

## SPECIFICATIONS

CUSTOMER : 矽創

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SAMPLE CODE (Ver.) : PS128128C-026-I-01 (Ver.0)

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MASS PRODUCTION CODE (Ver.) : PH128128C-026-I-Q (Ver.0)

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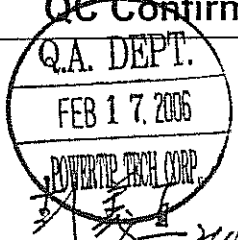

DRAWING NO. (Ver.) : PH-05071-003 (Ver.0)

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**Customer Approved**

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Date:

Approved	QC Confirmed	Designer
	 何國安 016 1330 06	

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- \* This specification is subject to change without notice.
- Please contact Powertip or it's representative before designing your product based on this specification.
- Approval For Specifications and Sample.

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**Note : For detailed information please refer to IC data sheet : Sitronix-ST7636R**

## 1. SPECIFICATIONS

### 1.1 Features

Item	Standard Value
Display Type	128 *(R、 G、 B) * 128 Dots
LCD Type	CSTN , Negative , Transmissive
Driver Condition	LCD Module : 1/128 Duty , 1/12 Bias
Screen size(inch)	1.5 (Diagonal)
Viewing Direction	6 O'clock
Color configuration	R.G.B. vertical stripe
Backlight Type	White LED B/L
Interface	8Bits data bus
Driver IC	ST7636R (support 65K, 262K, 16Mcolors)

LCM Weight : 6.5 g

### 1.2 Mechanical Specifications

Item	Standard Value	Unit
Outline Dimension	36.1(W) * 61.05(L) * 2.9(H)	mm
Viewing Area	29.5 (W) * 29.2 (L)	mm
Active Area	26.865 (W) * 26.865 (L)	mm
Dot Size	0.198 (W) * 0.198 (L)	mm
Dot Pitch	0.21 (W) * 0.21 (L)	mm

Note : For detailed information please refer to LCM drawing

### 1.3 Absolute Maximum Ratings

Item	Symbol	Condition	Min.	Max.	Unit
System Power Supply Voltage	VDD	-	-0.5	4.0	V
LCD Driver Supply Voltage	VOUT <sub>IN</sub>	-	-0.5	20	V
Input Voltage	V <sub>IN</sub>	-	-0.5	VDD + 0.5	V
Operating Temperature	T <sub>OP</sub>	-	-20	70	°C
Storage Temperature	T <sub>ST</sub>	-	-30	80	°C
Storage Humidity	H <sub>D</sub>	Ta < 40 °C	20	90	%RH

### 1.4 DC Electrical Characteristics

VDD = 2.8V , GND = 0V , Ta = 25°C

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Logic Supply Voltage	VDD	-	-	2.8	-	V
Input High Voltage	V <sub>IH</sub>	-	0.7VDD	-	VDD	V
Input Low Voltage	V <sub>IL</sub>	-	GND	-	0.3VDD	V
Output High Voltage	V <sub>OH</sub>	-	0.7VDD	-	VDD	V
Output Low Voltage	V <sub>OL</sub>	-	GND	-	0.3VDD	V
Supply Current	I <sub>DD</sub>	VDD=2.8 V	-	1.3	2.0	mA
LCD Driver Voltage	V <sub>OP</sub>	VOP -GND (-20°C)	14.5	15.0	15.5	V
		VOP -GND (+25°C)	13.5	14.0	14.5	
		VOP -GND (+70°C)	12.1	12.6	13.1	

Note : Electronic volume control (VOLCRTR)P1: 05H,P2:04H

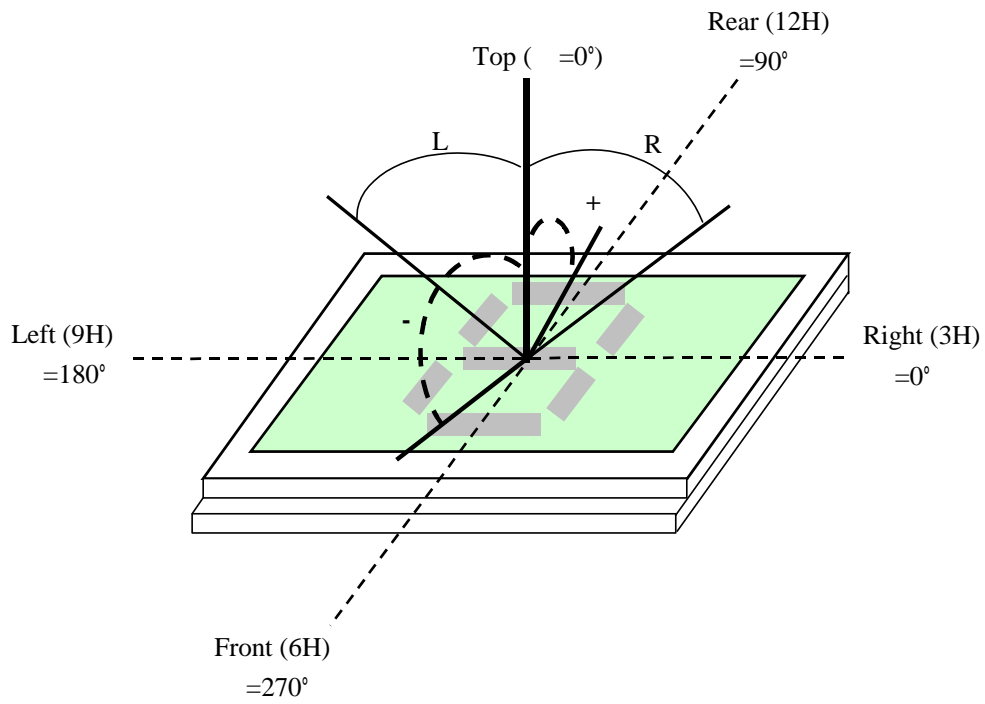
## 1.5 Optical Characteristics

Item		Symbol	Condition	Min.	Typ.	Max.	unit	
Response time	Rise	Tr	Ta = 25°C θX, θy = 0°	-	240	360	ms	Note2
	Fall	Tf		-	80	120		
Color of CIE Coordinate	White	X		0.24	0.29	0.34	-	-
		Y		0.24	0.29	0.34		
	Red	X		0.46	0.51	0.56		
		Y		0.28	0.33	0.38		
	Green	X		0.25	0.30	0.35		
		Y		0.44	0.49	0.54		
	Blue	X	0.11	0.16	0.21			
		Y	0.07	0.12	0.17			
Viewing angle	Top	θY+	CR ≥ 2.0	40			deg	Note1
	Bottom	θY-		40				
	Left	θX-		45				
	Right	θX+		45				
Contrast ratio		CR	Ta = 25°C θX = 0°, θY = 5°	10	15	-	-	Note3

Note 1.

