


SPECIFICATIONS

CUSTOMER : CHC131


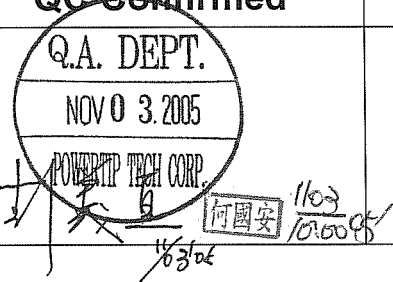

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Customer Approved

Date:

Approved	QC Confirmed	Designer
		

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Appendix : LCM Drawing Packaging

**Note : For detailed information please refer to IC data sheet :
Primacy(CSTN) : NT7571**

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 : 1/132 Duty , 1/6 Bias
Screen size(inch)	1.5 (Diagonal)
Viewing Direction	12 O'clock
Color configuration	R.G.B. vertical stripe
Backlight Type	White LED B/L
Interface	8Bits data bus
Driver IC	NT7571 (support 65K colors)

LCM Weight : 6.5 g

1.2 Mechanical Specifications

Item	Standard Value	Unit
Outline Dimension	33.35 (W) * 70.24 (L) * 3.2 (H)	mm
Viewing Area	28.3 (W) * 30.17 (L)	mm
Active Area	25.716 (W) * 27.508 (L)	mm
Dot Size	0.189 (W) * 0.203 (L)	mm
Dot Pitch	0.201 (W) * 0.215 (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	-	-0.3	4.0	V
LCD Driver Supply Voltage	VOUT	VOUT = VCC - VEE	-0.3	19.8	V
Input Voltage	V _{IN}	-	-0.3	VDD	V
Operating Temperature	T _{OP}	-	-20	70	°C
Storage Temperature	T _{ST}	-	-30	80	°C
Storage Humidity	H _D	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 _{IH}	-	0.8VDD	-	VDD	V
Input Low Voltage	V _{IL}	-	GND	-	0.2VDD	V
Output High Voltage	V _{OH}	-	0.8VDD	-	VDD	V
Output Low Voltage	V _{OL}	-	GND	-	0.2VDD	V
Supply Current	I _{DD}	VDD=2.8 V	-	0.8	1.5	mA
LCD Driver Voltage	V _{OP}	VOP -GND (-20°C)	10.6	10.9	11.2	V
		VOP -GND (+25°C)	10.2	10.5	10.8	
		VOP -GND (+70°C)	9.1	9.4	9.7	

Note : Contrast control (VOLCRTR) C5H

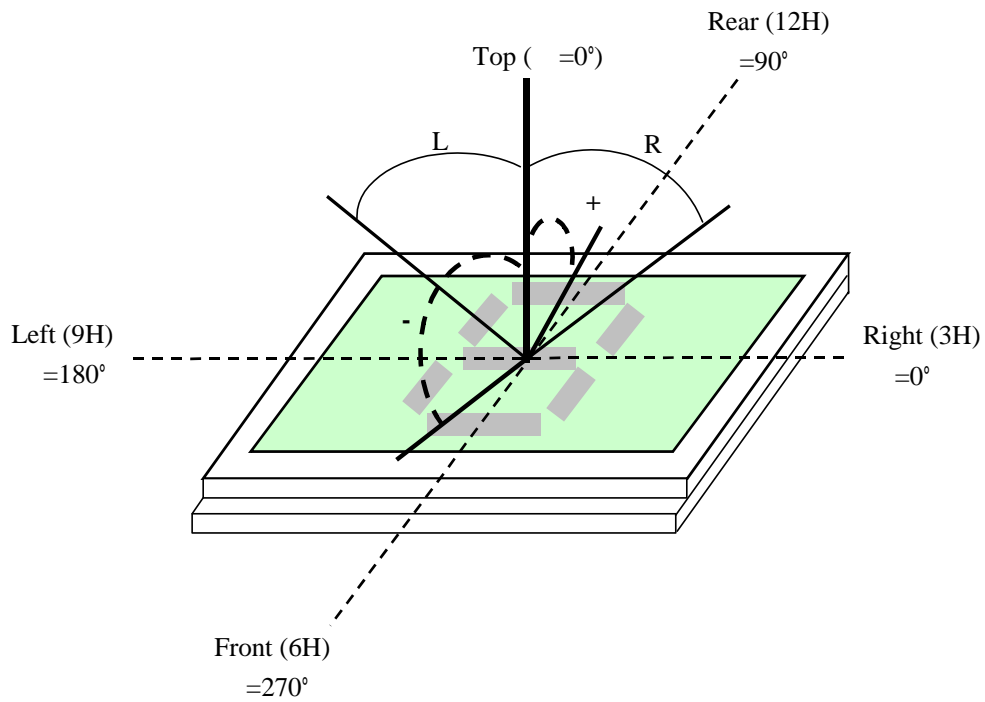
1.5 Optical Characteristics

Item		Symbol	Condition	Min.	Typ.	Max.	unit	
Response time	Rise	Tr	Ta = 25°C θX, θy = 0°	-	240	360	ms	Note2
	Fall	Tf		-	90	135		
Color of CIE Coordinate	White	X		0.23	0.28	0.33	-	-
		Y		0.26	0.31	0.36		
	Red	X		0.44	0.49	0.54		
		Y		0.29	0.34	0.39		
	Green	X		0.25	0.30	0.35		
		Y		0.43	0.48	0.53		
Blue	X	0.12	0.17	0.22				
	Y	0.10	0.15	0.20				
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°	8	12	-	-	Note3

Note 1.

