InnoLux
群創光電

□ Tentative Specification

□ Preliminary Specification

■ Approval Specification

MODEL NO.: G154IJE
SUFFIX: L02

Customer:

APPROVED BY   **SIGNATURE**

Name / Title
Note

Please return 1 copy for your confirmation with your signature and comments.

Approved By	Checked By	Prepared By
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2014-01-15 18:02:14 CST	2014-01-15 18:02:14 CST	2014-01-15 17:57:04 CST

Version 2.4

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Version 2.4

REVISION HISTORY

Version	Date	Section	Description
2.4	7th, Jan., 2014	All	G154IJE-L02 Approval Spec. was first issued.

Version 2.4

1. GENERAL DESCRIPTION

1.1 OVERVIEW

The G154IJE-L02 model is a 15.4" MVA TFT-LCD module with a white LED Backlight Unit and a 30-pin 1ch-LVDS interface. This module supports 1280 x 800 WXGA mode and displays 262k/ 16.2M colors. The converter for the Backlight Unit is built in.

1.2 GENERAL SPECIFICATIONS

Item	Specification	Unit	Note
Diagonal Size	15.4	inch	
Active Area	331.2(H) x 207.0(V)	mm	(1)
Bezel Opening Area	334.5 x 210.3	mm	
Driver Element	a-si TFT active matrix	-	-
Pixel Number	1280 x R.G.B. x 800	pixel	-
Pixel Pitch	0.259(H) x 0.259(V)	mm	-
Pixel Arrangement	RGB vertical stripe	-	-
Display Colors	262k/ 16.2M	color	-
Transmissive Mode	Normally black	-	-
Surface Treatment	AG, 3H	-	-
Luminance, White	400	Cd/m2	
Power Consumption	Total 19W (Max.) @ cell 4W (Max.), BL 15W (Max.)		

1.3 MECHANICAL SPECIFICATIONS

Item		Min.	Typ.	Max.	Unit	Note
Module Size	Horizontal (H)	351.5	352	352.5	mm	(1)
	Vertical (V)	229.5	230	230.5	mm	
	Thickness (T)	8.2	8.7	9.2	mm	
Bezel Area	Horizontal	334.2	334.5	334.8	mm	
	Vertical	210.0	210.3	210.6	mm	
Weight		-	920	-	g	
I/F connector mounting position		The mounting inclination of the connector makes the screen center within ±0.5mm as the horizontal.				(2)

Note (1) Please refer to the attached drawings for more information of front and back outline dimensions.

(2) Connector mounting position

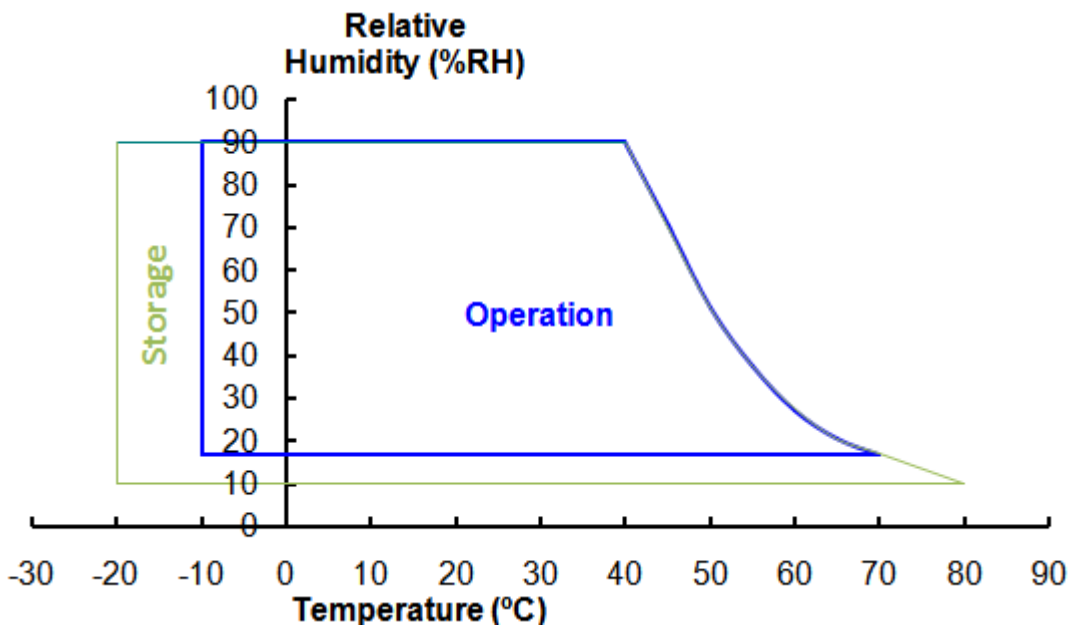+/- 0.5mm
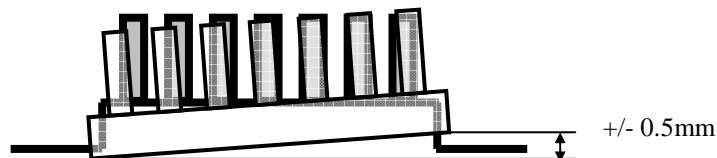
2. ABSOLUTE MAXIMUM RATINGS

2.1 ABSOLUTE RATINGS OF ENVIRONMENT

Item	Symbol	Value		Unit	Note
		Min.	Max.		
Operating Ambient Temperature	T_{OP}	-10	+70	ºC	(1), (2)
Storage Temperature	T_{ST}	-20	+80	ºC	(1)

Note (1): Temperature and relative humidity range is shown in the figure below.

(a) 90 %RH Max. (Ta < 40 ºC).

(b) Wet-bulb temperature should be 39 ºC Max. (Ta < 40 ºC).

(c) No condensation.

Note (2)
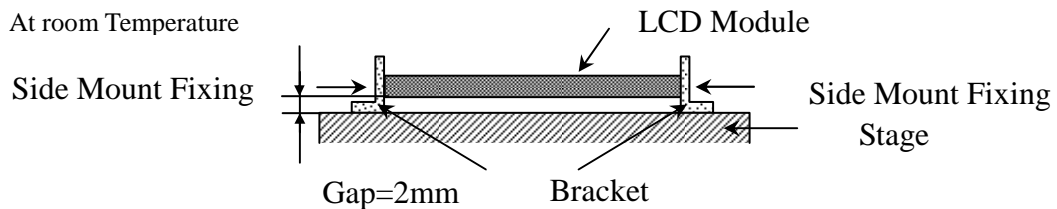

Note (3) 1 time for ± X, ± Y, ± Z. for Condition (25G / 6ms) is half Sine Wave,.