Optical characteristics-2

Viewing angle

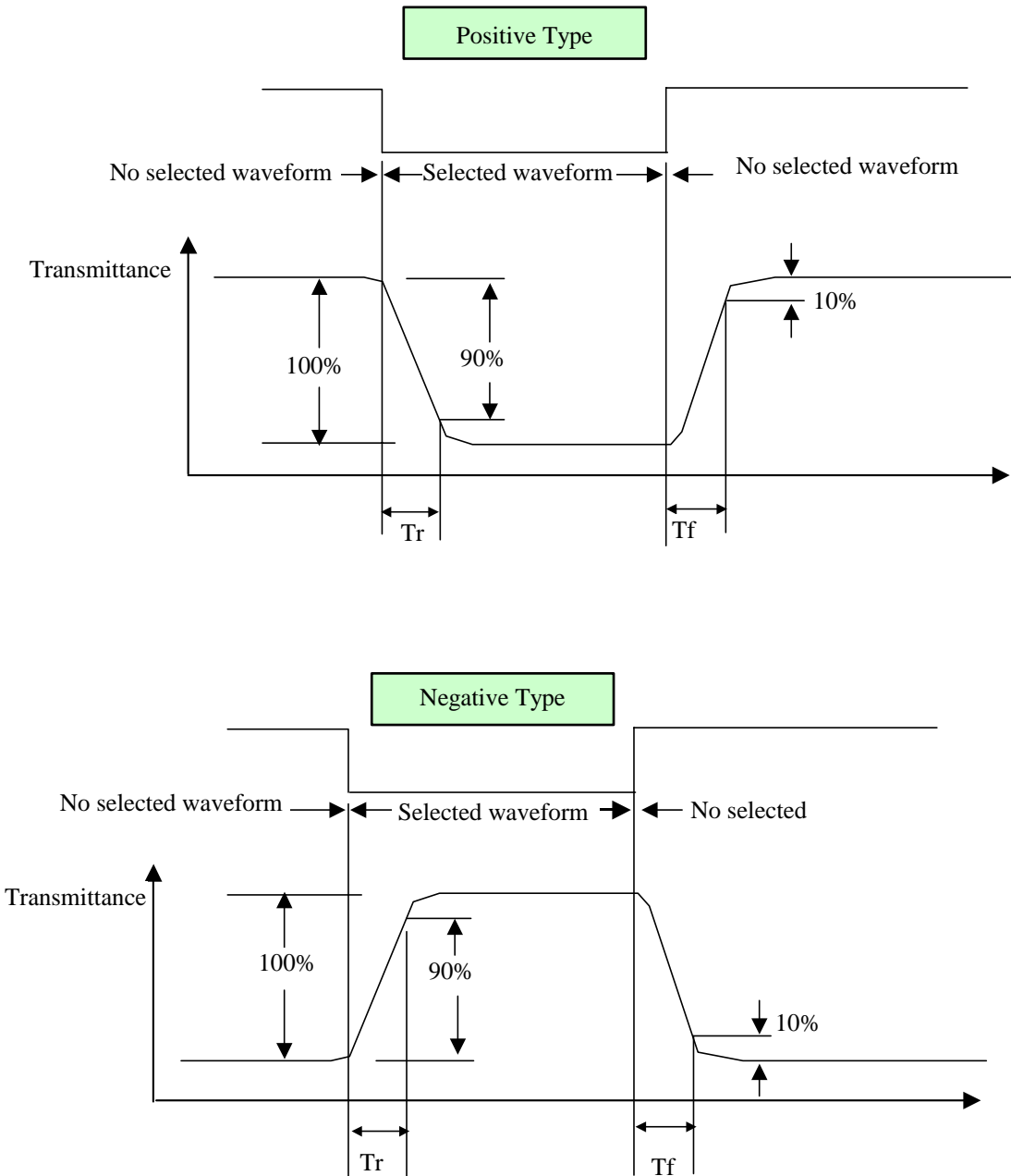


**Viewing angle**

Note 2.