Optical characteristics-2

Viewing angle

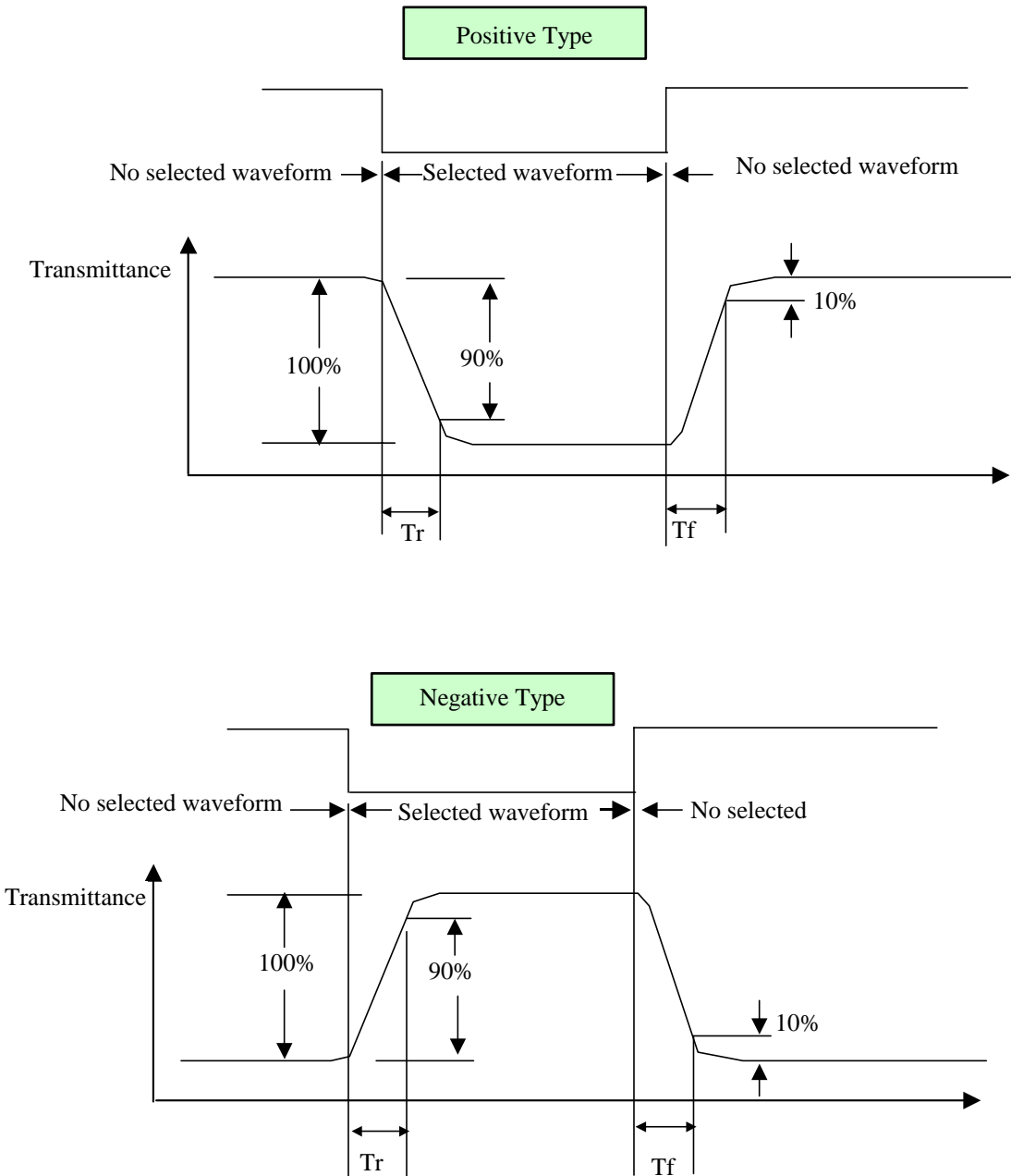


Viewing angle

Note 2.

