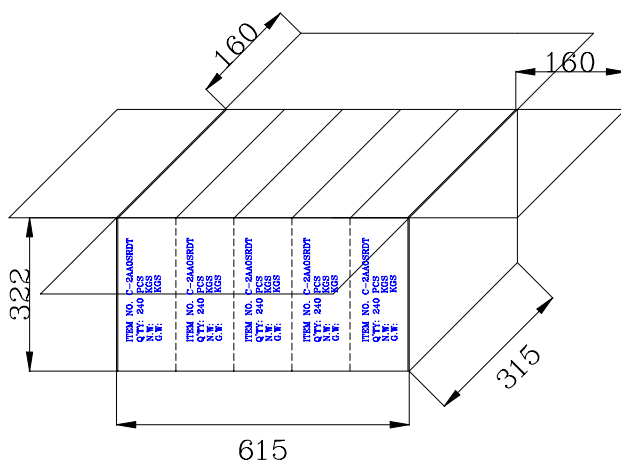
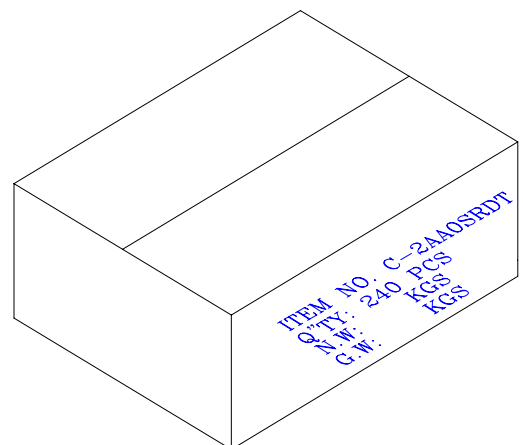
30 PCS/PIECE



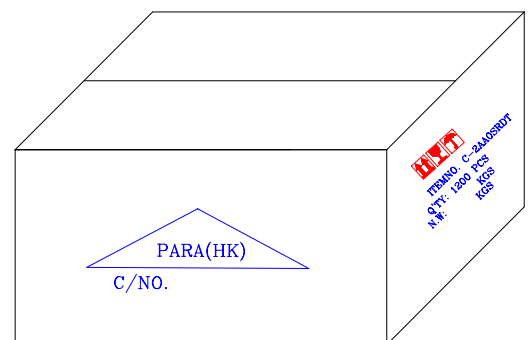
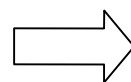
TAG (3:1)



8 PIECE/BOX



5 BOX/CTN



Experiment Item:

Item	Test Condition	Reference Standard
	Display	
OPERATION LIFE	Ta : $25 \pm 5^{\circ}\text{C}$ IF : 10~20 mA PER SEGMENT TEST TIME : 168HRS (-24HRS , +24HRS) 500HRS (-24HRS , +24HRS) 1000HRS (-24HRS , +72HRS)	MIL-STD-750 : 1026 MIL-STD-883 : 1005 JIS C 7021 : B-1
HIGH TEMPERATURE HIGH HUMIDITY STORAGE	Ta : $65^{\circ}\text{C} \pm 5^{\circ}\text{C}$ RH : 90~95%RH TEST TIME : 240HRS $\pm$ 2HRS	MIL-STD-202 : 103B JIS C 7021 : B-1
TEMPERATURE CYCLING	$85^{\circ}\text{C} \sim 25^{\circ}\text{C} \sim -35^{\circ}\text{C} \sim 25^{\circ}\text{C}$ 30min 5min 30min 5min 10CYCLES (COB : Thot : 65°C Tcold : -25°C)	MIL-STD-202 : 107D MIL-STD-750 : 1051 MIL-STD-883 : 1010 JIS C 7021 : A-4
THERMAL SHOCK	$85^{\circ}\text{C} \pm 5^{\circ}\text{C} \sim -35^{\circ}\text{C} \pm 5^{\circ}\text{C}$ 10min 10min 10CYCLES (COB : Thot : 65°C Tcold : -25°C)	MIL-STD-202 : 107D MIL-STD-750 : 1051 MIL-SYD-883 : 1011
SOLDER RESISTANCE	T , sol : $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$ DWELL TIME : 10 ± 1 sec	MIL-STD-202 : 210A MIL-STD-750-2031 JIS C 7021 : A-1
SOLDERABILITY	T , sol : $230^{\circ}\text{C} \pm 5^{\circ}\text{C}$ DWELL TIME : 5 ± 1 sec	MIL-STD-202 : 208D MIL-STD-750 : 2026 MIL-STD-883 : 2003 JIS C 7021 : A-2

•**SOLDERING**

METHOD	SOLDERING CONDITIONS	REMARK
DIP SOLDERING	Bath temperature: 260±5℃ Immersion time: with 5 sec	• Solder no closer than 2mm from the base of the package • Using soldering flux, "RESIN FLUX" is recommended.
SOLDERING IRON	Soldering iron: 30W or smaller Temperature at tip of iron: 260℃ or lower Soldering time: within 5 sec.	• During soldering, take care not to press the tip of iron against the PIN. (To prevent heat from being transferred directly to the PIN.)