Note (4) 5- 9Hz: 3,5mm amplitude 9- 500Hz: 1g- each 10 cycles / axis (X,Y,Z); 1 octave / min.

Note (5) At testing Vibration and Shock, the fixture in holding the module has to be hard and rigid enough so that the module would not be twisted or bent by the fixture.

The fixing condition is shown as below:

2.2 ELECTRICAL ABSOLUTE RATINGS

2.2.1 TFT LCD MODULE

Item	Symbol	Value		Unit	Note
		Min.	Max.		
Power Supply Voltage	Vcc	-0.3	4.0	V	(1)
Logic Input Voltage	V_{IN}	-0.3	Vcc+0.3	V	(1)

2.2.2 BACKLIGHT UNIT

Item	Value			Unit	Note
	Min	Typ.	Max.		
LED Light Bar Input voltage	-	31	-	V_{DC}	(1), (2)
LED Light Bar Input Current	-	400	-	mA_{DC}	

Note (1) Permanent damage to the device may occur if maximum values are exceeded. Function operation should be restricted to the conditions described under Normal Operating Conditions.

Note (2) Specified values are for LED (Refer to Section 3.2 for further information).

3. ELECTRICAL CHARACTERISTICS

3.1 TFT LCD MODULE

Ta = 25 ± 2 ºC

Parameter		Symbol	Value			Unit	Note
			Min.	Typ.	Max.		
Power Supply Voltage		Vcc	3.0	3.3	3.6	V	at Vcc=3.3V
Ripple Voltage		V_{RP}	-	50		mV	-
Rush Current		I_{RUSH}	-	-	1.5	A	(2)
Initial Stage Current		I_{IS}	-	-	1.0	A	(2)
Power Supply Current	White	Icc	-	1.2	1.44	A	(3)a, at Vcc=3.3V
	Black		-	750	900	mA	(3)b, at Vcc=3.3V
LVDS Differential Input High Threshold		VTH(LVDS)	-	-	+100	mV	(5), VCM=1.2V
LVDS Differential Input Low Threshold		VTL(LVDS)	-100	-	-	mV	(5) VCM=1.2V
LVDS Common Mode Voltage		VCM	1.125	-	1.375	V	(5)
LVDS Differential Input Voltage		|VID|	100	-	600	mV	(5)
Terminating Resistor		RT	-	100	-	Ohm	
Power per EBL WG		PEBL	-	3	-	W	(4)

Note (1) The assembly should be always operated within above ranges.

Note (2) Measurement Conditions:

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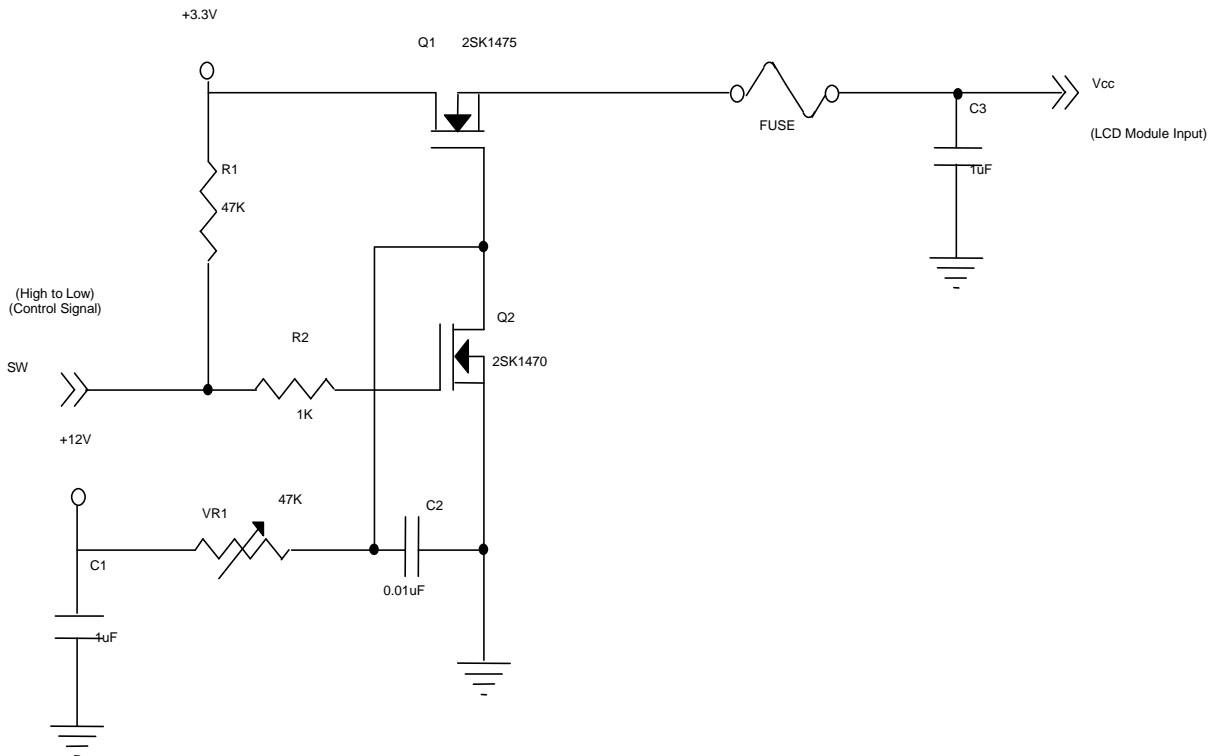
VCC rising time is 470us
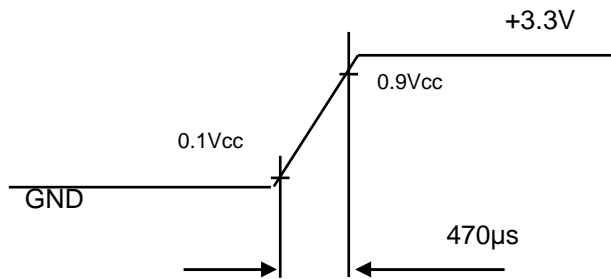
Note (3) The specified power supply current is under the conditions at Vcc = 3.3 V, Ta = 25 ± 2 ºC, f_v = 60 Hz, whereas a power dissipation check pattern below is displayed.