Optical characteristics-3

Fig.2 Definition of response time

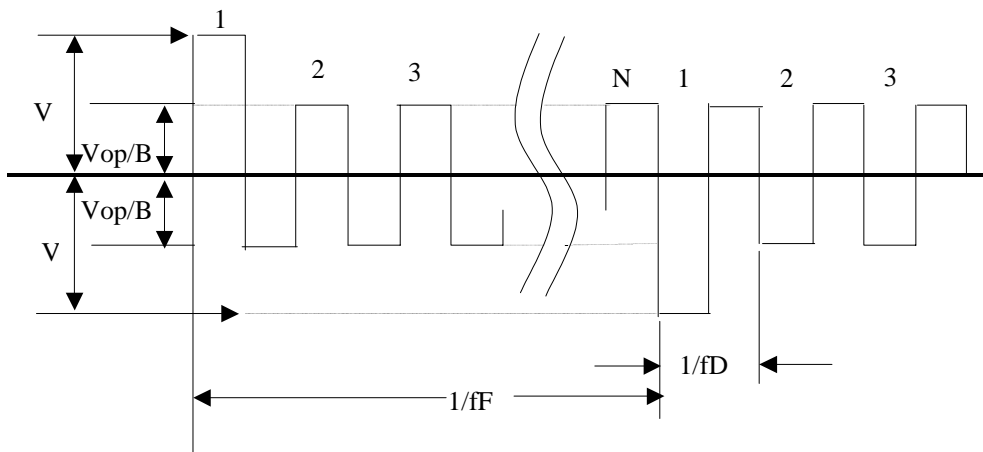


Electrical characteristics-2

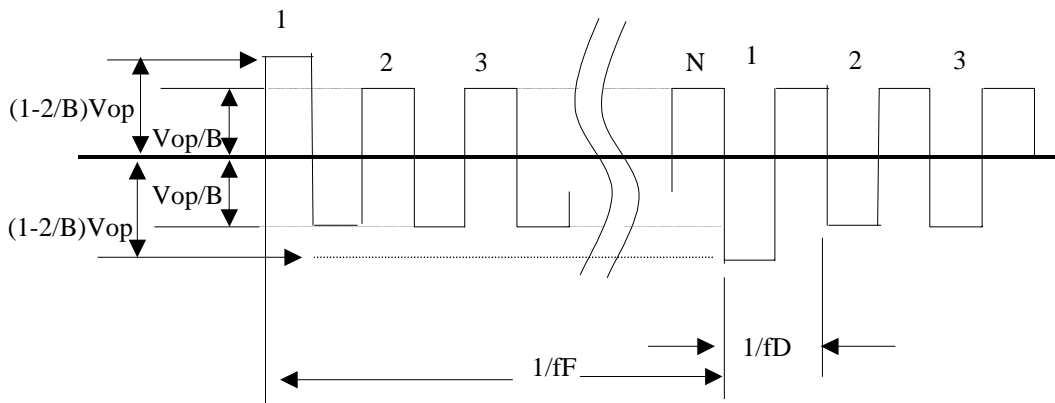
2 Drive waveform

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

(1) Selected waveform



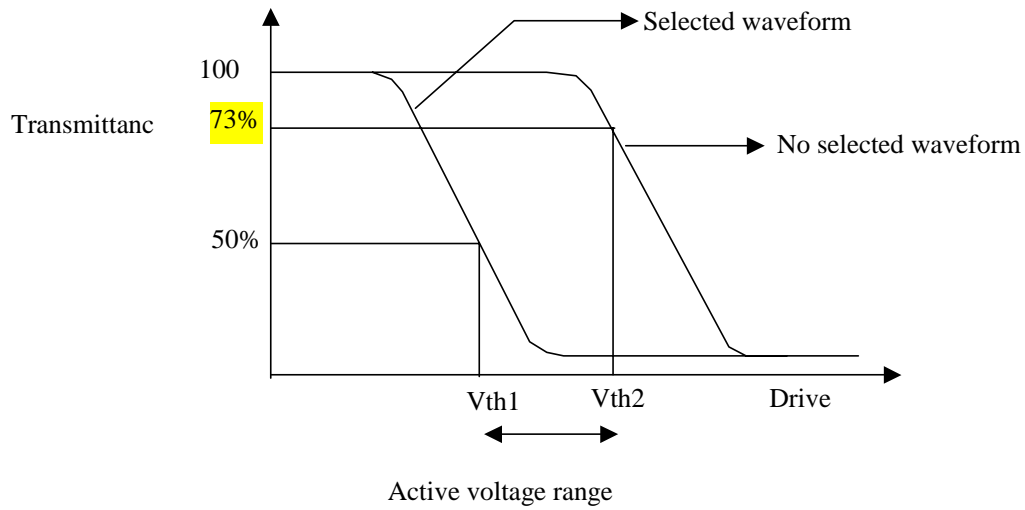
(2) Non- Selected waveform



Note:

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

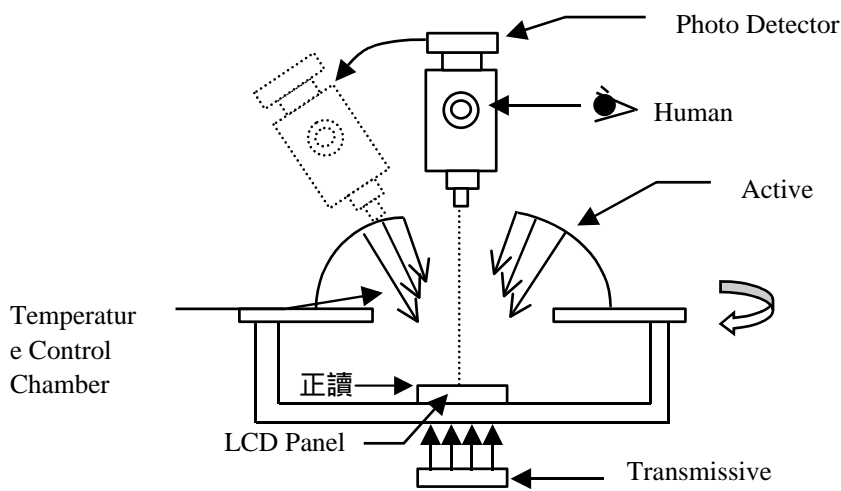
Note 3. : Definition of Vth



	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	-	30	mA
Reverse Voltage	VR	Ta =25°C	-	5	V
Power Dissipation	PO	Ta =25°C	-	150	mW
Operating Temperature	T _{OP}	-	-20	70	°C
Storage Temperature	T _{ST}	-	-30	80	°C

Electrical / Optical Characteristics

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward Voltage	VF	IF= 25mA	-	3.5	4.0	V
Reverse Current	IR	VR= 5V	-	-	50	μA
Average Brightness (with LCD)	IV	IF= 25mA	100	125	-	cd/m ²
CIE Color Coordinate (Without LCD)	X	IF= 25mA	0.260	0.290	0.320	-
	Y		0.255	0.285	0.315	
Uniformity *1	B	IF= 25mA	70	-	-	%
Color	White					