Optical characteristics-3

Fig.2 Definition of response time



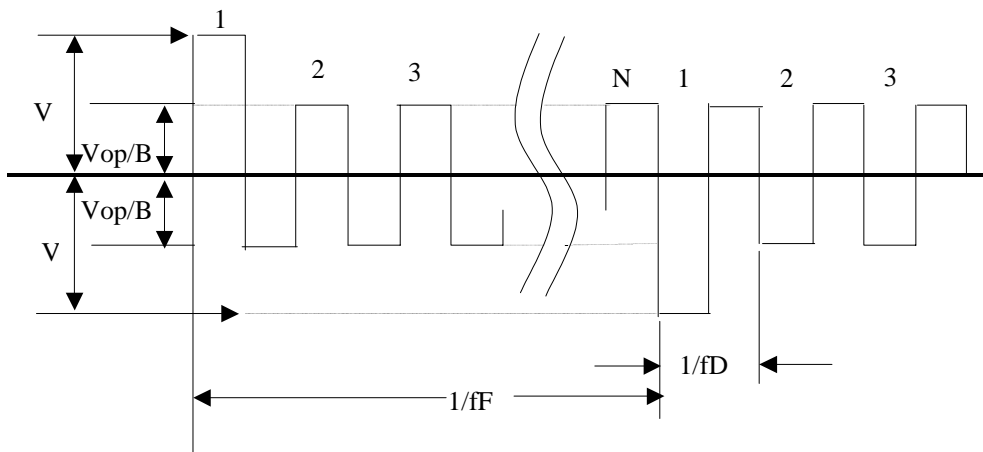


## Electrical characteristics-2

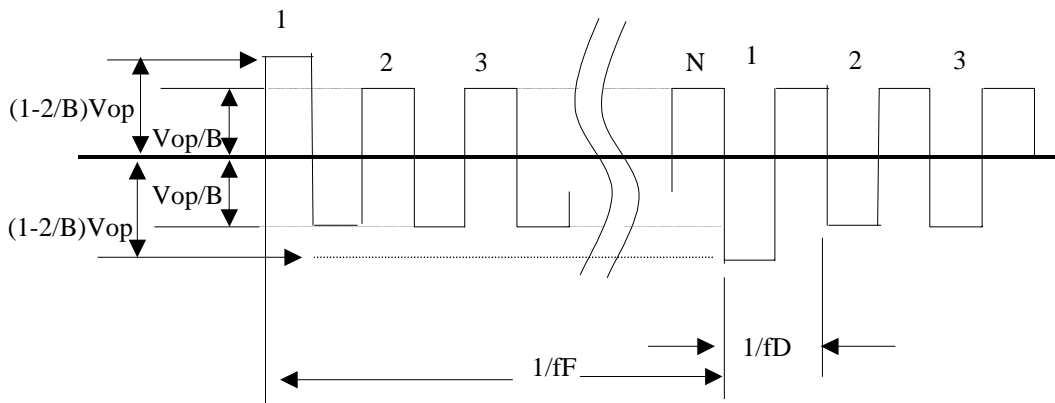
### 2 Drive waveform

$V_{op}$ : Drive voltage       $f_F$ : Frame frequency  
 $1/B$ : Bias                     $f_D$ : Drive frequency  
 $N$ : Duty

#### (1) Selected waveform



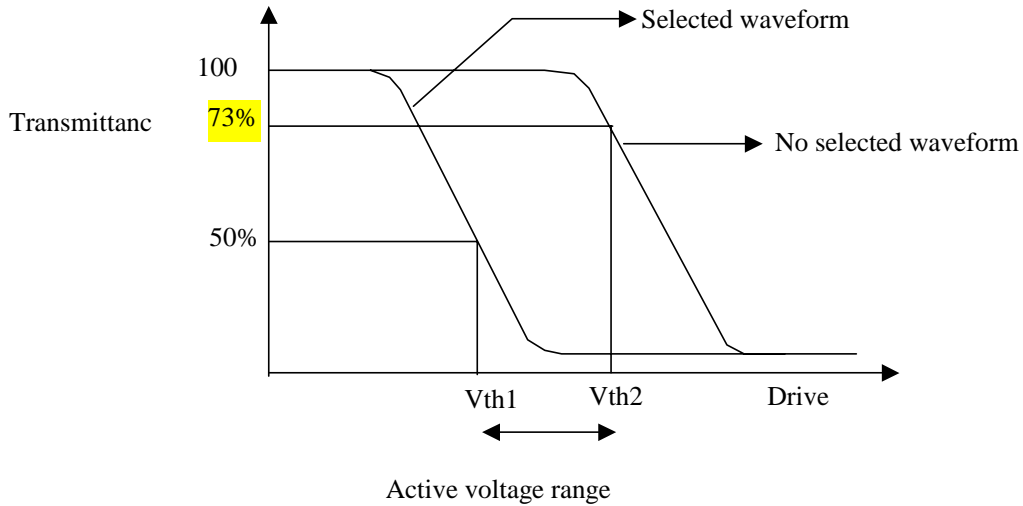
#### (2) Non- Selected waveform



Note:

Frame frequency is defined as follows: Common side supply  
 voltage peak - to - peak / 2 = 1 period

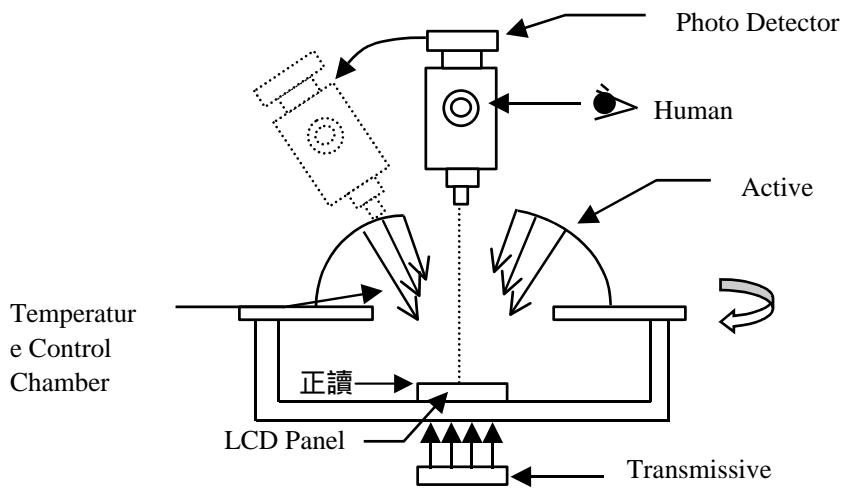
Note 3. : Definition of Vth



	Vth1	Vth2
View direction	10°	40°
Drive waveform	(Selected waveform)	(No selected waveform)
Transmittance	50%	73%

1 Contrast ratio  
 = (Brightness in OFF state) / (Brightness in ON state)

Outline of Electro-Optical Characteristics Measuring System



Measuring System: Autronic DMS-803

## 1.6 Backlight Characteristics

LCD Module with LED Backlight

### Maximum Ratings

Item	Symbol	Conditions	Min.	Max.	Unit
Forward Current	IF	Ta =25°C	-	60	mA
Reverse Voltage	VR	Ta =25°C	-	10	V
Power Dissipation	PO	Ta =25°C	-	240	mW
Operating Temperature	T <sub>OP</sub>	-	-20	70	°C
Storage Temperature	T <sub>ST</sub>	-	-30	80	°C

### Electrical / Optical Characteristics

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward Voltage	VF	IF= 40mA	-	3.5	4	V
Reverse Current	IR	VR= 10V	-	-	100	μA
Average Brightness (with LCD)	IV	IF= 40mA	120	160	-	cd/m <sup>2</sup>
CIE Color Coordinate (Without LCD)	X	IF= 40mA	0.260	0.290	0.320	-
	Y		0.255	0.285	0.315	
Uniformity *1	B	IF= 40mA	70	-	-	%
Color	White					

Note : \*1 B=B(min) / B(max).