a. White Pattern

Active Area

b. Black Pattern

Active Area

c. Vertical Stripe Pattern

Active Area

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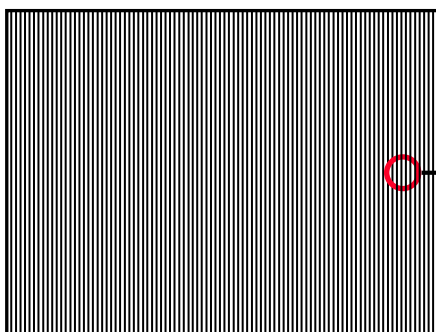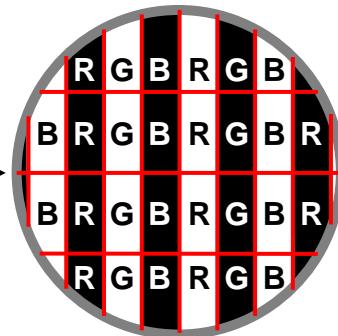
3.2 BACKLIGHT UNIT

Ta = 25 ± 2 ºC

Parameter		Symbol	Value			Unit	Note
			Min.	Typ.	Max.		
Converter Power Supply Voltage		V_i	10.8	12.0	13.2	V	(Duty 100%)
Converter Power Supply Current		I_i	1.1	1.2	1.3	A	@ Vi = 12V (Duty 100%)
LED Power Consumption		P_{LED}	---	14.4	---	W	@ Vi = 12V (Duty 100%),(3)
EN Control Level	Backlight on	BLU_EN	2	---	5	V	
	Backlight off		0	---	0.8	V	
PWM Control Level	PWM High Level	BLU_ADJ	2.0	---	5	V	
	PWM Low Level		0	---	0.4	V	
PWM Control Duty Ratio			1		100	%	
PWM Control Frequency		f_{PWM}	130	200	210	Hz	
LED Life Time		L_L	50,000			Hrs	(1), (2)

Note (1) LED current is measured by utilizing a high frequency current meter as shown below:

Note (2) The lifetime of LED is defined as the time when it continues to operate under the conditions at Ta = 50±2 ℃ and I_{LED} = 80mA$_{DC}$(LED forward current) until the brightness becomes $\leqq$ 50% of its original value.

Note (3) $P_L = I_o \times V_o$

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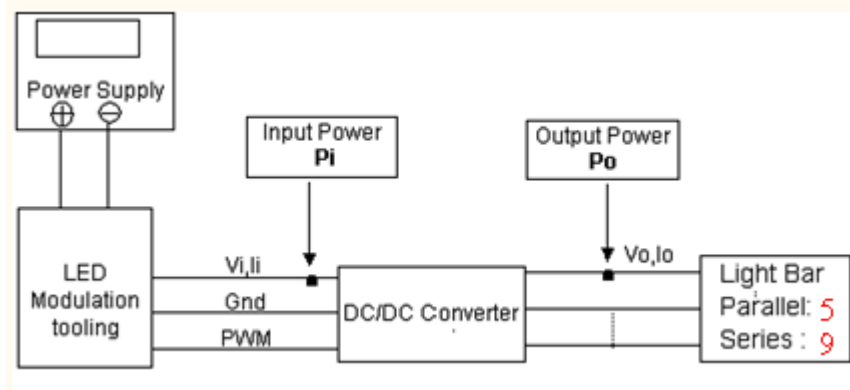
4. BLOCK DIAGRAM

4.1 TFT LCD MODULE

RX0(+/-) →
RX1(+/-) →
RX2(+/-) →
RX3(+/-) →
RXCLK(+/-) →

VCC →
SEL 6/8 →
GND →

VLED →
Dimming →
EN_LED →

INPUT CONNECTOR (093G30-B1001A-G4 (Starconn))

LVDS INPUT / TIMING CONTROLLER

DC/DC CONVERTER & REFERENCE VOLTAGE GENERATOR

LED Converter

SCAN DRIVER IC

TFT LCD PANEL (1280xR.G.B.x800)

DATA DRIVER IC

LED BACKLIGHT UNIT

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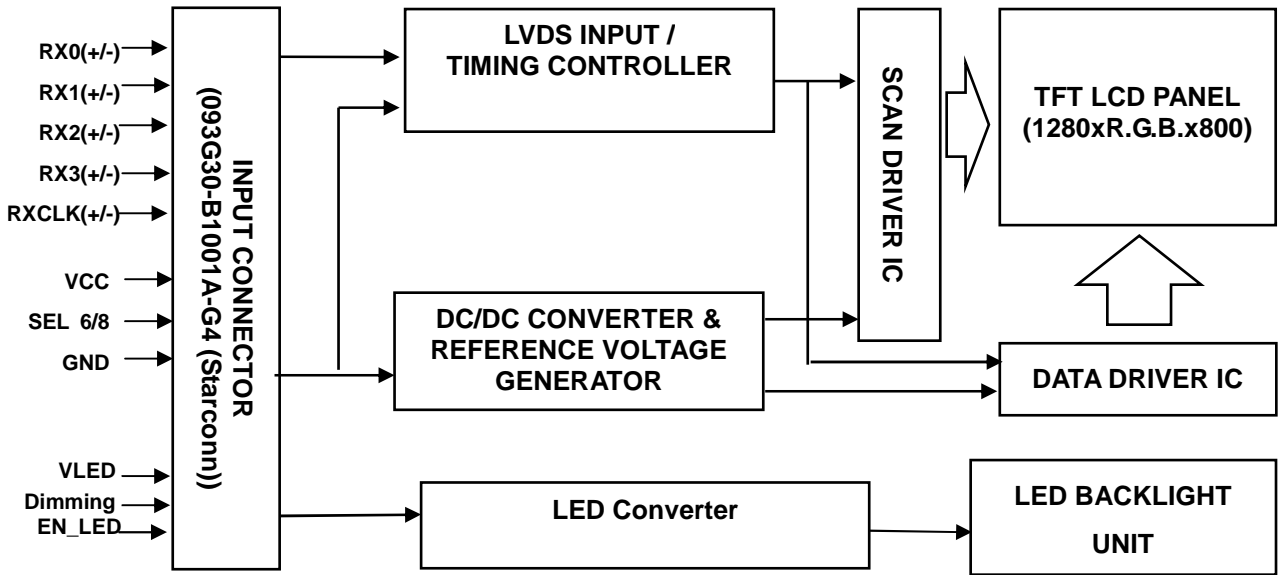
5. INPUT TERMINAL PIN ASSIGNMENT