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

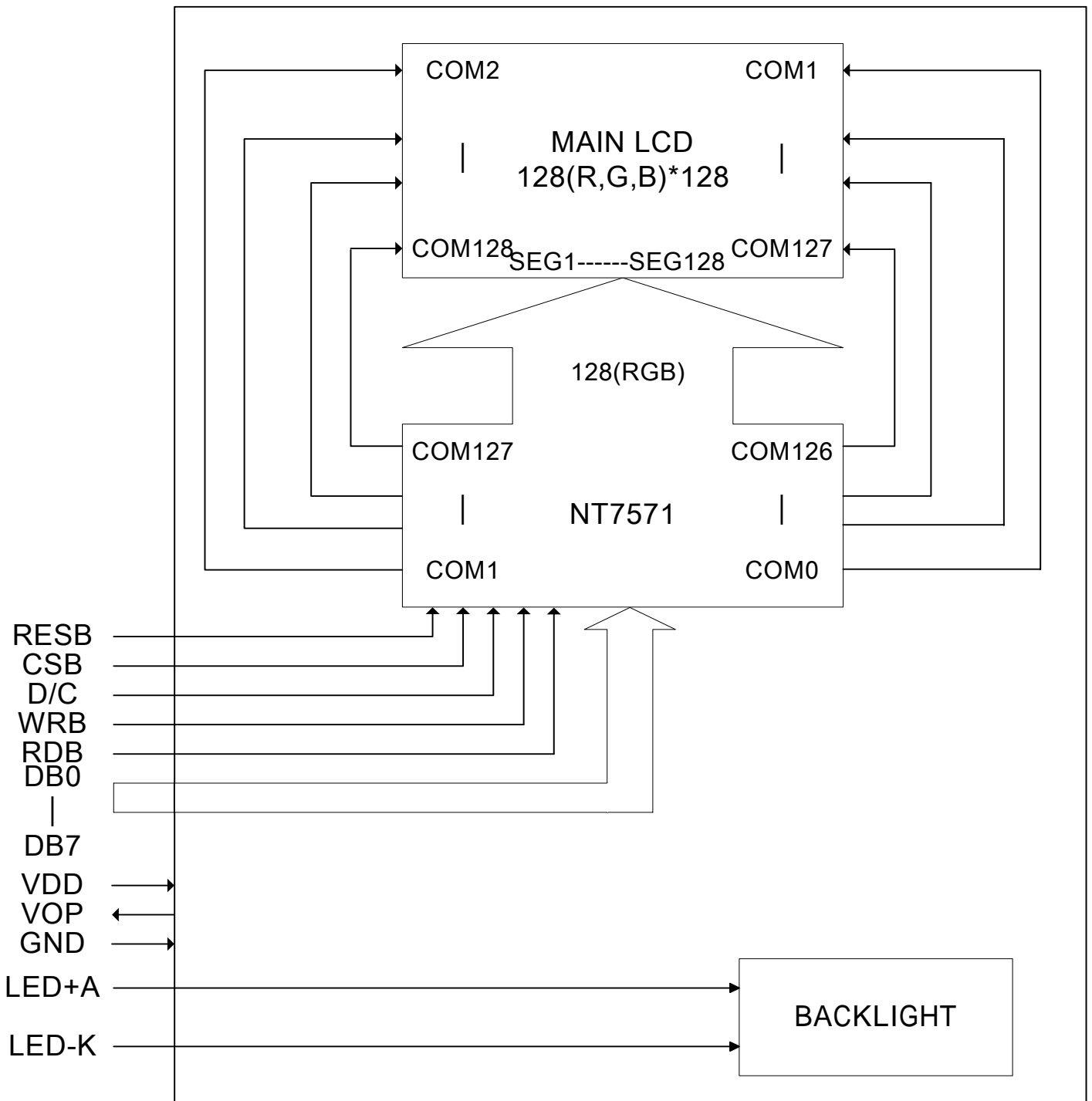
2. MODULE STRUCTURE

2.1 Counter Drawing

2.1.1 LCM Mechanical Diagram

* See Appendix

2.1.2 Block Diagram

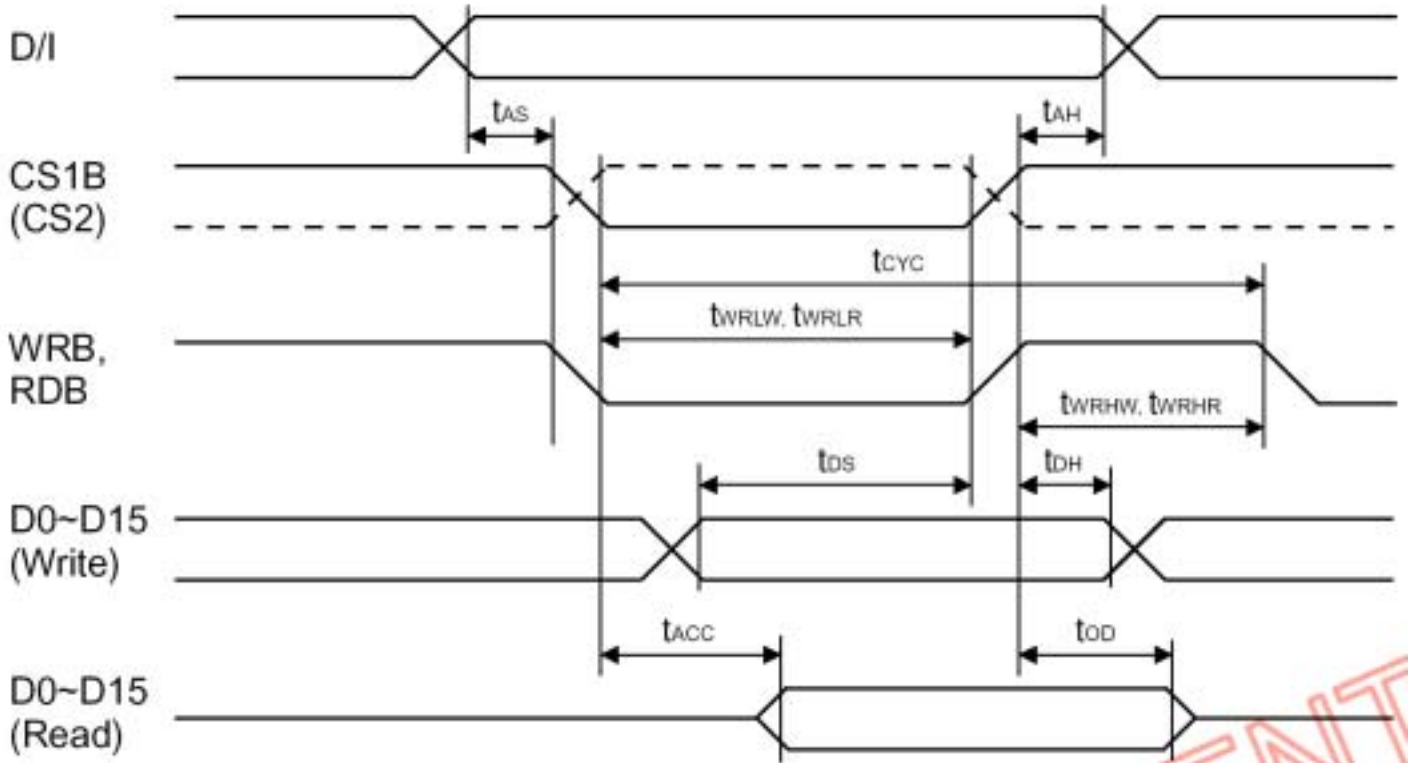


2.2 Interface Pin Description

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

2.3 Timing Characteristics

System Buses Read/Write Characteristics (for 8080 Series MPU)



(VDD = 2.8V, Ta = -40 to +85)

Symbol	Description	Min		Typ	Max		Units	Condition
		3.3V	1.8V		3.3V	1.8V		
t _{AS}	Address setup time	0	0	-	-	ns	D/I	
t _{AH}	Address hold time	0	0	-	-	ns		
t _{CYC}	System cycle time	150	360	-	-	ns	RBM = 0	
		100	180	-	-	ns	RBM = 1	
t _{WRLW}	Low pulse width for write	60	100	-	-	ns	WRB	
t _{WRLR}	Low pulse width for read	60	100	-	-	ns	RDB	
t _{WRHW}	High pulse width for write	30	75	-	-	ns	RBM = 0	
							RBM = 1	
t _{WRHR}	High pulse width for read	30	75	-	-	ns	RDB	
t _{DS}	WRITE data setup time	6	10	-	-	ns	D0~D15	
t _{DH}	WRITE data hold time	8	16	-	-	ns		
t _{ACC}	Access time	-		-	60	120	ns	D0~D15, CL = 100pF
t _{OD}	Output disable time	5	10	-	30	75		

2.4 Instruction Table

(LCD、IC : NT7571)

Command	A0	RD	WR	Command Code									Hex	Function
				D7	D6	D5	D4	D3	D2	D1	D0			
(1) Non Operation	0	1	0	0	0	0	0	0	0	0	0	0	00h	Non Operation
(2) Oscillation Mode Set	0	1	0	0	0	0	0	0	0	0	1	0	02h	Set Oscillation Mode
