NAN YA PLASTICS CORPORATION

SPECIFICATION OF

LCD MODULE

PRODUCT NO.: LDA43H580JDS

SPEC. NO.: LM580-0E-△0

CUSTOMER
APPROVED BY
DATE:

EDITED ON : OCT.01, 2007

LCD DEPARTMENT
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Q.C. DEPT.	DESIGN MANAGER	DESIGN CHECK	DESIGNER
			J.P Weng

RECORDS OF REVISION

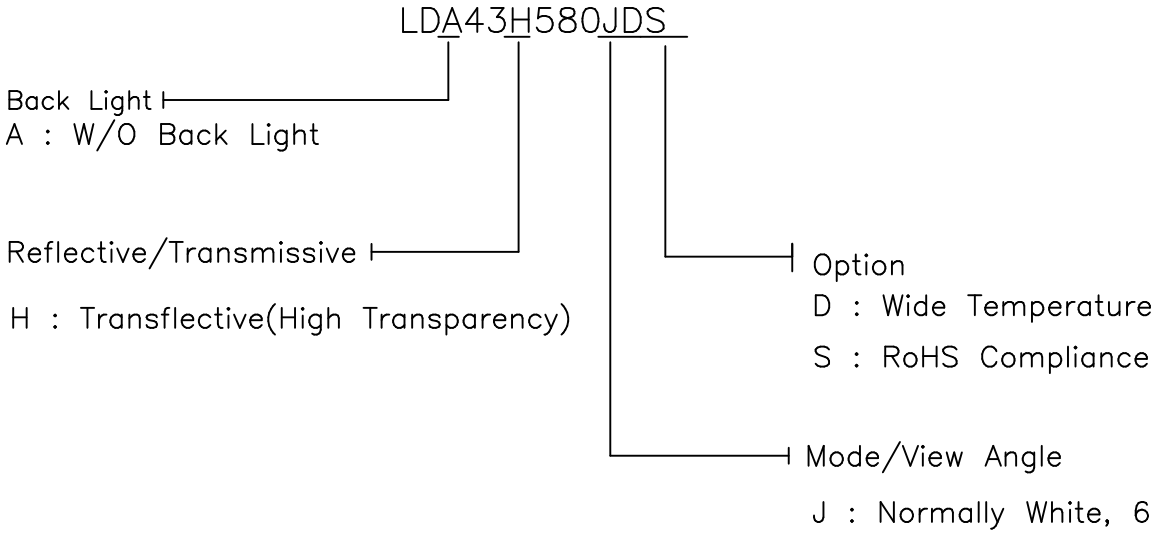
SPEC. NO. : LM580-0E

DATE	REVISED NO.	REF. PAGE	SUMMARY	DESIGN	CHECK
10.01.07'	0	1/23~23/23	First Issue	J.P Weng	

1. MECHANICAL DATA

NO	ITEM	CONTENTS	UNIT
1	Product No.	LDA43H580JDS	–
2	Module Size	48.0 (W) x 36.0 (H)x MAX2.0 (D)	mm
3	Dot Size	0.27 (W) x 0.27 (H)	mm
4	Dot Pitch	0.31 (W) x 0.31 (H)	mm
5	Number of Dots	128 x(W) x64 (H)	Dot
6	Duty	1/64	–
7	LCD Display Mode	FSTN Normally White / Positive Image	–
8	Rear Polarizer	Transflective(High Transparency)	–
9	Viewing Direction	6	O'clock
10	Backlight	W/O	–
11	Controller	S6B1713A11-B0CZ	–
12	Weight	7.5 g (approx)	g

Note :



RoHS Compliance.

Nan Ya guarantees that this project doesn't include any materials (6 materials) or includes less than specified quantities which are regulated by RoHS Compliance.

2. ABSOLUTE MAXIMUM RATINGS

(1) ELECTRICAL ABSOLUTE RATINGS

VSS=0V

	SYMBOL	MIN.	MAX.	UNIT	COMMENT
Power Supply for Logic	VDD-VSS	-0.3	5.5	V	
Input Voltage	VI	-0.3	VDD	V	
Static Electricity	-	-	-	-	Note 1

Note 1 LCM should be grounded during handling LCM.

(2) ENVIRONMENTAL ABSOLUTE MAXIMUM RATINGS

ITEM	WIDE TEMP.			
	OPERATING		STORAGE	
	MIN.	MAX.	MIN.	MAX.
Ambient Temperature	-20	70	-40	80
Humidity (Without Condensation)	Note 2,4		Note 3,4	

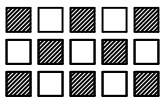
Note 2 Ta ≦ 70°C : 75%RH max

Note 3 Please refer to item of reliability test

Note 4 Background color will change slightly depending on ambient temperature. That phenomenon is reversible.

3. ELECTRICAL CHARACTERISTICS

3-1. CHARACTERISTICS OF LCM

ITEM	SYMBOL	CONDITION		MIN.	TYP.	MAX.	UNIT
Power Supply Voltage	VDD-VSS	-		2.5	3.0	3.5	V
Input Voltage	VIH	H level		0.8VDD	-	VDD	V
	VIL	L level		0	-	0.2VDD	V
Recommended LCD Driving Voltage (WIDE TEMP. LCM)	VOP	(*Note)	-20°C	10.5	10.9	11.3	V
			0°C	9.0	9.4	9.8	
			25°C	8.4	8.8	9.2	
			50°C	8.2	8.6	9.0	
			70°C	8.1	8.5	8.9	
Power Supply Current	IDD	VDD = 3.0V 		-	0.6	1.0	mA

(1)Duty=1/64, Bias=1/9
(2)Internal Resistance Ratio Register : (1,1,0)Binary
(3)Electronic Volumn Value : (16)Decimal
(4)Range of Electronic Volumn Control : (16±7)Decimal

4. OPTICAL CHARACTERISTICS

AT V_{OP}

ITEM / MODE		Cr(Contrast Ratio)										θ(Viewing Angle)		ϕ(Viewing Angle)	
		−20°C		0°C		25°C		50°C		70°C		25°C		25°C	
		MIN.	TYP.	MIN.	TYP.	MIN.	TYP.	MIN.	TYP.	MIN.	TYP.	MIN.	TYP.	MIN.	TYP.
H	J	2	3	3	4	3.5	5	2	3	1.5	2	–	F:35 R:30	–	L:30 R:30
NOTE		NOTE 6										NOTE 5			

NOTE :

H : Transflective(High Transparency)

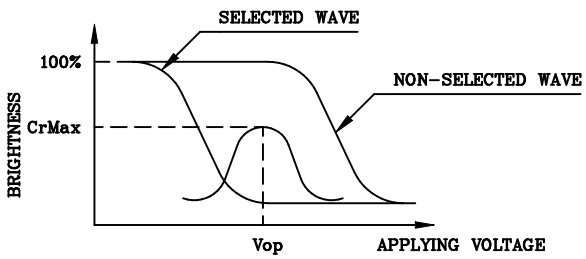
J : Normally White, 6 O'clock

AT ϕ=0° θ=0°

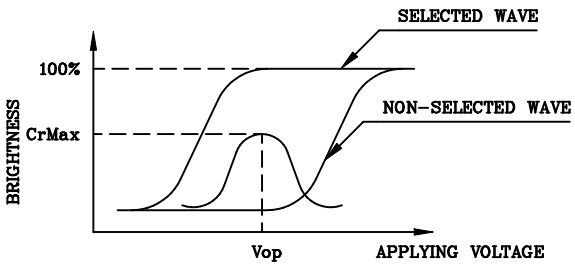
ITEM	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT	NOTE
Response Time (rise)	Tr	−20℃	8560	10700	16050	ms	NOTE 2
		0℃	1200	1500	2250		
		25℃	240	300	450		
		50℃	80	100	150		
		70℃	50	60	90		
Response Time (fall)	Tf	−20℃	6320	7900	11850	ms	NOTE 2
		0℃	720	900	1350		
		25℃	160	200	300		
		50℃	55	70	105		
		70℃	50	60	90		

(NOTE 1)

Definition of Operation Voltage(Vop)



(positive type)



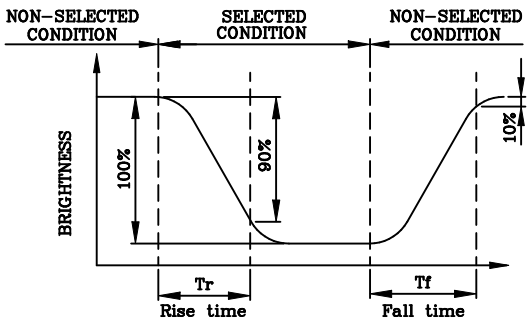
(negative type)