- 1) When soldering the PIN of Display in a jig that the package is fixed with a panel (See fig.1), be careful not to stress the PIN with iron tip. When soldering Display in a condition that the package is fixed with a panel, be careful not to cling and stress the surface of Display on the panel to avoid damaging the Display.

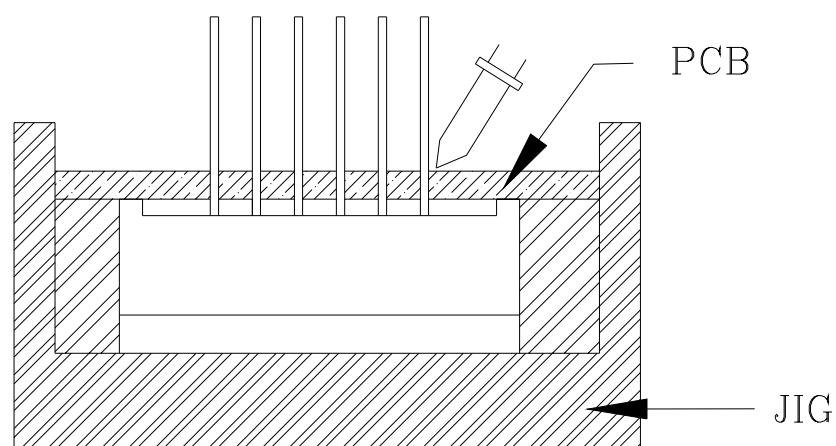


Fig.1

- 2) Similarly, when a jig is used to solder the Display to PC board, take care as much as possible to avoid steering the PIN (See Fig.2).

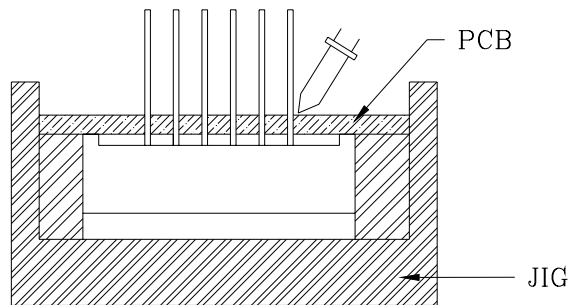


Fig.2

- 3) Repositioning after soldering should be avoided as much as possible. If inevitable, be sure to preserve the soldering conditions with irons stated above: select a best-suited method that assures the least stress to the Display.
- 4) PIN cutting after soldering should be performed only after the Display temperature has returned to normal temperature.

•LED MOUNTING METHOD

- 1) When mounting the Display by using a case, as shown Fig.3, ensure that the mounting holds on the PC board match the pitch of the PIN correctly-tolerance of dimensions of the respective components including the Display should be taken into account especially when designing the case, PC board, etc. to prevent pitch misalignment between the PIN and board holes, the diameter of the board holes should be slightly larger than the size of the PIN. Alternatively, the shape of the holes should be made oval. (See Fig.3)

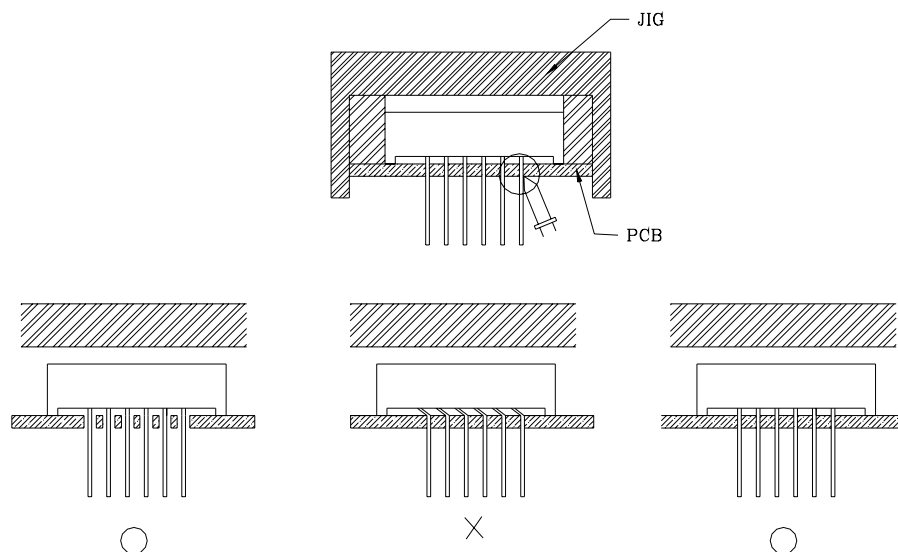


Fig.3

2) Use Display with holder made of resin (Fig.4) to position the PIN.