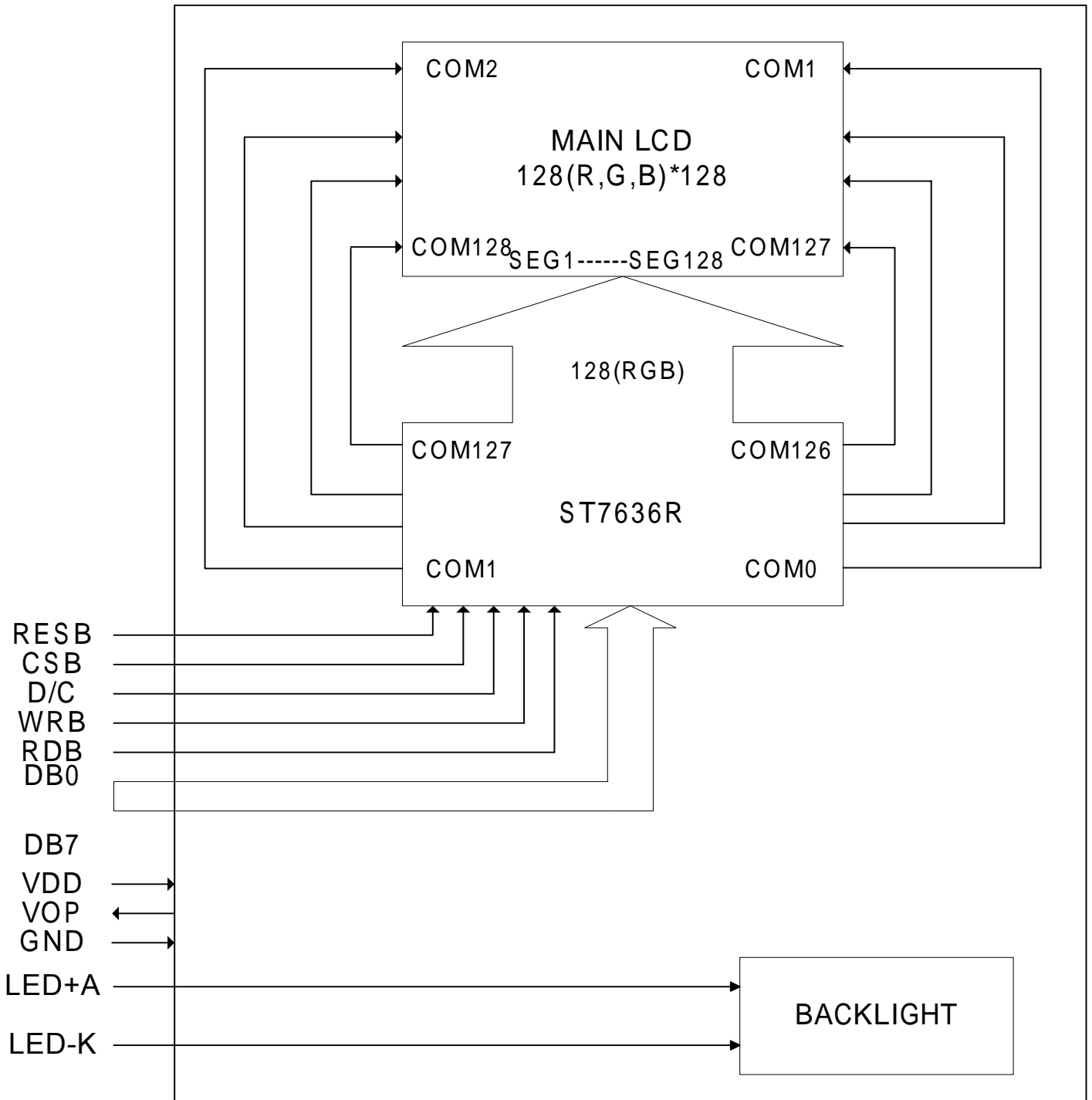
## 2. MODULE STRUCTURE

### 2.1 Counter Drawing

#### 2.1.1 LCM Mechanical Diagram

\* See Appendix

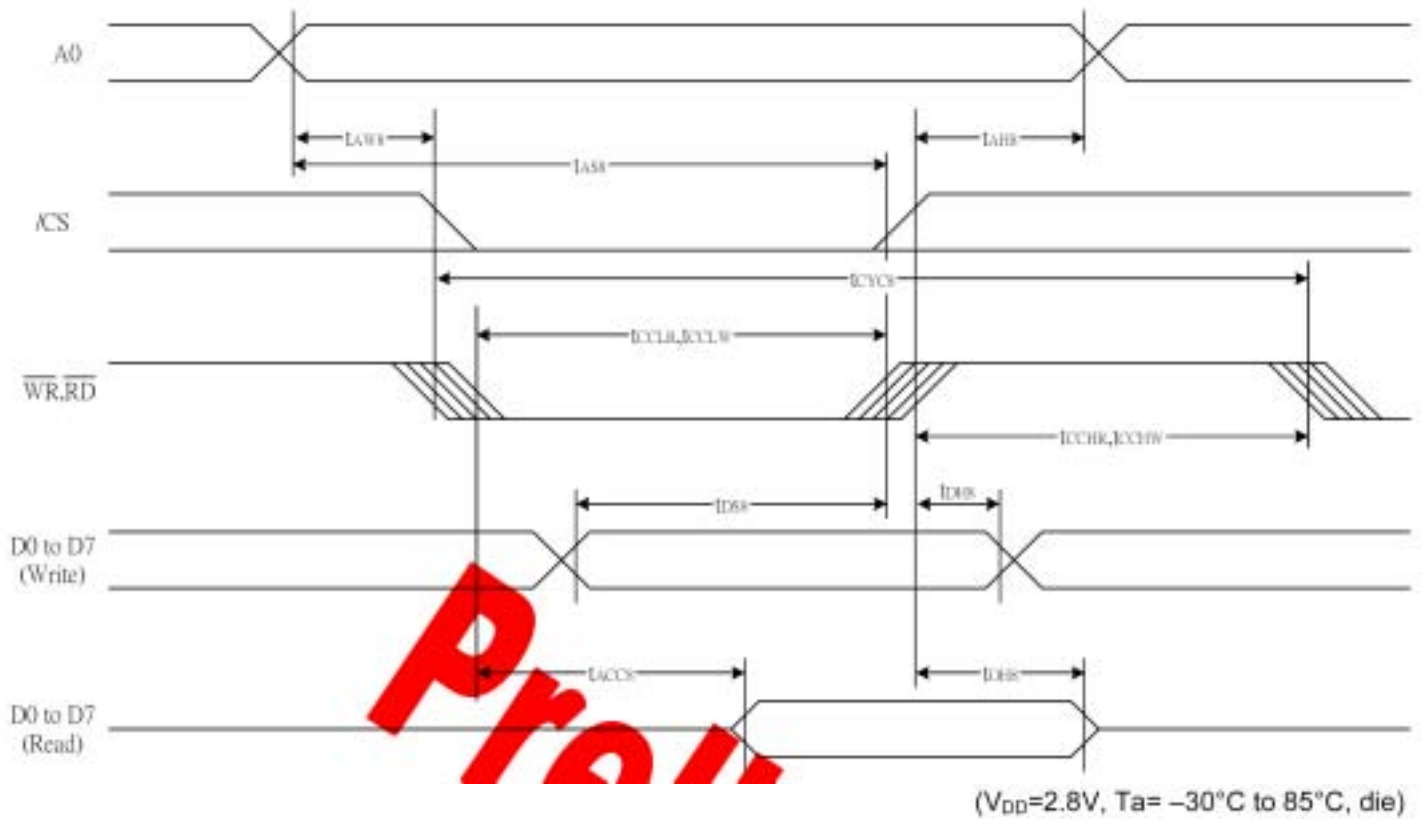
#### 2.1.2 Block Diagram



## 2.2 Interface Pin Description

Pin No.	Symbol	Function
1	LED-K	Power supply cathode input for backlight
2	LED+A	Power supply anode input for backlight
3	GND	Ground
4	VDD	Power supply input for driver IC (+2.8V).
5	NC	Ground
6	VOP	LCD operation voltage test pin.
7	CSB	Chip select pin, active " L "
8	RESB	Reset signal input f, active " L "
9	D/C	Data and control register select input H : D0 to D7 are display data. L : D0 to D7 are control data.
10	WRB	Write signal input, active " L "
11	RDB	Read signal input, active " L "
12	DB7	Data bus bit 7
13	DB6	Data bus bit 6
14	DB5	Data bus bit 5
15	DB4	Data bus bit 4
16	DB3	Data bus bit 3
17	DB2	Data bus bit 2
18	DB1	Data bus bit 1
19	DB0	Data bus bit 0
20	GND	Ground

## 2.3 Timing Characteristics



Item	Signal	Symbol	Condition	Rating		Units
				Min.	Max.	
Address hold time	A0	tAH8		10	—	ns
Address setup time		tAS8		50	—	
Address setup time		tAW8		0	—	
System cycle time (WRITE)	WR	tCYC8		180	—	ns
/WR L pulse width (WRITE)		tCCLW		55	—	
/WR H pulse width (WRITE)		tCCHW		140	—	
System cycle time (READ)	RD	tCYC8		180	—	
/RD L pulse width (READ)		tCCLR		90	—	
/RD H pulse width (READ)		tCCHR		90	—	
WRITE data setup time	D0 to D7	tDS8		55	—	
WRITE data hold time		tDH8		10	—	
READ access time		tACC8	CL = 100 pF	—	75	
READ Output disable time		tOH8	CL = 100 pF	—	65	

## 2.4 Instruction Table

(LCD、 IC : ST7636)

Ext=0															
Command	A0	RD	WR	D7	D6	D5	D4	D3	D2	D1	D0	Function	Hex	Parameter	Index
DISON	0	1	0	1	0	1	0	1	1	1	1	Display On	AF	None	1