*Conditions

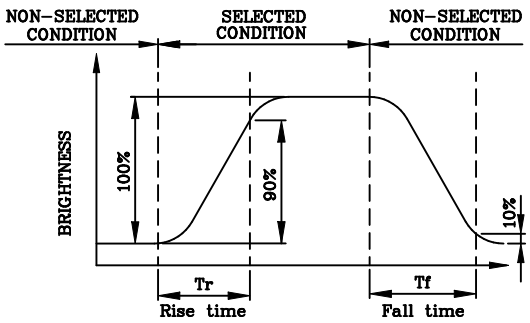
Viewing Angle : 0
Frame Frequency : 70Hz
Applying Waveform : 1/N duty 1/a bias

(NOTE 2)

Definition of Response Time(Tr,Tf)



(positive type)



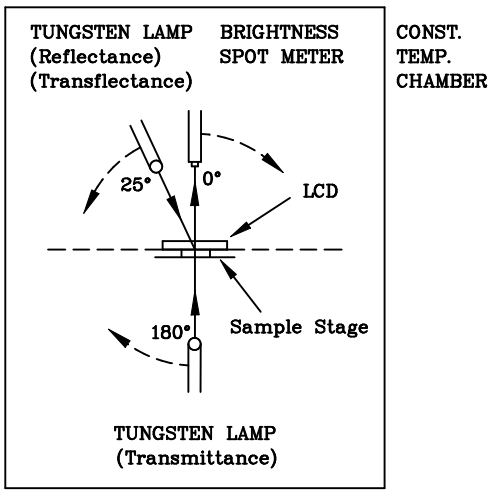
(negative type)

*Conditions

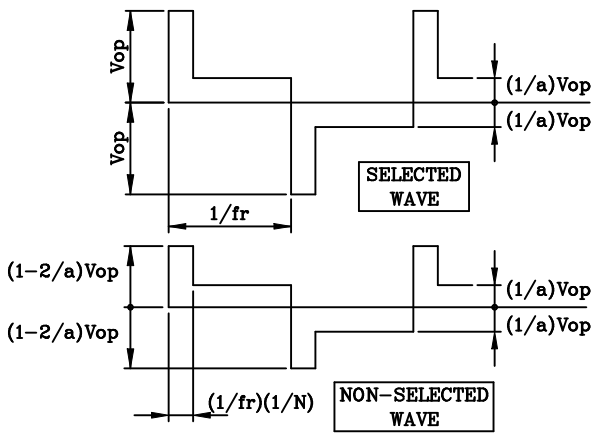
Operating Voltage : Vop
Viewing Angle (θ,ϕ) : (0,0)
Frame Frequency : 70Hz
Applying Waveform : 1/N duty 1/a bias

(NOTE 3)

Description of Measuring Equipment and Driving Waveforms

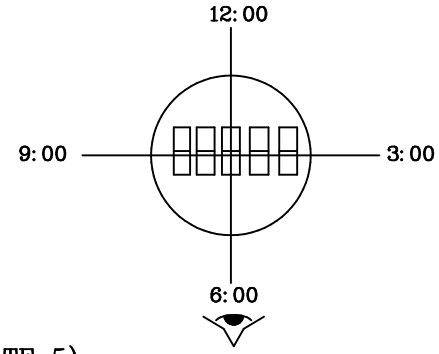


Multiplex Driving (1/N duty 1/a bias)



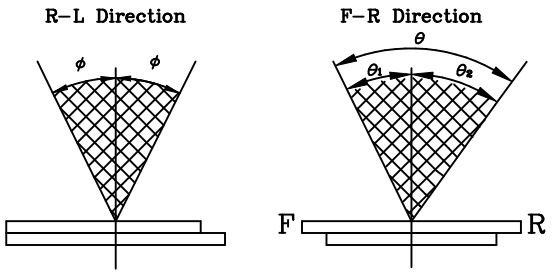
(NOTE 4)

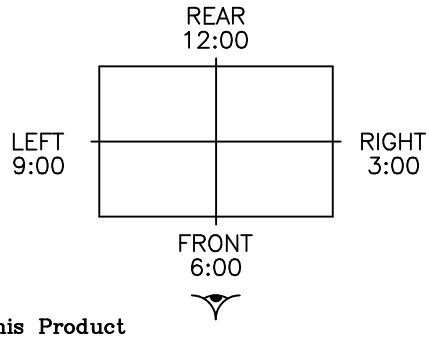
Definition of Viewing Direction



(NOTE 5)

Definition of Viewing Angle





*For This Product

The Viewing Direction Is 12 O'clock

So $\theta 1 > \theta 2$

$\theta = \theta_1 + \theta_2$

*Conditions

Operating Voltage : Vop

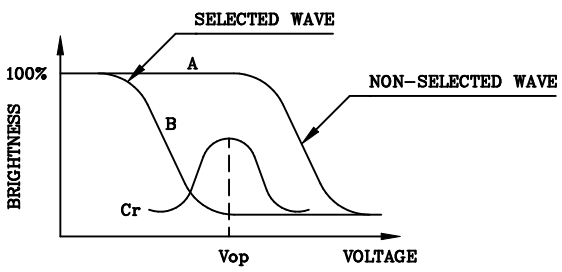
Frame Frequency : 70Hz

Applying Waveform : 1/N duty 1/a bias

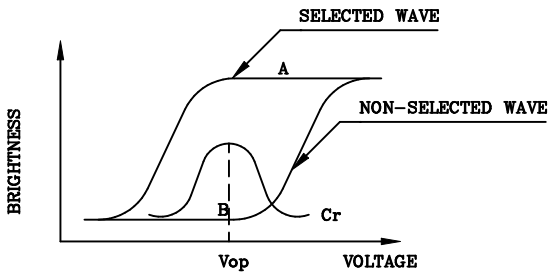
Contrast Ratio : larger than 2

(NOTE 6)

Definition of Contrast Ratio (Cr)



(positive type)



(negative type)