				0	0	0	0	0	0	EXT	OSC	-		
(3) Driver Output Mode Set	0	1	0	0	0	0	1	0	0	0	0	0	10h	Set the display direction
				SEQ	0	DL1	DL0	0	0	SWP	CDR	-		
(4) Monitor Signal control	0	1	0	0	0	0	1	1	0	0	0	0	18h	Timing signal monitor control
				0	0	SY1	SY0	SYN C	PM	CL	FR	-		
(5) DC/DC Select	0	1	0	0	0	1	0	0	0	0	0	0	20h	Select boosting times of 1st booster circuit
				0	0	DC3	DC2	0	0	DC1	DC0	-		
(6) Bias Set	0	1	0	0	0	1	0	0	0	0	1	0	22h	Set LCD bias ratio
				0	0	BS3	BS2	0	0	BS1	BS0	-		
(7) DC/DC Clock Division Set	0	1	0	0	0	1	0	0	1	0	0	0	24h	Set internal booster clock frequency
				0	DV5	DV4	DV3	0	DV2	DV1	DV0	-		
(8) DC/DC and AMP ON/OFF Set	0	1	0	0	0	1	0	0	1	1	0	0	26h	DC/DC converter and AMP ON/OFF set up
				0	0	0	0	AMP	BT3	BT2	BT1	-		
(9) Temperature Compensation Set	0	1	0	0	0	1	0	1	0	0	0	0	28h	Set driving voltage slope for temperature compensation
				0	0	0	0	0	0	TC1	TC0	-		
(10) Contrast control(1)	0	1	0	0	0	1	0	1	0	1	0	0	2Ah	Set v1 output voltage for normal and partial display mode 0
				C17	C16	C15	C14	C13	C12	C11	C10	-		
(11) Contrast control(2)	0	1	0	0	0	1	0	1	0	1	1	1	2Bh	Set v1 output voltage for normal and partial display mode 1
				C27	C26	C25	C24	C23	C22	C21	C20	-		
(12) Standby mode ON/OFF set	0	1	0	0	0	1	0	1	1	0	STB	2Ch 2Dh	Release/enter the standby mode	
(13) DDRAM burst mode ON/OFF set	0	1	0	0	0	1	0	1	1	1	RBM	2Eh 2Fh	DDRAM burst mode interface ON/OFF control	