DISOFF	0	1	0	1	0	1	0	1	1	1	0	Display Off	AE	None	2
DISNOR	0	1	0	1	0	1	0	0	1	1	0	Normal Display	A6	None	3
DISINV	0	1	0	1	0	1	0	0	1	1	1	Inverse Display	A7	None	4
COMSCN	0	1	0	1	0	1	1	1	0	1	1	Com Scan Direction	BB	1 byte	5
DISCTR	0	1	0	1	1	0	0	1	0	1	0	Display Control	CA	3 byte	6
SLPP	0	1	0	0	0	0	0	0	1	0	0	Sleep In/Out Preparation	04	1 byte	7
SLPIN	0	1	0	1	0	0	1	0	1	0	1	Sleep In	95	None	8
SLPOUT	0	1	0	1	0	0	1	0	1	0	0	Sleep Out	94	None	9
PASET	0	1	0	0	1	1	1	0	1	0	1	Page Address Set	75	2 byte	10
CASET	0	1	0	0	0	0	1	0	1	0	1	Column Address Set	15	2 byte	11
DATCTL	0	1	0	1	0	1	1	1	1	0	0	Data Scan Direction	BC	3 byte	12
RAMWR	0	1	0	0	1	0	1	1	1	0	0	Writing to Memory	5C	Data	13
RAMRD	0	1	0	0	1	0	1	1	1	0	1	Reading from Memory	5D	Data	14
PLTIN	0	1	0	1	0	1	0	1	0	0	0	Partial display in	A8	2 byte	15
PLTOUT	0	1	0	1	0	1	0	1	0	0	1	Partial display out	A9	None	16
RMWIN	0	1	0	1	1	1	0	0	0	0	0	Read Modify Write In	E0	None	17
RMWOUT	0	1	0	1	1	1	0	1	1	1	0	Read Modify Write Out	EE	None	18
ASCSET	0	1	0	1	0	1	0	1	0	1	0	Area Scroll Set	AA	4 byte	19
SCSTART	0	1	0	1	0	1	0	1	0	1	1	Scroll Start Set	AB	1 byte	20
OSCON	0	1	0	1	1	0	1	0	0	0	1	Internal OSC on	D1	None	21
OSCOFF	0	1	0	1	1	0	1	0	0	1	0	Internal OSC off	D2	None	22
PWRCTL	0	1	0	0	0	1	0	0	0	0	0	Power Control	20	1 byte	23
VOLCTR	0	1	0	1	0	0	0	0	0	0	1	EC control	81	2 byte	24
VOLUP	0	1	0	1	1	0	1	0	1	1	0	EC increase 1	D6	None	25
VOLDOWN	0	1	0	1	1	0	1	0	1	1	1	EC decrease 1	D7	None	26
STREAD	0	0	1	Status Read								Status Read			27
EPSRRD1	0	1	0	0	1	1	1	1	1	0	0	READ Register1	7C	None	28
EPSRRD2	0	1	0	0	1	1	1	1	1	0	1	READ Register2	7D	None	29
NOP	0	1	0	0	0	1	0	0	1	0	1	NOP Instruction	25	None	30
EEOK	0	1	0	0	0	0	0	0	1	1	1	EEPROM Function Start	07	1 byte	31
RESERVED	0	1	0	1	0	0	0	0	0	1	0	Not Use	82		32