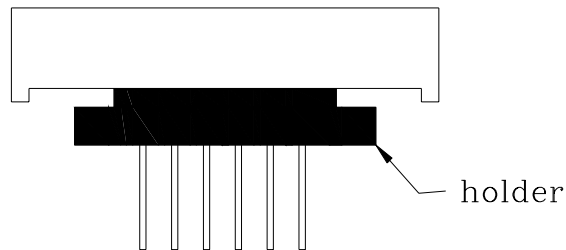


Fig.4

•FORMED LEAD

1) The PIN should be bent at a point located at least 2mm away from the package. Bending should be performed with base fixed means of a jig or pliers (Fig.5)

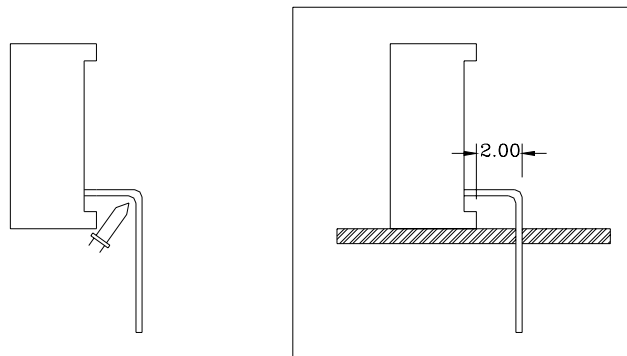


Fig.5

2) Forming PIN should be carried out prior to soldering and never during or after soldering.

3) Form the PIN of ensure alignment between the PIN and the hole on board, so that stress against the Display is prevented. (Fig.6)

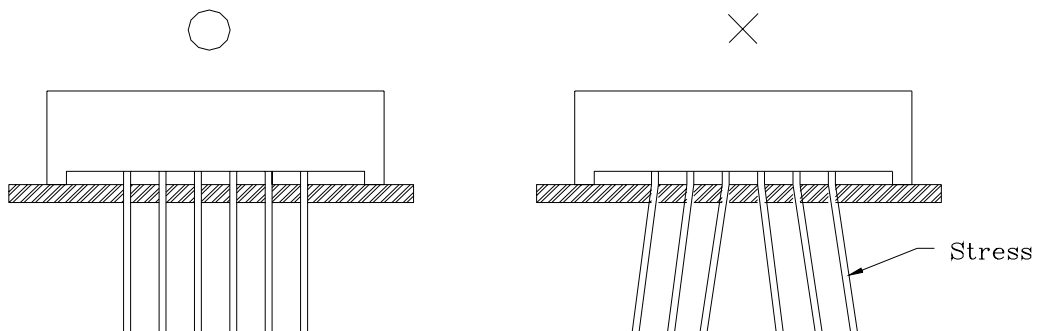


Fig.6

•LEAD STRENGTH

1) Bend strength

Do not bend the PIN more than twice. (Fig.7)

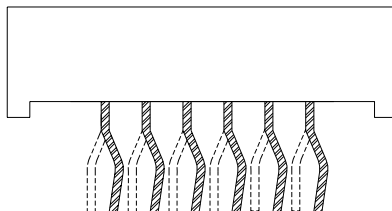


Fig.7

2) Tensile strength (@Room Temperature)

If the force is 1kg or less, there will be no problem. (Fig.8)

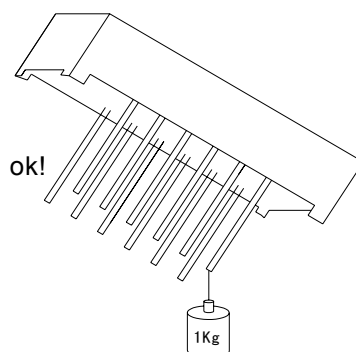


Fig.8

•HANDLING PRECAUTIONS

Although rigid against vibration, the Display may damaged or scratched if dropped. So take care when handling.

•CHEMICAL RESISTANCE

- 1) Avoid exposure to chemicals as it may attack the Display surface and cause discoloration.
- 2) When washing is required, refer to the following table for the proper chemical to be sued.

SOLVENT	ADAPTABILITY
Freon TE	⊙
Chlorothene	×
Isopropyl Alcohol	⊙
Thinner	×
Acetone	×
Trichloroethylene	×

⊙--Usable

×--Do not use.