Command	A0	RD	WR	Command Code									Function
				D7	D6	D5	D4	D3	D2	D1	D0	Hex	
(14) Addressing mode set	0	1	0	0	0	1	1	0	0	0	0	30h	Set the DDRAM addressing mode
				0	0	0	DSG	SGF	0	SGP	0	-	
(15) Row vector mode set	0	1	0	0	0	1	1	0	0	1	0	32h	Set row vector function
				0	0	0	0	0	0	INC	0	-	
(16) N-block Inversion set	0	1	0	0	0	1	1	0	1	0	0	34h	Set N-block Inversion for LCD AC driving
				FIM	0	0	NB4	NB3	NB2	NB1	NB0	-	
(17) Entry mode set	0	1	0	0	1	0	0	0	0	0	0	40h	Set internal function
				16B	0	0	MDI	MX	MY	Y/X	RMW	-	
(18) Row address area set	0	1	0	0	1	0	0	0	0	1	0	42h	Set row address area of DDRAM
				YS7	YS6	YS5	YS4	YS3	YS2	YS1	YS0	-	
				YE7	YE6	YE5	YE4	YE3	YE2	YE1	YE0	-	
(19) Column address area set	0	1	0	0	1	0	0	0	0	1	1	43h	Set column address area of DDRAM
				XS7	XS6	XS5	XS4	XS3	XS2	XS1	XS0	-	
				XE7	XE6	XE5	XE4	XE3	XE2	XE1	XE0	-	
(20) Display ON/OFF Control	0	1	0	0	1	0	1	0	0	0	DOF	50h 51h	Turn the display off/on
(21) Specified display pattern set	0	1	0	0	1	0	1	0	0	1	1	53h	Set the display pattern status
				0	0	0	0	0	0	DP1	DP0	-	
(22) Partial display mode set	0	1	0	0	1	0	1	0	1	0	1	55h	Set partial display mode
				0	0	0	0	0	0	PDY	PDM	PT	
(23) Partial display start line set	0	1	0	0	1	0	1	0	1	1	0	56h	Set start line for partial display area
				PS7	PS6	PS5	PS4	PS3	PS2	PS1	PS0	-	
(24) Partial display end line set	0	1	0	0	1	0	1	0	1	1	1	57h	Set end line for partial display area
				PE7	PE6	PE5	PE4	PE3	PE2	PE1	PE0	-	
(25) Area scroll set	0	1	0	0	1	0	1	1	0	0	1	59h	Set area scroll field
				0	0	0	0	0	0	SM1	SM0	-	
				SS7	SS6	SS5	SS4	SS3	SS2	SS1	SS0	-	
				SE7	SE6	SE5	SE4	SE3	SE2	SE1	SE0	-	
				LF7	LF6	LF5	LF4	LF3	LF2	LF1	LF0	-	

Command	A0	RD	WR	Command Code									Hex	Function	
				D7	D6	D5	D4	D3	D2	D1	D0	SL7			SL6
(26) Scroll start line set	0	1	0	0	1	0	1	1	0	1	0	5Ah	Set the start scroll line		
				SL7	SL6	SL5	SL4	SL3	SL2	SL1	SL0	-			
(27) CR volume up/down	0	1	0	0	1	1	1	0	0	0	CUD	70h 71h	Count up/down the value of contrast control (1) or (2)		
(28) Status read mode set	0	1	0	0	1	1	1	1	1	1	1	7Fh	Select the content that read by command read status		
				0	0	0	0	0	0	SR1	SR0	-			
(29) Status read	0	0	1	PM2	PM1	Y/X	PDM	PT	STB	REV	DP	-	Indicate the internal status of register		
				C17	C16	C15	C14	C13	C12	C11	C10	-			
				C27	C26	C25	C24	C23	C22	C21	C20	-			
(30) Display data write	0	1	0	WD[15:0]								Write display data to DDRAM			
(31) Display data read	0	1	0	RD[15:0]								read display data from DDRAM			
(32) MTP calibration ON/OFF control	0	1	0	1	1	1	0	1	0	1	MO F	EAh EBh	Turn MTP calibration function OFF/ON		
(33) Multi-time calibration set	0	1	0	1	1	1	0	1	1	0	1	EDh	Use for V1 voltage calibration		
				0	0	0	MT4	MT3	MT2	MT1	MT0	-			
(34) Multi-time programming set	0	1	0	1	1	1	0	1	1	1	1	EFh	Use for V1 voltage programming		
(35) test mode	0	1	0	1	1	1	1	1	*	*	*	-	Use for IC test (F9h~FBh,FDh~FFh)		