Contrast Ratio : Cr=A/B

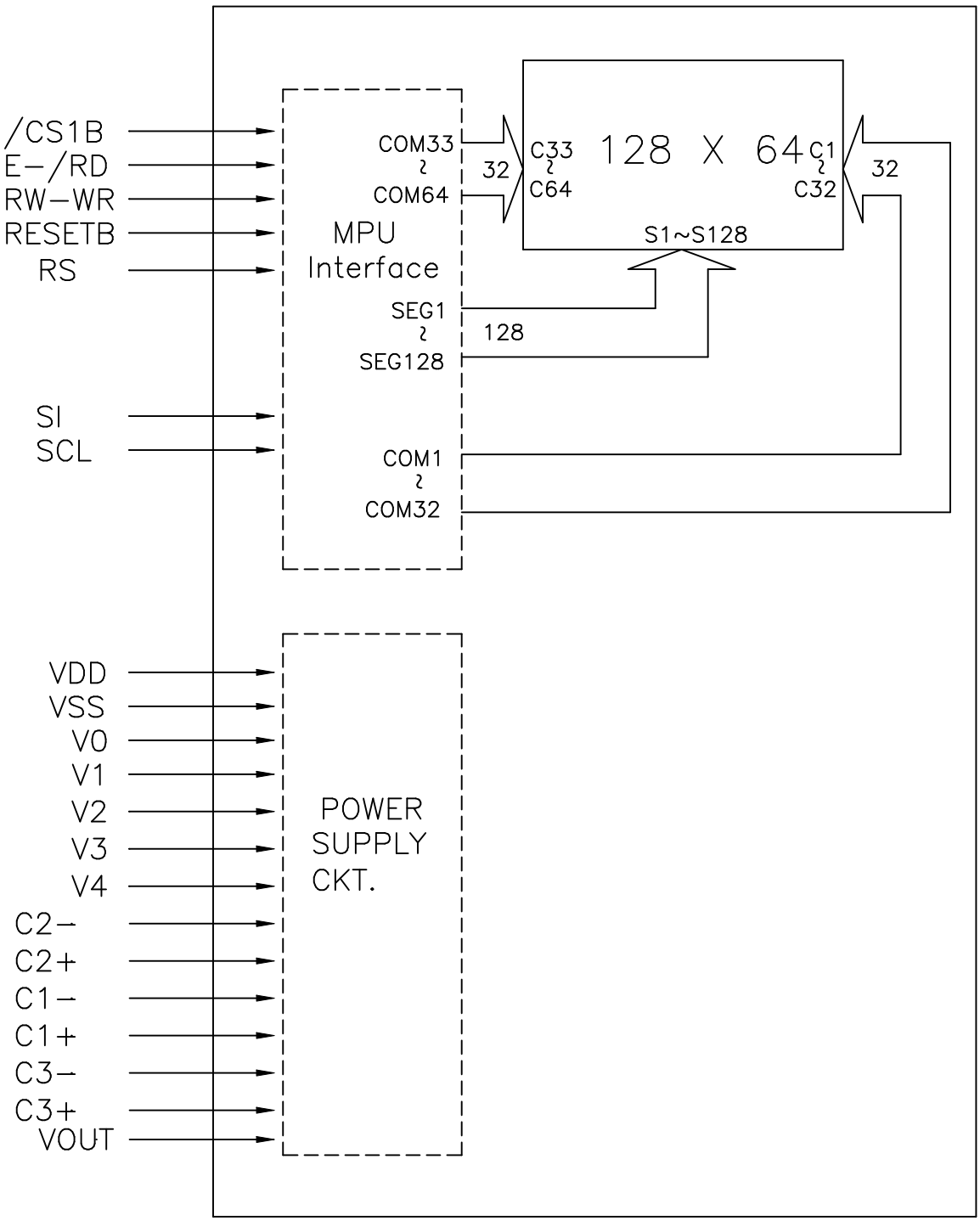
*Conditions

Viewing Angle : 0

Frame Frequency : 70Hz

Applying Waveform : 1/N duty 1/a bias

5. MPU INTERFACE/BLOCK DIAGRAM



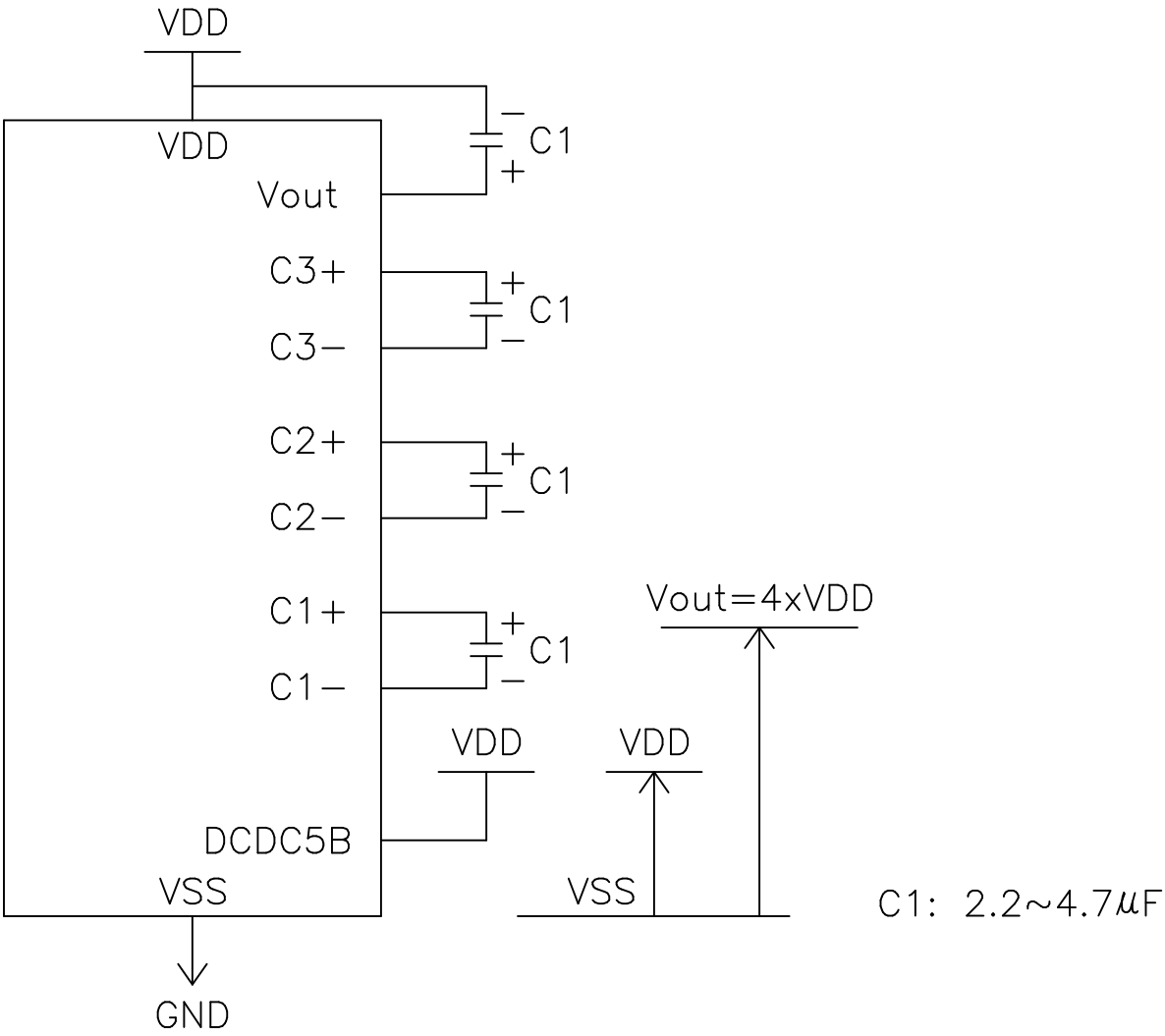
6. INTERNAL PIN CONNECTION

Used Cable : FPC , 1.0mm , 27 Pins , thickness 0.3mm.

Mating Connector : ELCO/6224 027 100 800+ OR EQUIVALENT

PIN NO	SYMBOL	FUNCTION
1	V4	POWER SUPPLY FOR THE LIQUID CRYSTAL DRIVE
2	V3	
3	V2	
4	V1	
5	V0	
6	C2−	CONNECT FOR THE INTERNAL VOLTAGE CONVERTER
7	C2+	
8	C1−	
9	C1+	
10	C3−	
11	C3+	
12	Vout	VOLTAGE CONVERTER OUTPUT
13	VDD	POWER SUPPLY CONNECT TO MPU POWER SUPPLY PIN
14	VSS	0V (GND)
15	DB7	DATA BUS
16	DB6	
17	DB5	
18	DB4	
19	DB3	
20	DB2	
21	DB1	
22	DB0	
23	E	WHEN INTERFACING TO A 6800 SERIES MPU : ACTIVE HIGH
24	RW	"H" : READ , "L" : WRITE
25	RS	REGISTER SELECT INPUT
26	RESETB	HARDWARE RESET INPUT
27	CS1B	CHIP SELECT INPUT

7.POWER SUPPLY/BOOSTER CAPACITANCE



8. KS0713 Series Commands

Instruction	RS	RW	DB7	DB6	DB5	DB4	DB3	DB2	DB1	DB0	Function
Read display data	1	1	Read data								Read data from DDRAM
Write display data	1	0	Write data								Write data into DDRAM
Read status	0	1	BUSY	ADC	ON/ OFF	RESETB	0	0	0	0	Read the intemal status
Display ON/OFF	0	0	1	0	1	0	1	1	1	DON	Tum ON/OFF LCD panel When DON=0,display is OFF When DON=1,display is ON
Initial display line	0	0	0	1	ST5	ST4	ST3	ST2	ST1	ST0	Specify DDRAM line for COM1
Set reference voltage mode	0	0	1	0	0	0	0	0	0	1	Set reference voltage mode
Set reference voltage register	0	0	×	×	SV5	SV4	SV3	SV2	SV1	SV0	Set reference voltage register
Set page address	0	0	1	0	1	1	P3	P2	P1	P0	Set page address
Set column address MSB	0	0	0	0	0	1	Y7	Y6	Y5	Y4	Set column address MSB
Set column address LSB	0	0	0	0	0	0	Y3	Y2	Y1	Y0	Set column address LSB
ADC select	0	0	1	0	1	0	0	0	0	AON	Select SEG output direction When ADC=0 normal direction(SEG1→SEG132) When ADC=1 reverse direction(SEG132→SEG1)
Reverse display ON/OFF	0	0	1	0	1	0	0	1	1	REV	Select normal/reverse display When REV=0 normal When REV=1 reverse
Entire display ON/OFF	0	0	1	0	1	0	0	1	0	EON	Select normal display/ entire display ON When EON=0,normal display When EON=1,entire display ON
LCD bias select	0	0	1	0	1	0	0	0	1	BIAS	Select LCD bias
Set modify-read	0	0	1	1	1	0	0	0	0	0	Set modify-read mode
Reset modify-read	0	0	1	1	1	0	1	1	1	0	Release modify-read mode
Reset	0	0	1	1	1	0	0	0	1	0	Initialize internal functions
SHL select	0	0	1	1	0	0	SHL	×	×	×	Select COM output direction When SHL=0 normal direction(COM1→COM64) When SHL=1 reverse direction(COM64→COM1)
Power control	0	0	0	0	1	0	1	VC	VR	VF	Control power circuit operation
Regulator resistor select	0	0	0	0	1	0	0	R2	R1	R0	Select resistance ratio of the regulator resistor
Set static indicator mode	0	0	1	0	1	0	1	1	0	SM	Set static indicator mode
Set static indicator register	0	0	×	×	×	×	×	×	S1	S0	Set static indicator register
Power save	–	–	–	–	–	–	–	–	–	–	Compound instruction of display OFF and entire display
Test instruction	0	0	1	1	1	1	×	×	×	×	Don't use this instruction