5.1 TFT LCD MODULE

Pin	Name	Description	Remark
1	12V	LED Power supply	LED converter power
2	12V	LED Power supply	
3	12V	LED Power supply	
4	12V	LED Power supply	
5	ENLED	Enable Pin	
6	Dimming	Backlight Adjust	
7	GND	Ground	
8	GND	Ground	
9	VCC	Power supply +3.3V	System power
10	VCC	Power supply +3.3V	
11	GND	Ground	
12	GND	Ground	
13	RX0-	Differential Data Input, CH0 (Negative)	
14	RX0+	Differential Data Input, CH0 (Positive)	
15	GND	Ground	
16	RX1-	Differential Data Input, CH1 (Negative)	
17	RX1+	Differential Data Input , CH1 (Positive)	
18	GND	Ground	
19	RX2-	Differential Data Input , CH2 (Negative)	B2~B5, DE, Hsync, Vsync
20	RX2+	Differential Data Input , CH2 (Positive)	
21	GND	Ground	
22	RXCLK-	Differential Clock Input (Negative)	LVDS Level Clock
23	RXCLK+	Differential Clock Input (Positive)	
24	GND	Ground	
25	RX3-	Differential Data Input, CH3 (Negative)	
26	RX3+	Differential Data Input, CH3 (Positive)	
27	GND	Ground	
28	SEL6/8	LVDS 6/8 bit select function control, Low or NC → 6 bit Input Mode High →8 bit Input Mode	(2)
29	GND	GND	
30	GND	Ground	

Note (1) Connector Part No.: STARCONN 093G30-B1001A-G4 or equivalent.

Note (2) "Low" stands for 0V. "High" stands for 3.3V. "NC" stands for "No Connected".

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5.3 COLOR DATA INPUT ASSIGNMENT

The brightness of each primary color (red, green and blue) is based on the 6-bit gray scale data input for the color. The higher the binary input, the brighter the color. The table below provides the assignment of color versus data input.

Color		Data Signal																	
		Red						Green						Blue					
		R5	R4	R3	R2	R1	R0	G5	G4	G3	G2	G1	G0	B5	B4	B3	B2	B1	B0
Basic Colors	Black	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Red	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
	Green	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
	Cyan	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1
	Magenta	1	1	1	1	1	1	0	0	0	0	0	0	1	1	1	1	1	1
	Yellow	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
	White	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Gray Scale Of Red	Red(0)/Dark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Red(1)	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
	Red(2)	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	Red(61)	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
	Red(62)	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	Red(63)	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Gray Scale Of Green	Green(0)/Dark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Green(1)	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	Green(2)	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	Green(61)	0	0	0	0	0	0	1	1	1	1	0	1	0	0	0	0	0	0
	Green(62)	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0
	Green(63)	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0
Gray Scale Of Blue	Blue(0)/Dark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Blue(1)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	Blue(2)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	Blue(61)	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1
	Blue(62)	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0
	Blue(63)	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1

Note (1) 0: Low Level Voltage, 1: High Level Voltage

6. INTERFACE TIMING

6.1 INPUT SIGNAL TIMING SPECIFICATIONS

The input signal timing specifications are shown as the following table and timing diagram.

| Signal	Item	Symbol	Min.	Typ.	Max.	Unit	Note
DCLK	Frequency	1/Tc	67.45	71	74.55	MHz	-
DE	Vertical Total Time	TV	810	823	1000	TH	-
	Vertical Addressing Time	TVD	800	800	800	TH	-
	Horizontal Total Time	TH	1360	1440	1600	Tc	-
	Horizontal Addressing Time	THD	1280	1280	1280	Tc	-

Note：(1) Because this module is operated by DE only mode, Hsync and Vsync input signals should be

set to low logic level or ground. Otherwise, this module would operate abnormally.

INPUT SIGNAL TIMING DIAGRAM
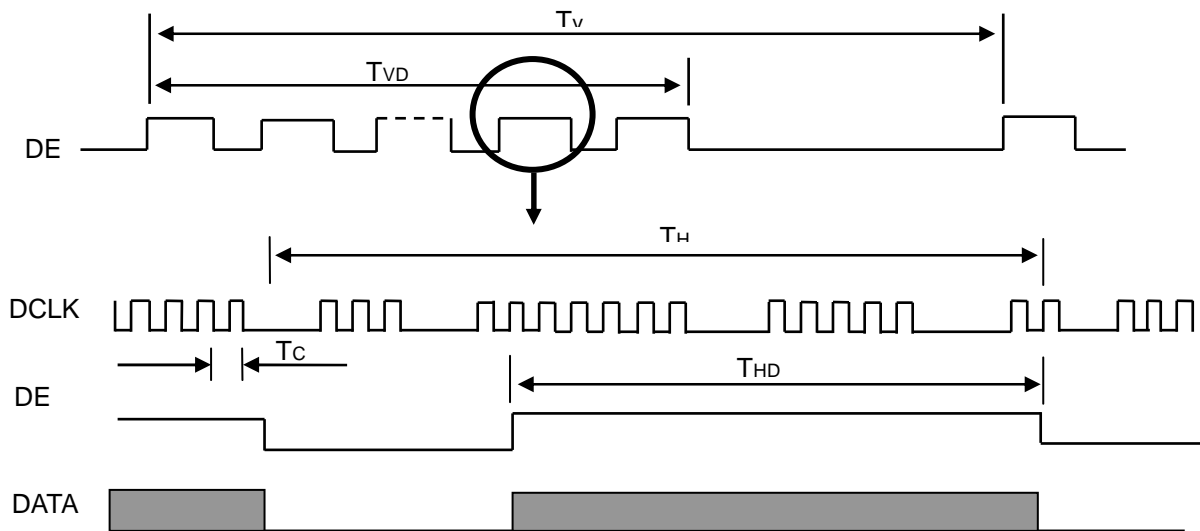
6.2 POWER ON/OFF SEQUENCE