Ext=1																
Command	A0	RD	WR	D7	D6	D5	D4	D3	D2	D1	D0	Function	Hex	Parameter	Index	
Frame1 Set	0	1	0	0	0	1	0	0	0	0	0	FRAME 1 PWM Set	20	16 byte	1	
Frame2 Set	0	1	0	0	0	1	0	0	0	0	1	FRAME 2 PWM Set	21	16 byte	2	
Frame3 Set	0	1	0	0	0	1	0	0	0	1	0	FRAME 3 PWM Set	22	16 byte	3	
Frame4 Set	0	1	0	0	0	1	0	0	0	1	1	FRAME 4 PWM Set	23	16 byte	4	
ANASET	0	1	0	0	0	1	1	0	0	1	0	Analog Set	32	3 byte	5	
EPCTIN	0	1	0	1	1	0	0	1	1	0	1	Control EEPROM	CD	1 byte	6	
EPCOUT	0	1	0	1	1	0	0	1	1	0	0	Cancel EEPROM	CC	None	7	
EPMWR	0	1	0	1	1	1	1	1	1	0	0	Write to EEPROM	FC	None	8	
EPMRD	0	1	0	1	1	1	1	1	1	0	1	Read from EEPROM	FD	None	9	
TGCSET	0	1	0	1	1	1	1	0	0	0	1	Thermal Gradient Coefficient Set	F1	1 byte	10	
DISPADJ	0	1	0	1	1	1	1	1	0	1	0	Display Performance Adjustment	FA	1 byte	11	

Ext=1 or Ext=0																
Command	A0	RD	WR	D7	D6	D5	D4	D3	D2	D1	D0	Function	Hex	Parameter	Index	
Ext In	0	1	0	0	0	1	1	0	0	0	0	Ext=0 Set	30	None	--	
Ext Out	0	1	0	0	0	1	1	0	0	0	1	Ext=1 Set	31	None	--	

**Note 1:** Initial values depend on MID wiring and IC ID codings



## 2.5 Data Format

### (1)65K color display

Data Write Sequence	DB7	DB6	DB5	DB4	DB3	DB2	DB1	DB0
1 <sup>st</sup> Byte Write	R	R	R	R	R	G	G	G
2 <sup>nd</sup> Byte Write	G	G	G	B	B	B	B	B

A sing pixel of data is read after the second write operation as shown, and it is written in the display RAM.

### (2)262K color display

Data Write Sequence	DB7	DB6	DB5	DB4	DB3	DB2	DB1	DB0
1 <sup>st</sup> Byte Write	R	R	R	R	R	R	X	X
2 <sup>nd</sup> Byte Write	G	G	G	G	G	G	X	X
3 <sup>rd</sup> Byte Write	B	B	B	B	B	B	X	X

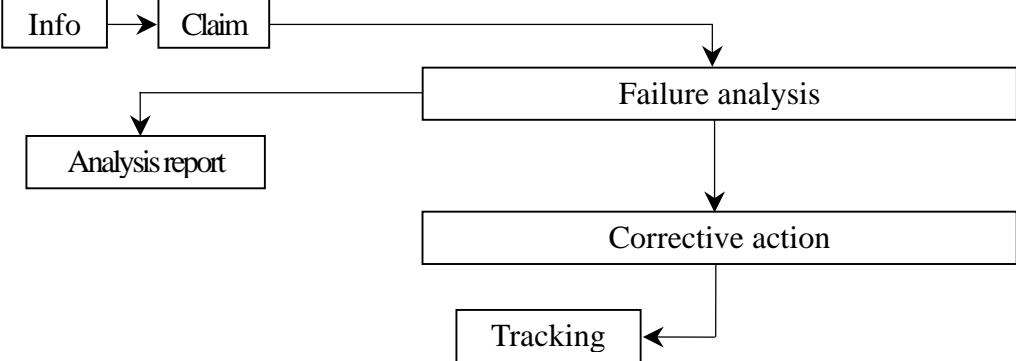
A sing pixel of data is read after the second write operation as shown, and it is written in the display RAM.  
 "X" is dummy bit, and it is ignored for display.

### (3)16M color display

Data Write Sequence	DB7	DB6	DB5	DB4	DB3	DB2	DB1	DB0
1 <sup>st</sup> Byte Write	R	R	R	R	R	R	R	R
2 <sup>nd</sup> Byte Write	G	G	G	G	G	G	G	G
3 <sup>rd</sup> Byte Write	B	B	B	B	B	B	B	B

A sing pixel of data is read after the second write operation as shown, and it is written in the display RAM.



Item	Customer	Sales	R&D	Q.A	Manufacturing	Product control	Purchase	Inventory control
Sales Service	 <pre> graph TD     Info[Info] --&gt; Claim[Claim]     Claim --&gt; Failure[Failure analysis]     Failure --&gt; Report[Analysis report]     Failure --&gt; Action[Corrective action]     Action --&gt; Tracking[Tracking]           </pre>							
Q.A Activity	1. ISO 9001 Maintenance Activities 3. Equipment calibration 5. Standardization Management				2. Process improvement proposal 4. Education And Training Activities			

### 3.2 Inspection Specification

Inspection Standard : MIL-STD-105E Table Normal Inspection Single Sampling Level II