NOTE : "×"=Don't care

8.1 DISPLAY DATA RAM and ADDRESSES

Page Address D3D2D1D0	Data									Line address	COM output
0,0,0,0	D0	■	■	■					Page 0	00H	COM0
	D1	■				■				01H	COM1
	D2	■								02H	COM2
	D3		■	■	■					03H	COM3
	D4					■				04H	COM4
	D5	■				■				05H	COM5
	D6		■	■	■					06H	COM6
	D7									07H	COM7
0,0,0,1	D0								Page 1	08H	COM8
	D1									09H	COM9
	D2									0AH	COM10
	D3									0BH	COM11
	D4									0CH	COM12
	D5									0DH	COM13
	D6									0EH	COM14
	D7									0FH	COM15
0,0,1,0	D0~D7								Page 2	10H~17H	COM16~COM23
0,0,1,1	D0~D7								Page 3	18~1FH	COM24~COM31
0,1,0,0	D0~D7								Page 4	20H~27H	COM32~COM39
0,1,0,1	D0~D7								Page 5	28H~2FH	COM40~COM47
0,1,1,0	D0								Page 6	30H	COM48
	D1									31H	COM49
	D2									32H	COM50
	D3									33H	COM51
	D4									34H	COM52
	D5									35H	COM53
	D6									36H	COM54
	D7									37H	COM55
0,1,1,1	D0								Page 7	38H	COM56
	D1									39H	COM57
	D2									3AH	COM58
	D3									3BH	COM59
	D4									3CH	COM60
	D5									3DH	COM61
	D6									3EH	COM62
	D7									3FH	COM63
1,0,0,0	D0								Page 8		COMS

Column address														
	ADC	D0=0	83	82	81	80	7F	7E	7D	7C	---	82	83
		D0=1	83	82	81	80	7F	7E	7D	7C	---	01	00
	LCD OUT		SEG0	SEG1	SEG2	SEG3	SEG4	SEG5	SEG6	SEG7	---	SEG130	SEG131

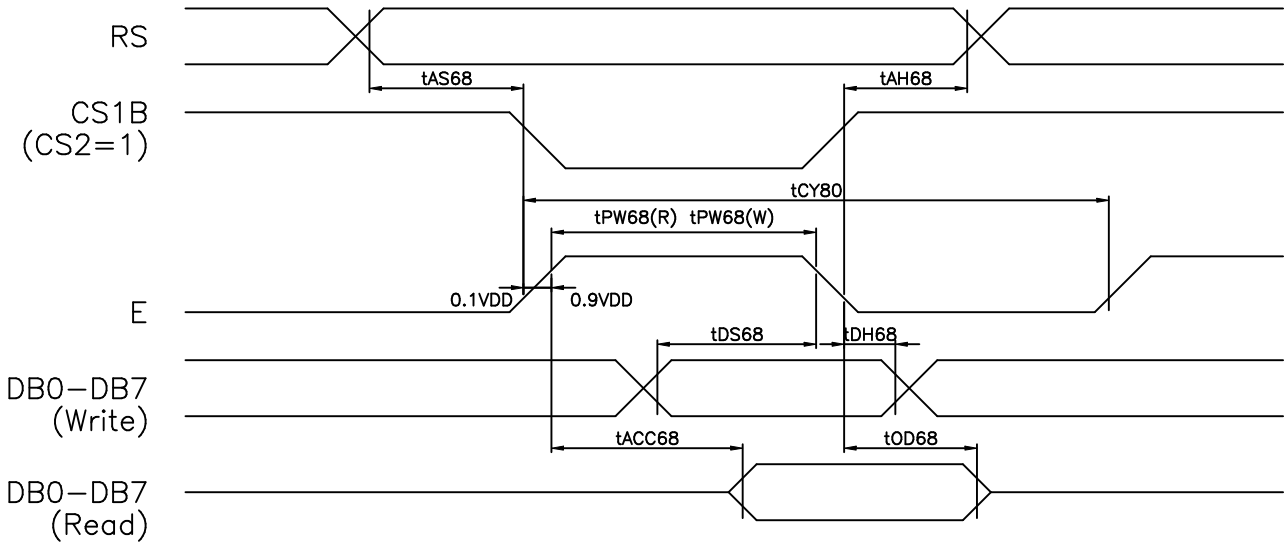
when the common output mode is normal

1/64

Start

8.3 TIMING CHARACTERISTICS

(For 6800 Series MPU)



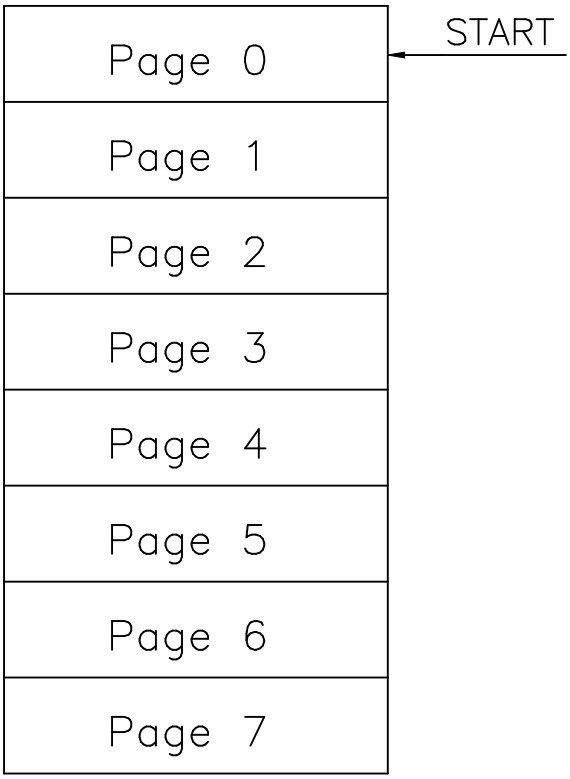
(VDD=2.4V–3.3V,Ta=–40 to +85°C)

Item		Signal	Symbol	Min.	Typ.	Max.	Unites	Remark
Address setup time Address hold time		RS	tAS68 tAH68	13 17	– –	– –	ns	
System cycle time		RS	tCY68	400	–	–	ns	
Data setup time Data hold time		DB0–DB7	tDS68 tDH68	35 13	– –	– –	ns	
Access time Output disable time			tACC68 tOD68	– 10	– –	125 90	ns ns	CL=100pF
Enable Pulse width	Read Write	E_RD	tPW68(R) tPW68(W)	125 55	–	–	–	

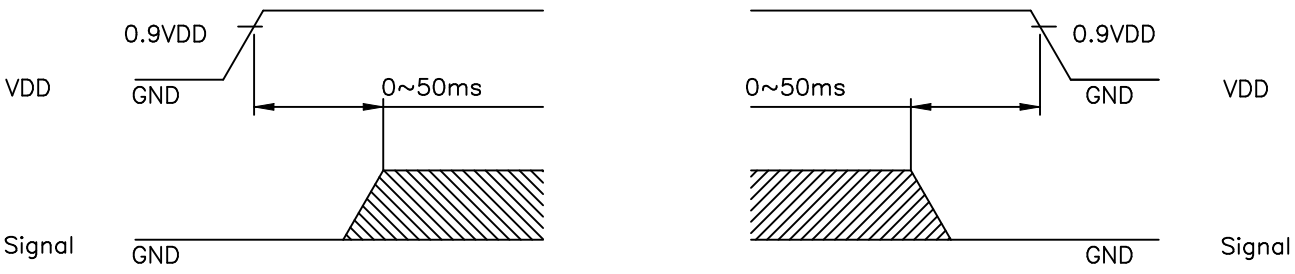
(VDD=4.5V–5.5V,Ta=–40 to +85°C)

Item		Signal	Symbol	Min.	Typ.	Max.	Unites	Remark
Address setup time Address hold time		RS	tAS68 tAH68	10 10	– –	– –	ns	
System cycle time		RS	tCY68	150	–	–	ns	
Data setup time Data hold time		DB0–DB7	tDS68 tDH68	18 10	– –	– –	ns	
Access time Output disable time			tACC68 tOD68	– 10	– –	65 45	ns ns	CL=100pF
Enable Pulse width	Read Write	E_RD	tPW68(R) tPW68(W)	65 25	–	–	–	

8.5 DISPLAY PATTERN



8.6 POWER ON/OFF TIMING



The missing pixels may occur when the LCM is driven beyond above power interface timing sequence.