To prevent a latch-up or DC operation of LCD assembly, the power on/off sequence should be as the diagram below.
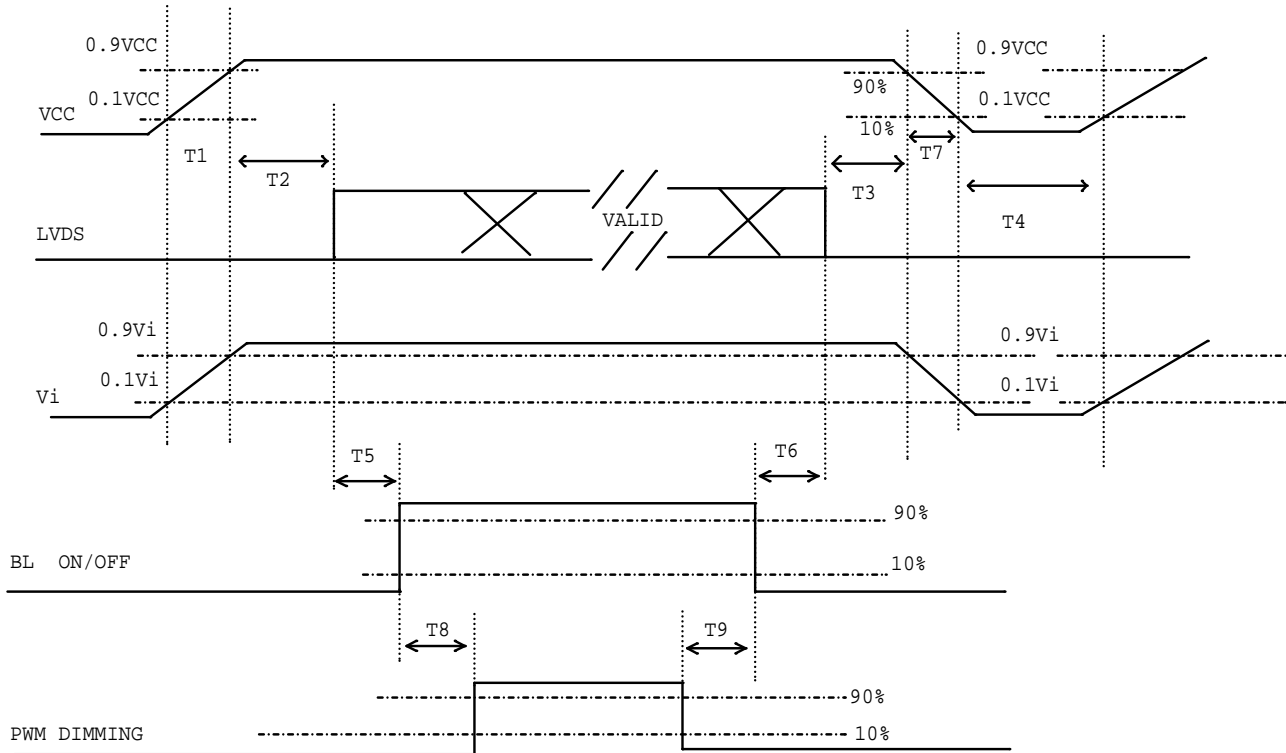
Power ON/OFF sequence

Note (1) Please avoid floating state of interface signal at invalid period.

Note (2) When the interface signal is invalid, be sure to pull down the power supply of LCD VCC to 0 V.

Note (3) The Backlight converter power must be turned on after the power supply for the logic and the interface signal is valid. The Backlight converter power must be turned off before the power supply for the logic and the interface signal is invalid.
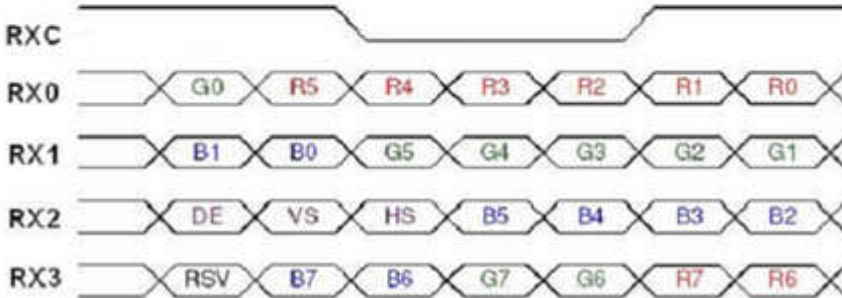
Parameter	Value			Units
	Min	Typ	Max	
T1	0.5	-	10	ms
T2	0	-	50	ms
T3	0	-	50	ms
T4	500	-	-	ms
T5	200	-	-	ms
T6	20	-	-	ms
T7	5	-	300	ms
T8	10	-	-	ms
T9	10	-	-	ms

6.3 The Input Data Format

SEL 6/8=Low or NC for 6 Bits LVDS
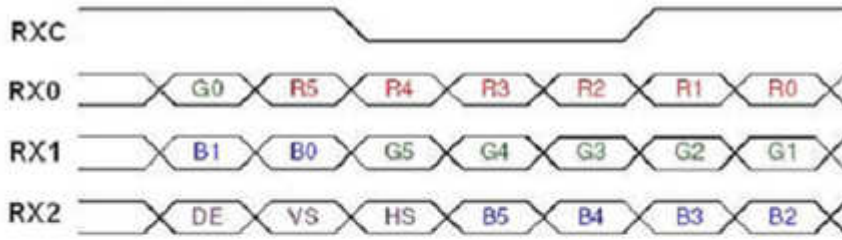
SEL 6/8=High for 8 Bits LVDS

Note (1)   R/G/B data 7: MSB, R/G/B data 0: LSB

Note (2)   Please follow PSWG

Signal Name	Description	Remark
R7	Red Data 7 (MSB)	Red-pixel Data
R6	Red Data 6	Each red pixel's brightness data consists of these
R5	Red Data 5	8 bits pixel data.
R4	Red Data 4	
R3	Red Data 3	
R2	Red Data 2	
R1	Red Data 1	
R0	Red Data 0 (LSB)	
G7	Green Data 7 (MSB)	Green-pixel Data
G6	GreenData 6	Each green pixel's brightness data consists of these
G5	GreenData 5	8 bits pixel data.
G4	GreenData 4	
G3	GreenData 3	
G2	GreenData 2	
G1	GreenData 1	
G0	GreenData 0 (LSB)	
B7	Blue Data 7 (MSB)	Blue-pixel Data
B6	Blue Data 6	Each blue pixel's brightness data consists of these
B5	Blue Data 5	8 bits pixel data.
B4	Blue Data 4	
B3	Blue Data 3	
B2	Blue Data 2	
B1	Blue Data 1	
B0	Blue Data 0 (LSB)	
RXCLKIN+ RXCLKIN-	LVDS Clock Input	
DE	Display Enable	
VS	Vertical Sync	
HS	Horizontal Sync	

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7. OPTICAL CHARACTERISTICS

7.1 TEST CONDITIONS

| Item	Symbol	Value	Unit
Ambient Temperature	Ta	25±2	°C
Ambient Humidity	Ha	50±10	%RH
Supply Voltage	V_{CC}	3.3	V
Input Signal		According to typical value in "3. ELECTRICAL CHARACTERISTICS"	
Converter PWM duty		100%	

7.2 OPTICAL SPECIFICATIONS

The relative measurement methods of optical characteristics are shown in 7.2. The following items should

be measured under the test conditions described in 7.1 and stable environment shown in Note (5).