Equipment : Gauge , MIL-STD , Powertip Tester , Sample

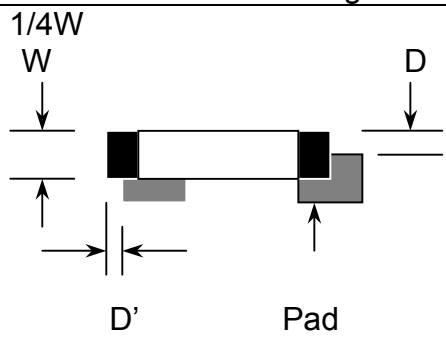
IQC Defect Level : Major Defect AQL 0.4; Minor Defect AQL 1.5

FQC Defect Level : 100% Inspection

OUT Going Defect Level : Sampling

Specification :

NO	Item	Specification	Judge	Level
1	Part Number	The part number is inconsistent with work order of production	N.G.	Major
2	Quantity	The quantity is inconsistent with work order of production	N.G.	Major
3	Electronic characteristics of LCM $A = (L + W) / 2$	The display lacks of some patterns.	N.G.	Major
		Missing line.	N.G.	Major
		The size of missing dot, A is $> 1/2$ Dot size	N.G.	Major
		There is no function.	N.G.	Major
		Output data is error	N.G.	Major
4	Appearance of LCD $A = (L + W) / 2$  Dirty particle (Including scratch、bubble )	Material is different with work order of production	N.G.	Major
		LCD is assembled in inverse direction	N.G.	Major
		Bezel is assembled in inverse direction	N.G.	Major
		Shadow is within LCD viewing area + 0.5 mm	N.G.	Major
		The diameter of dirty particle, A is $> 0.4$ mm	N.G.	Minor
		Dirty particle length is $> 3.0$ mm, and $0.01$ mm $<$ width $\leq 0.05$ mm	N.G.	Minor
		Display is without protective film	N.G.	Minor
		Conductive rubber is over bezel 1mm	N.G.	Minor
		Polarizer exceeds over viewing area of LCD	N.G.	Minor
		Area of bubble in polarizer, A $> 1.0$ mm, the number of bubble is $> 1$ piece.	N.G.	Minor
		$0.4$ mm $<$ Area of bubble in polarizer, A $< 1.0$ mm, the number of bubble is $> 4$ pieces.	N.G.	Minor
5	Appearance of PCB $A = (L + W) / 2$	Burned area or wrong part number is on PCB	N.G.	Major
		The symbol, character, and mark of PCB are unidentifiable.	N.G.	Minor
		The stripped solder mask , A is $> 1.0$ mm	N.G.	Minor
		$0.3$ mm $<$ stripped solder mask or visible circuit, A $< 1.0$ mm, and the number is $\geq 4$ pieces	N.G.	Minor
		There is particle between the circuits in solder mask	N.G.	Minor
		The circuit is peeled off or cracked	N.G.	Minor
		There is any circuits risen or exposed.	N.G.	Minor
		$0.2$ mm $<$ Area of solder ball, A is $\leq 0.4$ mm	N.G.	Minor
		The number of solder ball is $\geq 3$ pieces	N.G.	Minor
The magnitude of solder ball, A is $> 0.4$ mm.	N.G.	Minor		

NO	Item	Specification	Judge	Level
6	Appearance of molding $A=(L+W)/2$	The shape of modeling is deformed by touching.	N.G.	Major
		Insufficient epoxy: Circuit or pad of IC is visible	N.G.	Minor
		Excessive epoxy: Diameter of modeling is > 2.0mm or height is > 2.5mm	N.G.	Minor
		The diameter of pinhole in modeling, A is > 0.2mm.	N.G.	Minor
7	Appearance of frame $A=(L+W)/2$	The folding angle of frame must be $> 45^{\circ} + 10^{\circ}$	N.G.	Minor
		The area of stripped electroplate in top-view of frame, A is > 1.0mm.	N.G.	Minor
		Rust or crack is (Top view only)	N.G.	Minor
		The scratched width of frame is > 0.06mm. (Top view only)	N.G.	Minor
8	Electrical characteristic of backlight $A=(L+W)/2$	The color of backlight is nonconforming	N.G.	Major
		Backlight can't work normally.	N.G.	Major
		The LED lamp can't work normally	N.G.	Major
		The unsoldering area of pin for backlight, A is > 1/2 solder joint area.	N.G.	Minor
		The height of solder pin for backlight is > 2.0mm	N.G.	Minor
10	Assembly parts $A=(L+W)/2$	The mark or polarity of component is unidentifiable.	N.G.	Minor
		The height between bottom of component and surface of the PCB is floating > 0.7mm	N.G.	Minor
		$D > 1/4W$  <p>The diagram illustrates a component on a PCB pad. W is the component width, D is the side overhang, and D' is the end solder joint width. The pad is labeled 'Pad'.</p>	N.G.	Minor
		End solder joint width, D' is > 50% width of component termination or width of pad	N.G.	Minor
		Side overhang, D is > 25% width of component termination.	N.G.	Minor
		Component is cracked, deformed, and burned, etc.	N.G.	Minor
		The polarity of component is placed in inverse direction.	N.G.	Minor
		Maximum fillet height of solder extends onto the component body or minimum fillet height is < 0.5mm.	N.G.	Minor

## 4. RELIABILITY TEST

### 4.1 Reliability Test Condition

NO	Item	Test Condition	
1	High Temperature Storage	Storage at $80 \pm 2^{\circ}\text{C}$ 96~100 hrs Surrounding temperature, then storage at normal condition 4hrs	
2	Low Temperature Storage	Storage at $-30 \pm 2^{\circ}\text{C}$ 96~100 hrs Surrounding temperature, then storage at normal condition 4hrs	
3	High Temperature /Humidity Storage	1.Storage 96~100 hrs $60 \pm 2^{\circ}\text{C}$ , 90~95%RH surrounding temperature, then storage at normal condition 4hrs. (Excluding the polarizer). or 2.Storage 96~100 hrs $40 \pm 2^{\circ}\text{C}$ , 90~95%RH surrounding temperature, then storage at normal condition 4 hrs.	
4	Temperature Cycling	$-20^{\circ}\text{C} \rightarrow 25^{\circ}\text{C} \rightarrow 70^{\circ}\text{C} \rightarrow 25^{\circ}\text{C}$ $\leftarrow (30\text{mins}) (5\text{mins}) (30\text{mins}) (5\text{mins}) \rightarrow$ <p style="text-align: center;">10 Cycle</p>	
5	Vibration	10~55Hz ( 1 minute ) 1.5mm X,Y and Z direction * (each 2hrs)	
6	ESD Test	Air Discharge: Apply 6 KV with 5 times discharge for each polarity +/-	Contact Discharge: Apply 250V with 5 times discharge for each polarity +/-
		Testing location: Around the face of LCD	Testing location: 1.Apply to bezel. 2.Apply to Vdd, Vss.
7	Drop Test	Packing Weight (Kg)	Drop Height (cm)
		0 ~ 45.4	122
		45.4 ~ 90.8	76
		90.8 ~ 454	61
		Over 454	46