9. RELIABILITY TEST

WIDE TEMPERATURE RELIABILITY TEST

NO	ITEM	CONDITION			STANDARD	NOTE
1	High Temp. Storage	80°C	120Hrs		Appearance without defect	
2	Low Temp. Storage	−40°C	120Hrs		Appearance without defect	
3	High Temp. & High Humi. Storage	60°C 90%RH	120Hrs		Appearance without defect	
4	High Temp. Operating Display	70°C	120Hrs		Appearance without defect	
5	Low Temp. Operating Display	−20°C	120Hrs		Appearance without defect	
6	Thermal Shock	−20°C,30min → 70°C,30min ↑ (1cycle)			Appearance without defect	10 cycles

Inspection Provision

1.Purpose

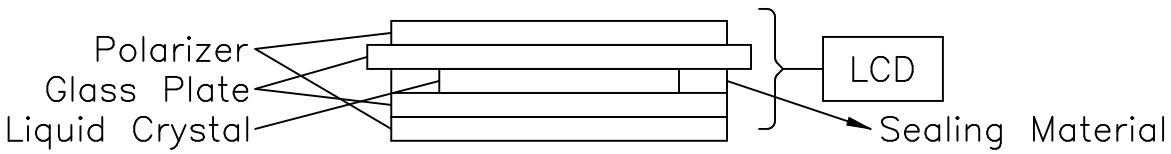
The NAN YA inspection provision provides outgoing inspection provision and its expected quality level based on our outgoing inspection of NAN YA LCD produces.

2.Applicable Scope

The NAN YA inspection provision is applicable to the arrangement in regard to outgoing inspection and quality assurance after outgoing.

3.Technical Terms

3-1 NAN YA Technical Terms



4.Outgoing Inspection

4-1 Ispection Method

MIL-STD-105E Level Ⅱ Regular inspection

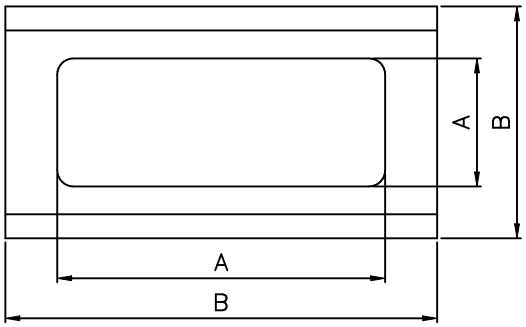
4-2 Inspection Standard

	Item		AQL(%)	Remarks
Major Defect	Dots	Opens Shorts Erroneous operation	0.4	faults which substantially lower the practicality and the initial purpose difficult to achieve.
	Solder appearance	Shorts Loose		
	Cracks	Display surface cracks		

	Dimensions	External from Dimensions	0.4	
Minor Defect	Inside the glass	Black spots	0.65	faults which appear to pose almost no obstacle to the practicality, effective use, and operation.
	Polarizing plate	Scratches, foreign Matter, air bubbles, and peeling		
	Dots	Pinhole, deformation		
	Color tone	Color unevenness		
	Solder appearance	Cold solder Solder projections		

4-3 Inspection Provisions
*Viewing Area Definition

Fig. 1



A : Zone Viewing Area
B : Zone Glass Plate Out Line

*Inspection place to be 500 to 1000 lux illuminance uniformly without glaring.
The distance between luminous source(daylight fluorescent lamp and cool white fluorescent lamp) and a sample to be 30cm to 50cm.

*Test and measurement are performed under the following conditions, unless otherwise specified.

Otherwise specfied.

Temperature	20± 15°C
Humidity	65± 20%R.H..
Pressure	860~1060hPa(mmbar)

In case of doubtful judgment, it is performed under the following conditions.

Temperature	20± 2°C
Humidity	65± 5%R.H..
Pressure	860~1060hPa(mmbar)

5.Specification for quality check

5-1 Electrical characteristics

NO.	Item	Criterion
1.	Non operational	Fail
2.	Miss operating	Fail
3.	Missing dot	Fail
4.	Contrast irregular	Fail
5.	Response time	Within Specified value

5-2 External Appearance Defect

<table>
<tr><th>NO.</th><th>Item</th><th>Criterion</th></tr>
<tr><td>1.</td><td>Black spots, foreign matter, and white spots (Including light leakage due to pinholes of polarizing plates, etc.)</td><td>(1)-1-Spots(At non lighting condition)

<table>
<tr><th>Average Diameter(mm):D</th><th>Number of pieces permitted</th></tr>
<tr><td>D≦0.1</td><td>Ignore</td></tr>
<tr><td>0.1<D≦0.2</td><td>5</td></tr>
<tr><td>0.2<D≦0.3</td><td>2</td></tr>
<tr><td>0.3<D</td><td>0</td></tr>
</table>
Number of total pieces is set to within 5 pieces.

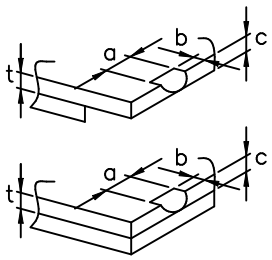
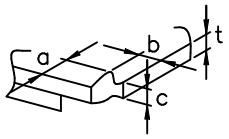
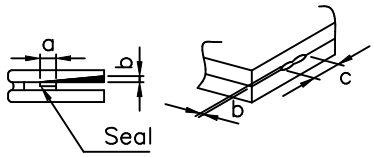
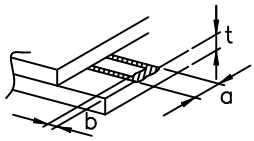
Note that when there are 2 pieces or more, they are not to be concentrated.
Set as: Average diameter = (Long diameter + Short diameter)/2

(1)-2-Spots(At lighting condition)

<table>
<tr><th>Average Diameter(mm):D</th><th>Number of pieces permitted</th></tr>
<tr><td>D≦0.3</td><td>Ignore</td></tr>
<tr><td>0.3<D≦0.75</td><td>5</td></tr>
<tr><td>0.75<D</td><td>0</td></tr>
</table>
Number of total pieces is set to within 5 pieces.

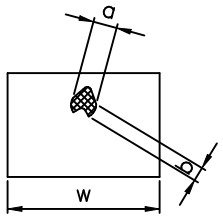
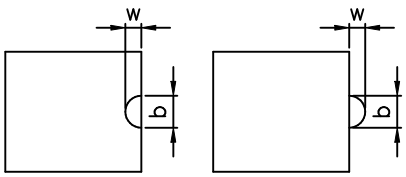
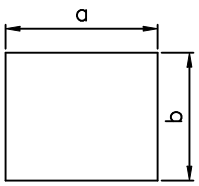
Note that when there are 2 pieces or more, they are not to be concentrated.
Set as: Average diameter = (Long diameter + Short diameter)/2</td></tr>
</table>