Item		Symbol	Condition	Min.	Typ.	Max.	Unit	Note
Contrast Ratio		CR		800	1000	-	-	(2), (5)
Response Time		T_R		-	15	20	ms	(3)
		T_F		-	10	15	ms	
Luminance of White (5P)		L_{AVE}		300	400	-	cd/m²	(4), (5)
White Variation		δW	$\theta_x=0°,\theta_Y=0°$ Viewing Normal Angle	-	1.25	1.4	-	(5), (6)
Color Chromaticity	Red	Rx			0.565		-	(1), (5)
		Ry			0.351		-	
	Green	Gx			0.357		-	
		Gy		Typ. +0.05	0.590	Typ. +0.05	-	
	Blue	Bx			0.155		-	
		By			0.131		-	
	White	Wx			0.313		-	
		Wy			0.329		-	
Viewing Angle	Horizontal	θ_x+	CR≥10	80	88	-	Deg.	(1), (5)
		θ_x-		80	88	-		
	Vertical	θ_Y+		80	88	-		
		θ_Y-		80	88	-		

Note (1) Definition of Viewing Angle (θx, θy):
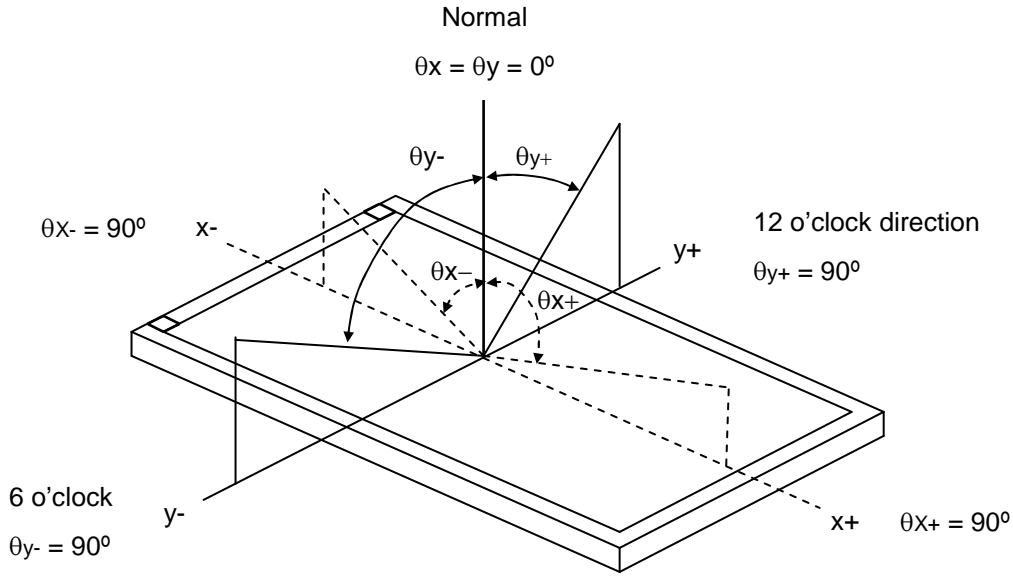
Note (2) Definition of Contrast Ratio (CR):

The contrast ratio can be calculated by the following expression.
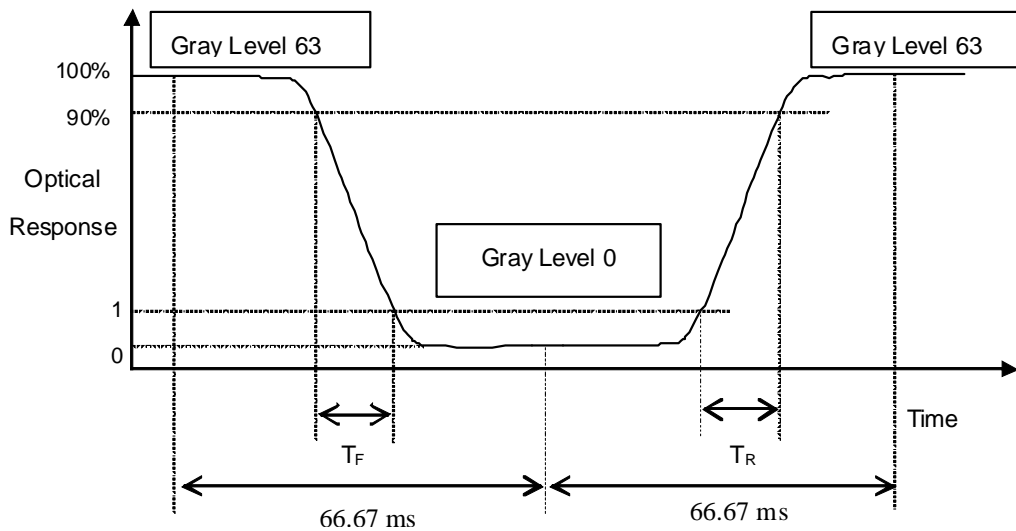
Contrast Ratio (CR) = L63 / L0

L63: Luminance of gray level 63

L 0: Luminance of gray level 0

CR = CR (5)

CR (X) is corresponding to the Contrast Ratio of the point X at Figure in Note (6).

Note (3) Definition of Response Time (T_R, T_F) and measurement method:
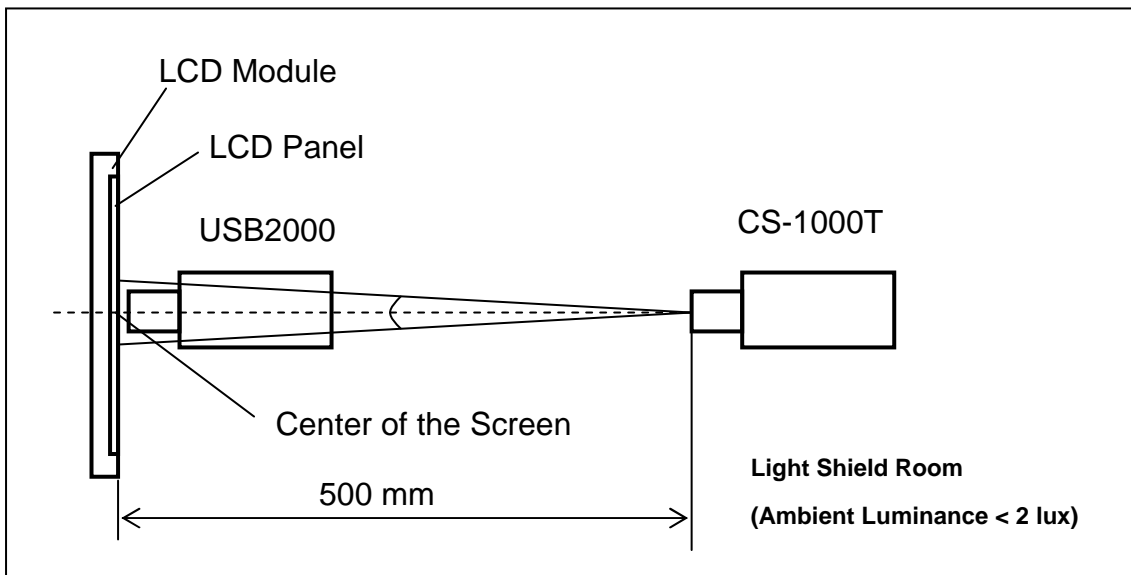
Note (4) Definition of Luminance of White (L_C):

Measure the luminance of gray level 63 at center point

$L_C = L$ (5)

L (x) is corresponding to the luminance of the point X at Figure in Note (6).