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

2.5 Data Format

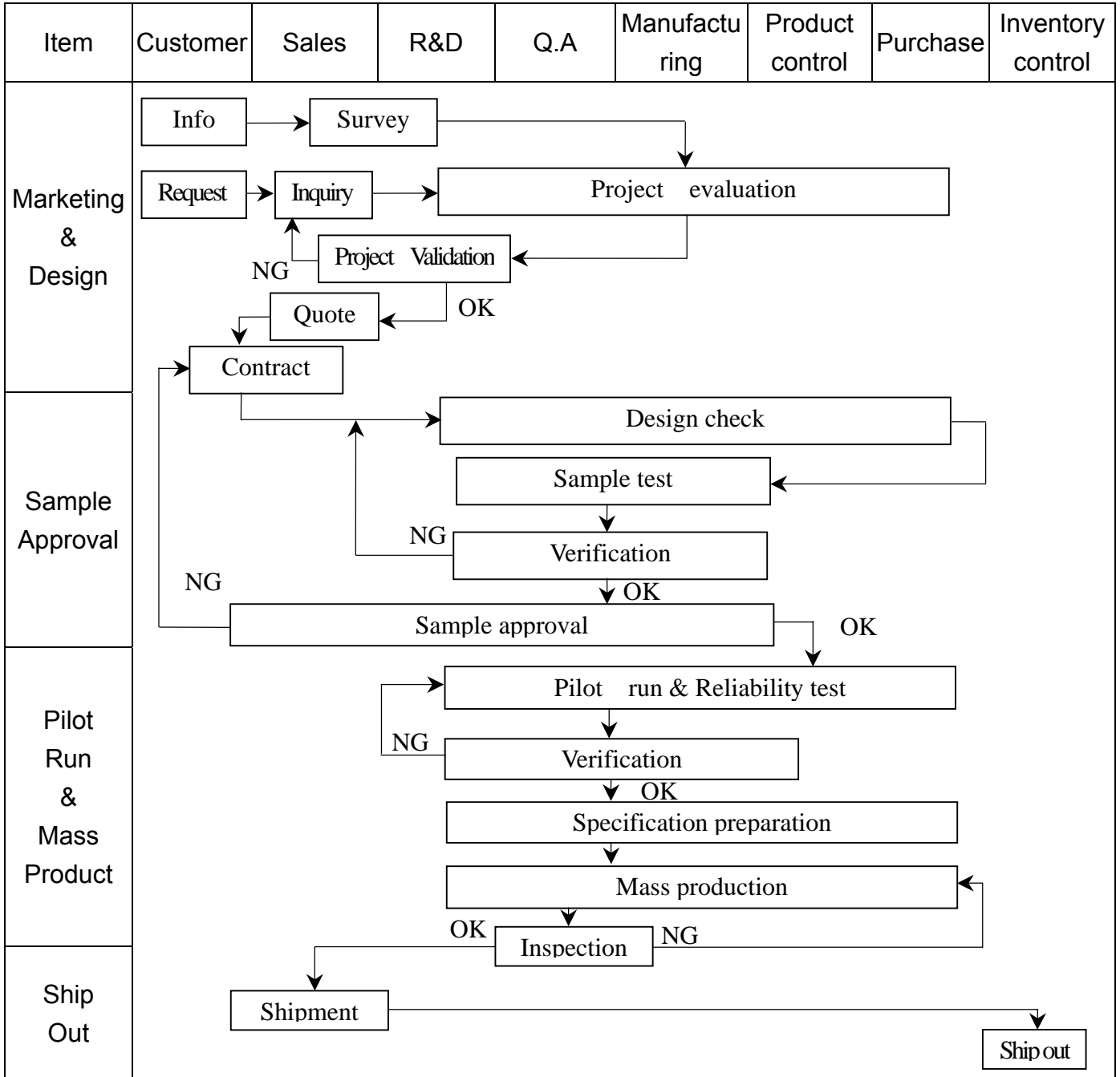
(1)65K color display

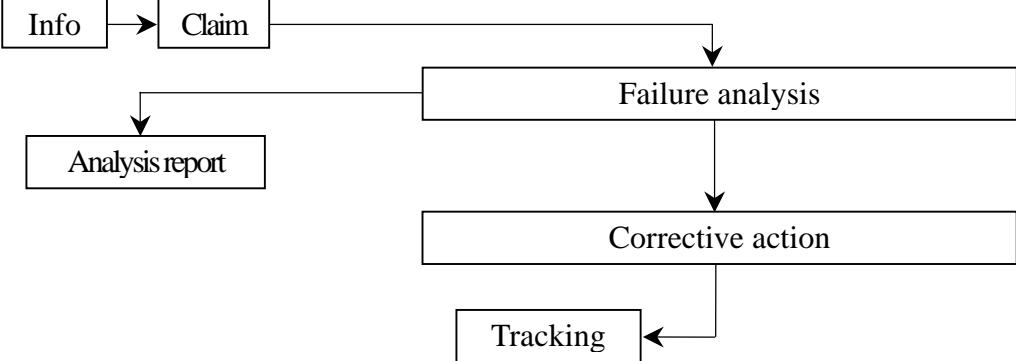
Data Write Sequence	DB7	DB6	DB5	DB4	DB3	DB2	DB1	DB0
1 st Byte Write	R	R	R	R	R	G	G	G
2 ^{nt} Byte Write	G	G	G	B	B	B	B	B

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

3. QUALITY ASSURANCE SYSTEM

3.1 Quality Assurance Flow Chart



Item	Customer	Sales	R&D	Q.A	Manufacturing	Product control	Purchase	Inventory control
Sales Service	 <pre> graph TD Info[Info] --> Claim[Claim] Claim --> Failure[Failure analysis] Failure --> Report[Analysis report] Failure --> Action[Corrective action] Action --> 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

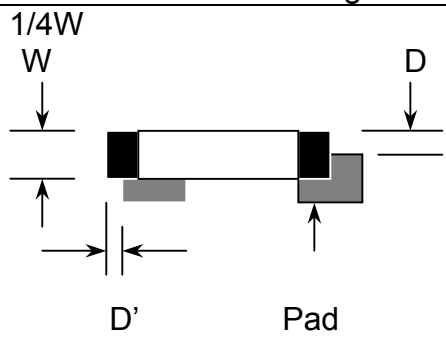
IQC Defect Level : Major Defect AQL 0.4; Minor Defect AQL 1.5

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 ≤ 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 ≥ 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 ≤ 0.4 mm	N.G.	Minor
		The number of solder ball is ≥ 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 > 20mm 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
		$D > 1/4W$ 	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