<table>
<tr><td>1.</td><td>Line</td><td>(1)-1 Lines(At non lighting condition)
<table><tr><th>Width(mm):W</th><th>Length(mm):L</th><th>Number of pieces permitted</th></tr><tr><td>W≦0.03</td><td>Ignore</td><td>Ignore</td></tr><tr><td>0.03<W≦0.08</td><td>L≦4</td><td>2</td></tr><tr><td>0.08<W≦0.1</td><td>L≦1</td><td>1</td></tr></table>Object exceeding 0.1mm follow the standards of the spots form.
Note that when there are 2 pieces or more, they are not to be concentrated.
(1)-2 Lines(At lighting condition)
<table><tr><th>Width(mm):W</th><th>Length(mm):L</th><th>Number of pieces permitted</th></tr><tr><td>W≦0.03</td><td>Ignore</td><td>Ignore</td></tr><tr><td>0.03<W≦0.08</td><td>L≦3</td><td>6</td></tr><tr><td>0.08<W</td><td>3<L</td><td>None</td></tr></table>Object exceeding 0.1mm follow the standards of the spots form.
Note that when there are 2 pieces or more, they are not to be concentrated.</td></tr>
<tr><td>2.</td><td>Scratches(Glass, reflection plates, and polarizing plates)</td><td>In accordance with black spots.
(At non lighting condition)</td></tr>
<tr><td>3.</td><td>Color irregular</td><td>Not remarkable color irregular.</td></tr>
</table>

<table>
<tr><td>4.</td><td>Air bubbles polarizing plates, and reflection plates</td><td colspan="2">
<table>
<tr><th>Average Diameter (mm):D</th><th>Number of pieces permitted</th></tr>
<tr><td>D≦0.3</td><td>Ignore</td></tr>
<tr><td>0.3<D</td><td>0</td></tr>
</table>
Average diameter = (Long diameter + Short diameter)/2
Note that when there are 4 pieces or more, they are not to be concentrated.
</td></tr>
<tr><td rowspan="5">5.</td><td rowspan="5">Cracks</td><td>(1)General crack
 
</td><td>a≦5
b≦2
c≦t
Where, a and b are ignored when less that or equal 0.5. The numbers of pieces are set at up to 5 pieces.</td></tr>
<tr><td>(2)Corner crack
 
</td><td>a≦2.5
b≦2.5
c≦t
a+b≦4</td></tr>
<tr><td>(3)Seal portion crack
 
</td><td>a≦The seal widthx1/3
b≦tx2/3
c≦5
The numbers of pieces are set at up to 5 pieces.</td></tr>
<tr><td>(4)ITO Pin crack
 
</td><td>a≦5
b≦1/3 pin length
c≦t</td></tr>
<tr><td>(5)Progressive cracks</td><td>All taken to be unacceptable.</td></tr>
</table>

6	Outer dimensions	Should be within the tolerance.
7	Newton ring(touch panel)	Orbicular of interference fringes is not allowed in the optimum contrast within the active area under viewing angle.
8	Soldering	Should be no defective soldering such as shorting, loose terminal cold solder, peeling of printed circuit board pattern, improper mounting position, etc.

5-3 Dot Appearance Defect

NO.	Item	Criteria
1	Pinhole	 Dot display a and b are each ≦0.2mm The overall total is taken be with in 10 units. Note that they are not to be concentrated.
2	Missing	 Dot display a and b are each ≦0.2mm The overall total is taken to be with in 10 units.
3	Thick and thin display	 Taken to be within ±1.5% of display character width(a) and height(b).

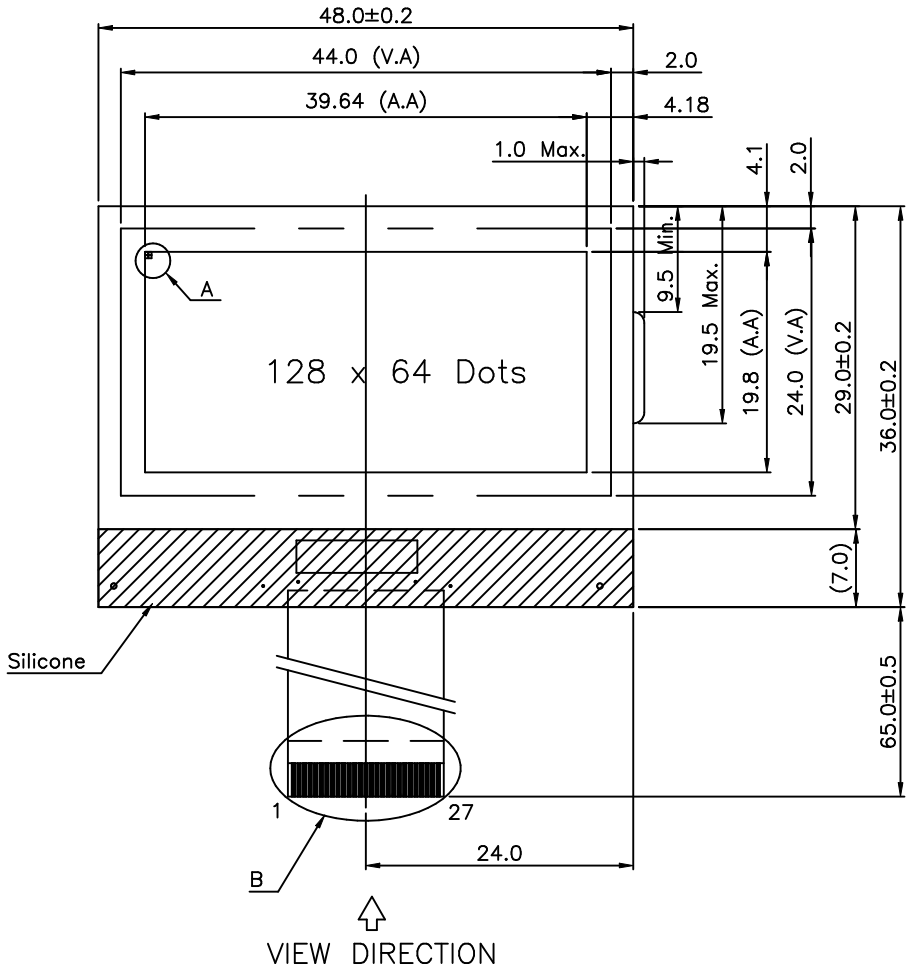
NOTICE:

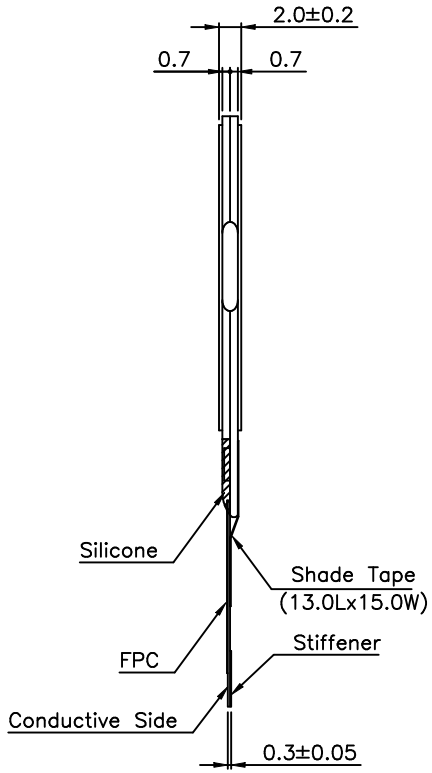
- SAFETY
  1. If the LCD panel breaks, be careful not to get the liquid crystal to touch your skin.
  2. If the liquid crystal touches your skin or clothes, please wash it off immediately by using soap and water.

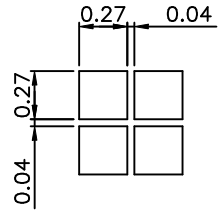
- HANDLING
  1. Avoid static electricity which can damage the CMOS LSI.
  2. Do not remove the panel or frame from the module.
  3. The polarizing plate of the display is very fragile. So, please handle it very carefully.
  4. Do not wipe the polarizing plate with a dry cloth, as it may easily scratch the surface of plate.
  5. Do not use ketonics solvent & Aromatic solvent, use with a soft cloth soaked with a cleaning naphtha solvent.

- STORAGE
  1. Store the panel or module in a dark place where the temperature is 25°C±5°C and the humidity is below 65% RH.
  2. Do not place the module near organics solvents or corrosive gases.
  3. Do not crush, shake, or jolt the module.

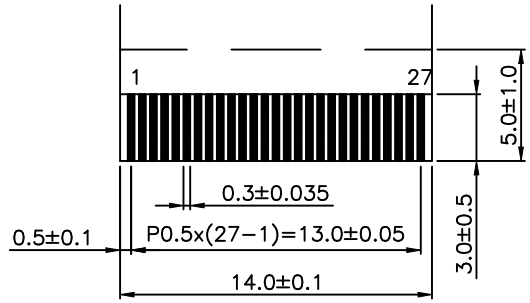
- TERMS OF WARRANT
  1. Acceptance inspection period
     The period is within one month after the arrival of contracted commodity at the buyer's factory site.
  2. Applicable warrant period
     The period is within twelve months since the date of shipping out under normal using and storage conditions.