Note (5) Measurement Setup:

The LCD module should be stabilized at given temperature for 20 minutes to avoid abrupt temperature change during measuring. In order to stabilize the luminance, the measurement should be executed after lighting Backlight for 20 minutes in a windless room.

LCD Module

LCD Panel

USB2000

CS-1000T

Center of the Screen

Light Shield Room

(Ambient Luminance < 2 lux)

500 mm

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Note (6) Definition of White Variation (δW):

Measure the luminance of gray level 63 at 5 points

$$\delta W = \frac{\text{Maximum} \ [L\ (1),\ L\ (2),\ L\ (3),\ L\ (4),\ L\ (5)]}{\text{Minimum} \ [L\ (1),\ L\ (2),\ L\ (3),\ L\ (4),\ L\ (5)]}$$

Horizontal Line

Active Area
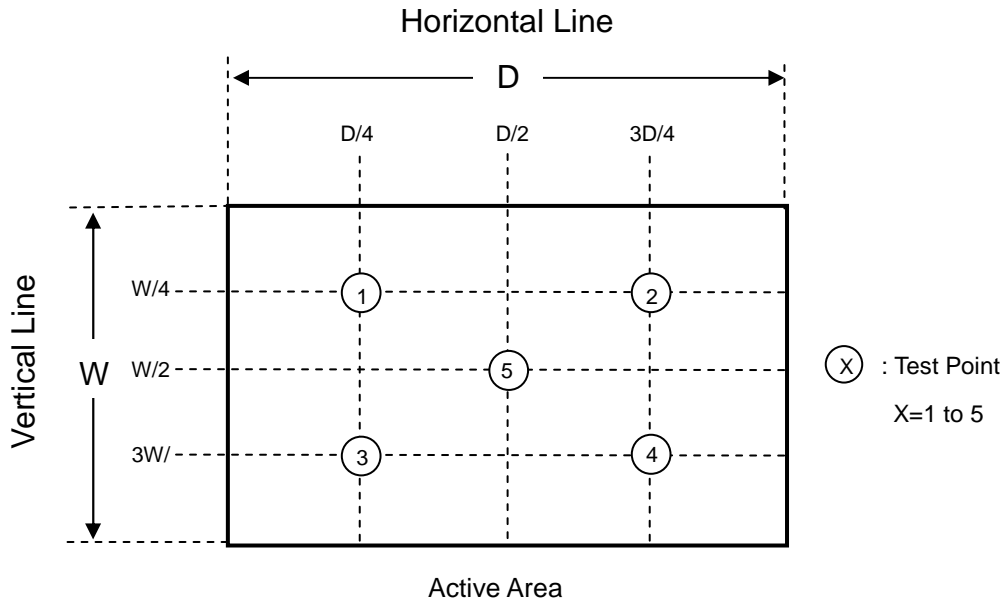
8. Reliability Test Criteria

Test Item	Test Condition	Note
High Temperature Storage Test	80ºC,240 hours	(1)(2)(4)
Low Temperature Storage Test	-20ºC, 240hours	
Thermal Shock Storage Test	-20ºC, 0.5hour←→80℃, 0.5hour; 1hour/cycle,100cycles	
High Temperature Operation Test	70ºC, 240 hours	
Low Temperature Operation Test	-10ºC, 240 hours	
High Temperature & High Humidity Operation Test	60ºC, 90%RH, 240hours	
Shock (Non-Operating)	200G, 2ms, half sine wave, 1time for each direction of ±X, ±Y, ±Z	(3)(4)
Vibration (Non-Operating)	1.5G 10~500hz sine wave, 30min/cycle, 1cycles, each X, Y, Z direction	(3)(4)

Note (1) There should be no condensation on the surface of panel during test.

Note (2) Temperature of panel display surface area should be 80 ºC Max.