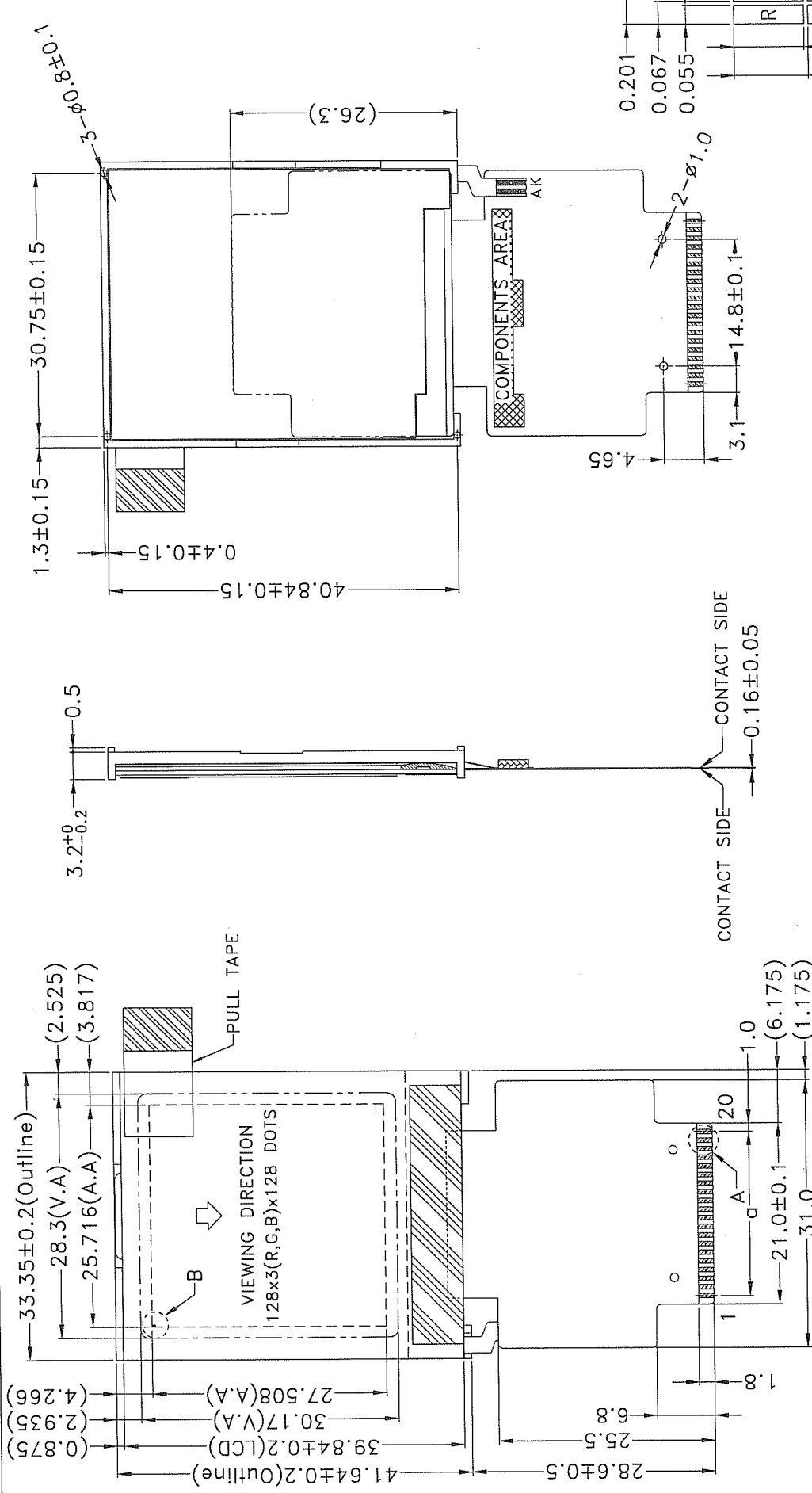
- 5.2.1 Avoid any strong mechanical shock which can break the glass.
- 5.2.2 Avoid static electricity which can damage the CMOS LSI—When working with the module , be sure to ground your body and any electrical equipment you may be using.
- 5.2.3 Do not remove the panel or frame from the module.
- 5.2.4 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.

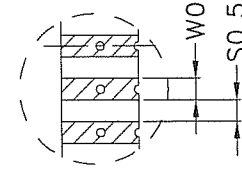


NOTE:

1. THE TOLERANCE UNLESS CLASSIFIED ± 0.2 mm
 $R = 0.5 \pm 0.1$ mm FOR NOT ASSIGNED
2. LCD TYPE : CSTN
3. COMPONENT AREA
4. α : PITCH $1.0 \times 19 = 19.0 \pm 0.05$
5. DRIVE IC: NT7571

DETAIL A
SCALE: 4X

久正光電股份有限公司 POWER TIP TECHNOLOGY CORPORATION		APPROVED	CHECKER	DRAWN
圖面名稱 PH128128C-024-LY1Q	SCALE: 1/0.7	UNIT: mm	PAGE: 1/1	
圖面編號 PH-05049-005	ED I	0		
REV	DESCRIPTION	DATE		



LCM包裝規格書

LCM Model PH128128C-024-LY1Q

LCM Packaging Specifications
(For Tray)

Approve	Check	Contact
黃秋源	石建	鍾政憲
DATE	初版	版次Ver
05'11.01	05'11.01	0

1. 包裝材料規格表 (Packaging Material) : (per carton)

No.	Item	Model	Dimensions (mm)	Quantity
1	成品 (LCD Panel)	PH128128C-024-LY1Q	33.35 X 41.64	672
2	多層薄膜(1)POF	OTFILM0BA03ABA	19"X350X0.015	6
3	TRAY 盤 (2)	PH128128-024	352 X 260 X 10.8	48
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	16	x no of tray	7	=	112
(2)Total LCD quantity in carton : no of boxes	112	x quantity per box	6	=	672

Use empty tray
空盤

Put products into the tray

Tray stacking

(1) POF

(2) Tray

(3)Product Box

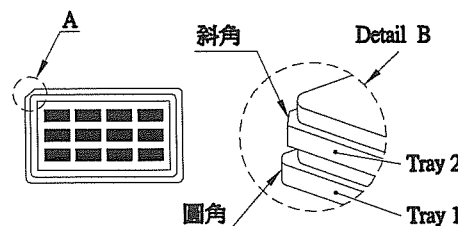
(4)Polylon board

(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 : TY12812824TZBA