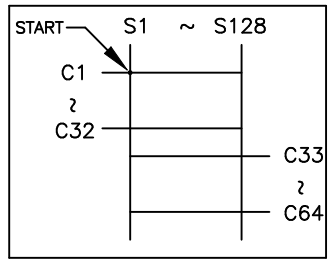




Detail A
(S=32:1)



Detail B
(S=4:1)



Panel Layout

NOTES :
1. Resolution : 128x64 Dots
2. MPU INTERFACE SELECT 6800 SERIES

PIN NO	SYMBOL	FUNCTION	PIN NO	SYMBOL	FUNCTION
1	V4	POWER SUPPLY FOR THE LIQUID CRYSTAL DRIVE	15	DB7	DATA BUS
2	V3	POWER SUPPLY FOR THE LIQUID CRYSTAL DRIVE	16	DB6	DATA BUS
3	V2	POWER SUPPLY FOR THE LIQUID CRYSTAL DRIVE	17	DB5	DATA BUS
4	V1	POWER SUPPLY FOR THE LIQUID CRYSTAL DRIVE	18	DB4	DATA BUS
5	V0	POWER SUPPLY FOR THE LIQUID CRYSTAL DRIVE	19	DB3	DATA BUS
6	C2−	CONNECT FOR THE INTERNAL VOLTAGE CONVERTER	20	DB2	DATA BUS
7	C2+	CONNECT FOR THE INTERNAL VOLTAGE CONVERTER	21	DB1	DATA BUS
8	C1−	CONNECT FOR THE INTERNAL VOLTAGE CONVERTER	22	DB0	DATA BUS
9	C1+	CONNECT FOR THE INTERNAL VOLTAGE CONVERTER	23	E	WHEN INTERFACING TO A 6800 SERIES MPU : ACTIVE HIGH
10	C3−	CONNECT FOR THE INTERNAL VOLTAGE CONVERTER	24	RW	"H" : READ , "L" : WRITE
11	C3+	CONNECT FOR THE INTERNAL VOLTAGE CONVERTER	25	RS	REGISTER SELECT INPUT
12	Vout	VOLTAGE CONVERTER OUTPUT	26	RESETB	HARDWARE RESET INPUT
13	VDD	POWER SUPPLY CONNECT TO MPU POWER SUPPLY PIN	27	CS1B	CHIP SELECT INPUT
14	VSS	0V (GND)			

GENERAL TOLERANCE LIST

DIMENSION	TOLERANCE
L ≦ 6	±0.25 (mm)
6 < L ≦ 18	±0.3 (mm)
18 < L ≦ 50	±0.4 (mm)
50 < L ≦ 125	±0.5 (mm)
125 < L	±0.6 (mm)
ANGLE	±1° (DEG)

南亞塑膠工業股份有限公司
NAN YA PLASTICS CORPORATION

製品圖

LDA43H580JDS

REV. NO.	DESCRIPTION	DATE	DESIGN	CHECK	APPROVE
5					
4					
3					
2					
1					

	NAME	DATE	THIRD ANGLE P.
APPROVE			
CHECK			
DESIGN	Campos Chen	96.09.19	SCALE / UNIT
DRAWN	Campos Chen	96.09.19	2/1 / mm

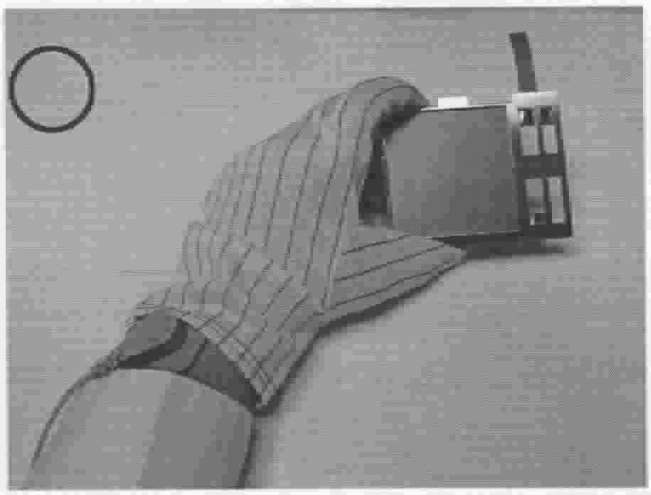
DWG NO. M580EDDA

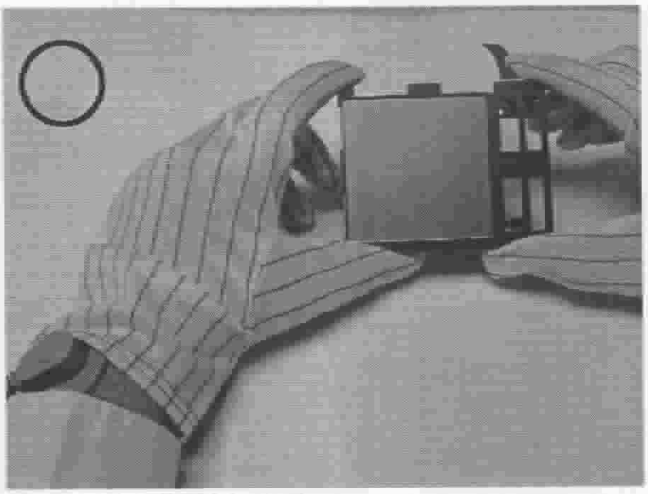
THE NOTES OF LCM USING

LCM is easy to damage.

Please follow the notes as bellows, and be careful of handling!

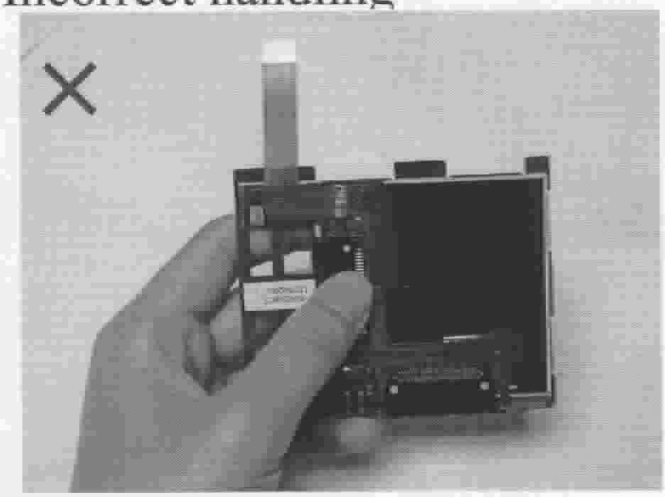
Correct handling



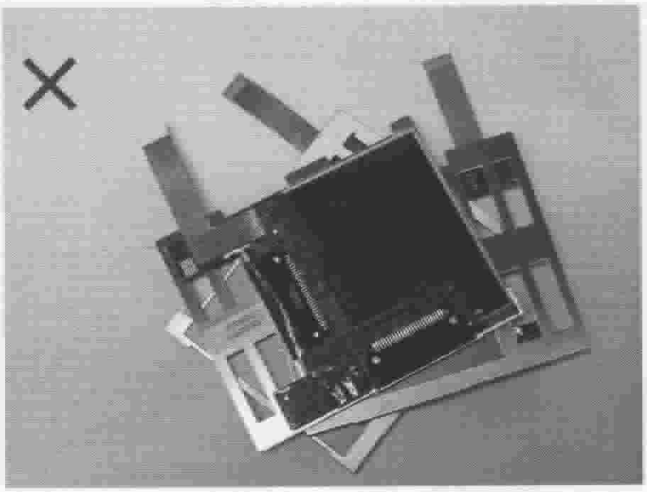


As above picture, please handle with glove by LCM edges and full EOS/ESD protection.