## **5. PRECAUTION RELATING PRODUCT HANDLING**

### **5.1 SAFETY**

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

### **5.2 HANDLING**

- 5.2.1 Avoid any strong mechanical shock which can break the glass.
- 5.2.2 Avoid static electricity which can damage the CMOS LSI—When working with the module , be sure to ground your body and any electrical equipment you may be using.
- 5.2.3 Do not remove the panel or frame from the module.
- 5.2.4 The polarizing plate of the display is very fragile. So , please handle it very carefully, do not touch , push or rub the exposed polarizing with anything harder than an HB pencil lead (glass , tweezers , etc.)
- 5.2.5 Do not wipe the polarizing plate with a dry cloth , as it may easily scratch the surface of plate.
- 5.2.6 Do not touch the display area with bare hands , this will stain the display area.
- 5.2.7 Do not use ketonics solvent & aromatic solvent. Use with a soft cloth soaked with a cleaning naphtha solvent.
- 5.2.8 To control temperature and time of soldering is  $280 \pm 10^{\circ}\text{C}$  and 3-5 sec.
- 5.2.9 To avoid liquid (include organic solvent) stained on LCM

### **5.3 STORAGE**

- 5.3.1 Store the panel or module in a dark place where the temperature is  $25^{\circ}\text{C} \pm 5^{\circ}\text{C}$  and the humidity is below 65% RH.
- 5.3.2 Do not place the module near organics solvents or corrosive gases.
- 5.3.3 Do not crush , shake , or jolt the module.

### **5.4 TERMS OF WARRANTY**

- 5.4.1 Applicable warrant period  
The period is within thirteen months since the date of shipping out under normal using and storage conditions.
- 5.4.2 Unaccepted responsibility  
This product has been manufactured to your company's specification as a part for use in your company's general electronic products. It is guaranteed to perform according to delivery specifications. For any other use apart from general electronic equipment, we cannot take responsibility if the product is used in nuclear power control equipment, aerospace equipment , fire and security systems or any other applications in which there is a direct risk to human life and where extremely high levels of reliability are required.





# LCM包裝規格書

LCM Packaging Specifications  
(For Tray)

Approve	Check	Contact
黃秋源	石建莊	鍾政憲
DATE	初版	版次Ver
06'02.15	06'02.15	0

LCM Model	PH128128C-026-I-Q
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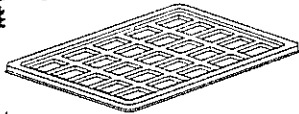
## 1. 包裝材料規格表 (Packaging Material) : (per carton)

No.	Item	Model	Dimensions (mm)	Quantity
1	成品 (LCD Panel)	PH128128C-026-I-Q	36.1 X 42.9	864
2	多層薄膜(1)POF	OTFILM0BA03ABA	19"X350X0.015	6
3	TRAY 盤 (2)	PH-128128-019	352 X 260 X 10.8	54
4	內盒(3)Product Box	BX36627063ABBA	393 X 274 X 68	6
5	保力龍板(4)Polylon board	OTPLB00PL08ABA	550 X 393 X 20	2
6	外紙箱(5)Carton	BX57041027CCBA	570 X 410 X 265	1
7				
8				
9				

## 2. 單箱數量規格表 (Packaging Specifications and Quantity) :

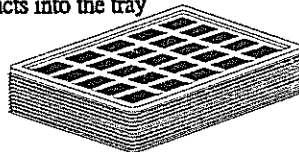
(1)LCD quantity per box : no per tray	18	x no of tray	8	=	144
(2)Total LCD quantity in carton : no of boxes	144	x quantity per box	6	=	864

Use empty tray  
空盤



+

Put products into the tray

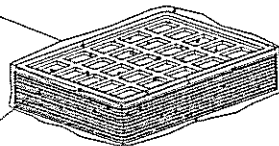


↓

Tray stacking



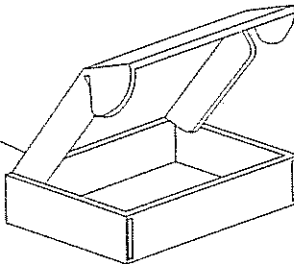
(1) POF



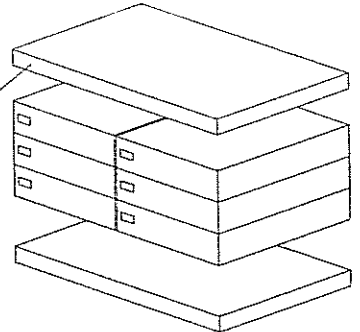
(2) Tray

↓

(3)Product Box

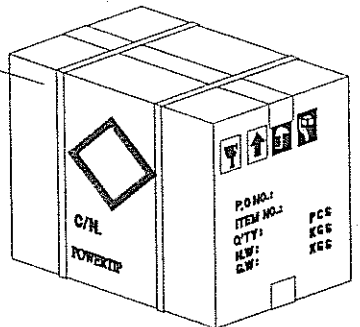


(4)Polylon board



↓

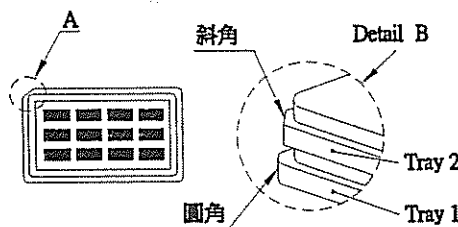
(5) Carton



## 特 記 事 項 (REMARK)

### 1. Label Specifications :

MODEL:	
LOT NO:	
QUANTITY:	
CHECK:	



Rotate tray 180 degrees and place on top of stack.  
Check the tray stack using Fig. B.

TRAY盤相疊時,需旋轉180度,請詳見B視圖

TRAY正式料號 : TY12812819TZBA