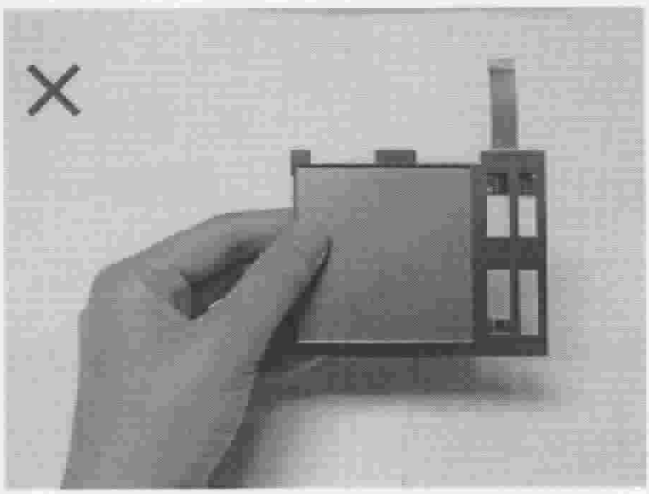
Incorrect handling



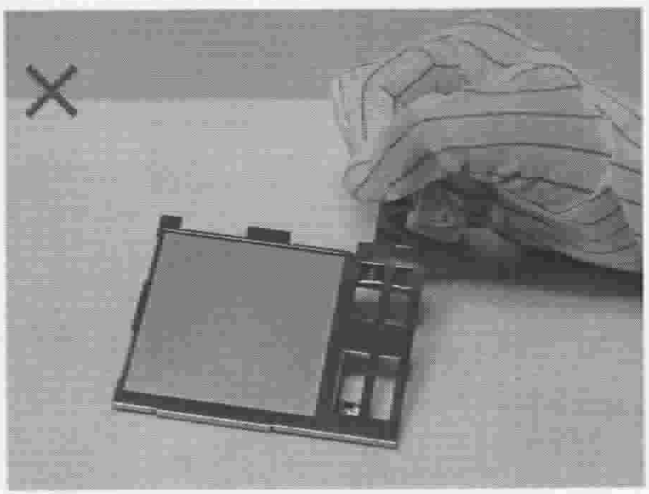
Please don't touch IC directly.



Please don't put one on another LCM.



Please don't hold the surface of LCM.

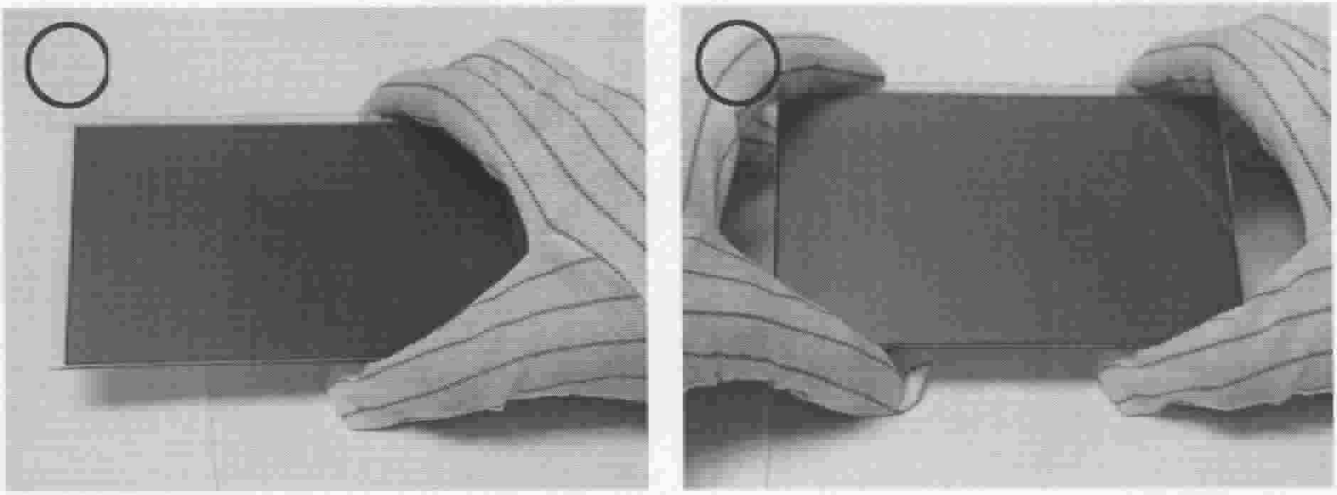


Please don't stretch interface of output.

THE NOTES OF LCD USING

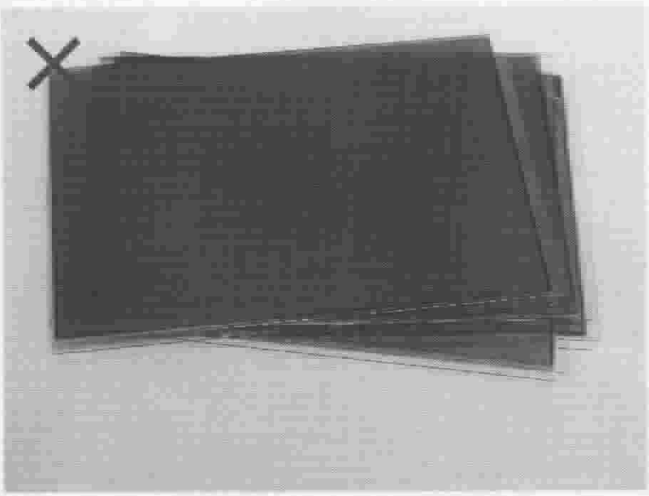
LCD is easy damage.
Please follow notes as bellows, and be careful of handling!

Correct handling

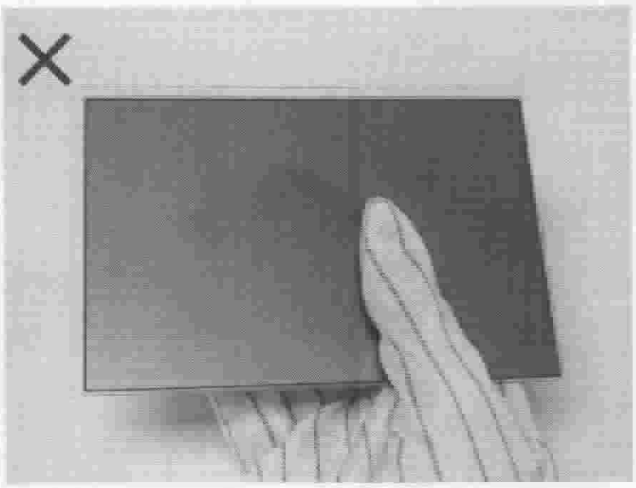


As above picture, please handle with glove by LCD edges and full EOS/ESD protection.

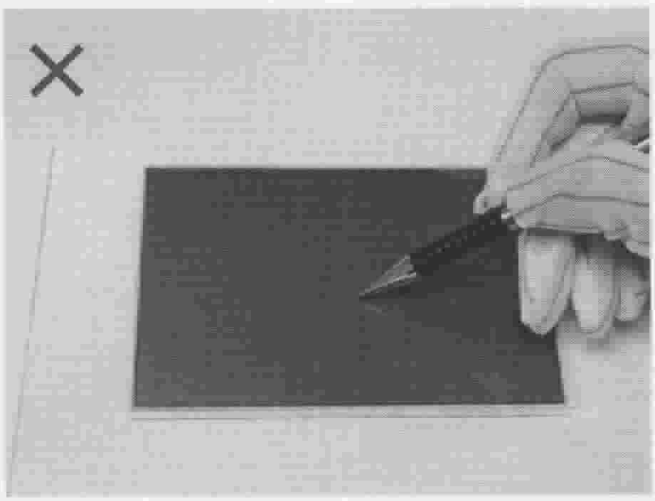
Incorrect handling



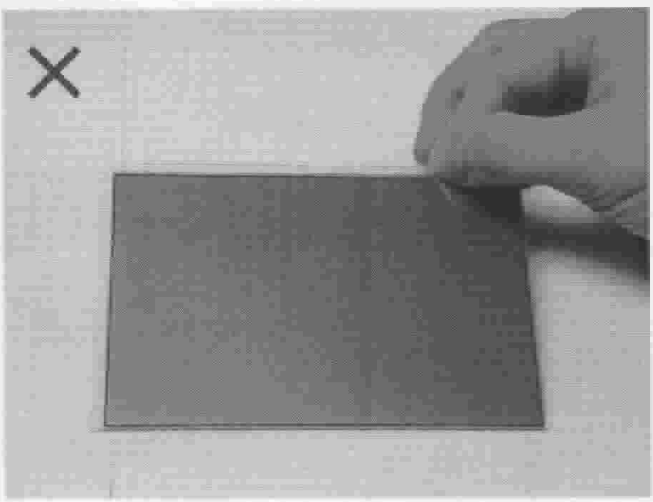
Please don't put one on another LCD.



Please don't hold the surface of LCD.



Please don't operate with sharp stick such as sharp pencil.



Please don't touch ITO glass without anti-static gloves.