Note (3) At testing Vibration and Shock, the fixture in holding the module has to be hard and rigid enough so that the module would not be twisted or bent by the fixture.
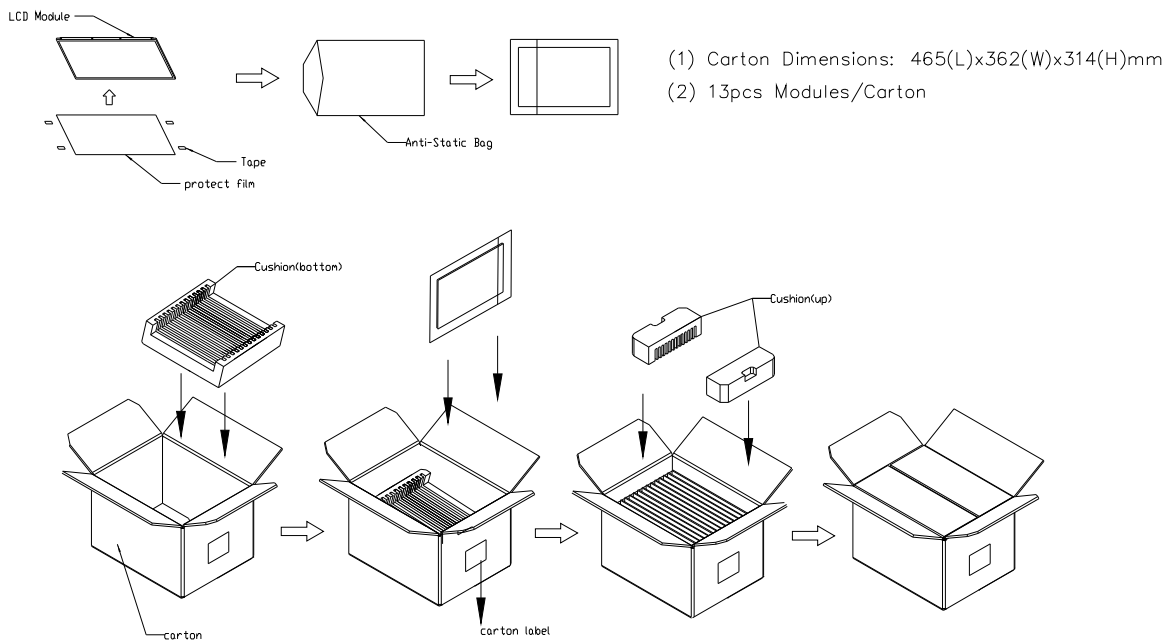
Note (4) In the standard conditions, there is no function failure issue occurred. All the cosmetic specification is judged before reliability test.
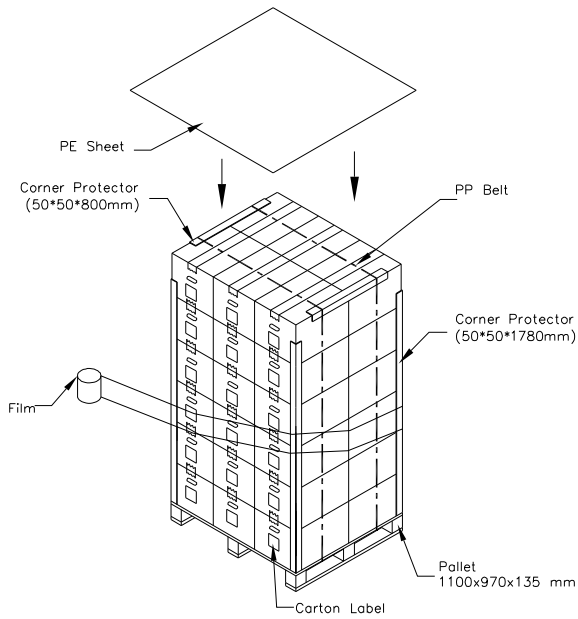
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9. PACKAGING

9.1 PACKING SPECIFICATIONS

(1) 13pcs LCD modules / 1 Box

(2) Box dimensions: 465(L) X 362 (W) X 314 (H) mm

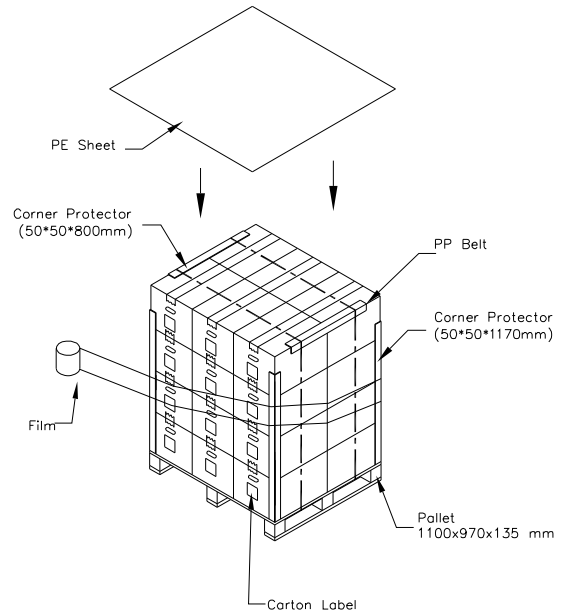(3) Weight: approximately 11 Kg (13 modules per box)

9.2 PACKING METHOD

(1) Carton Dimensions: 465(L)x362(W)x314(H)mm

(2) 13pcs Modules/Carton

Figure. 9-1 Packing method

Sea / Land Transportation (40ft Container)

Air Transportation

PE Sheet

Corner Protector
(50*50*800mm)

PP Belt

Corner Protector
(50*50*1780mm)

Film

Pallet
1100x970x135 mm

Carton Label

PE Sheet

Corner Protector
(50*50*800mm)

PP Belt

Corner Protector
(50*50*1170mm)

Film

Pallet
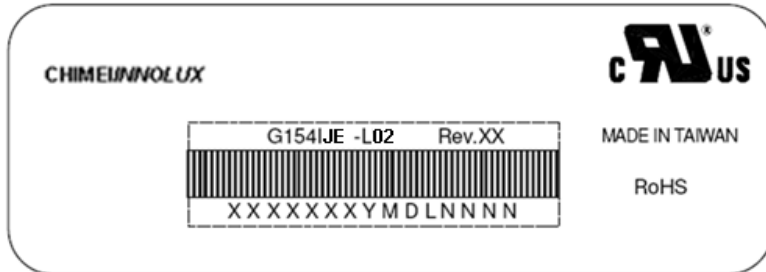1100x970x135 mm

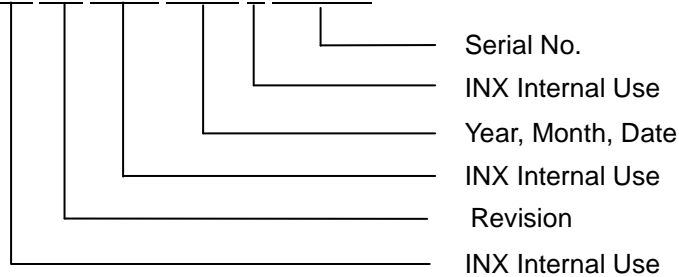Carton Label

Figure. 9-2 Packing method

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10. DEFINITION OF LABELS

10.1 MODULE LABEL

The barcode nameplate is pasted on each module as illustration, and its definitions are as following explanation.

(a) Model Name: G154IJE -L02

(b) Revision: Rev. XX, for example: A1, …C1, C2 …etc.

(c) Serial ID: X X X X X X X Y M D X N N N N

- Serial No.
- INX Internal Use
- Year, Month, Date
- INX Internal Use
- Revision
- INX Internal Use

Serial ID includes the information as below:

(a) Manufactured Date: Year: 0~9, for 2010~2019

Month: 1~9, A~C, for Jan. ~ Dec.

Day: 1~9, A~Y, for 1st to 31st, exclude I , O and U

(b) Revision Code: cover all the change

(c) Serial No.: Manufacturing sequence of product

11. PRECAUTIONS

11.1 ASSEMBLY AND HANDLING PRECAUTIONS

(1) Do not apply rough force such as bending or twisting to the module during assembly.

(2) To assemble or install module into user's system can be only in clean working areas. The dust and oil may cause electrical short or worsen the polarizer.

(3) It's not permitted to have pressure or impulse on the module because the LCD panel and Backlight will be damaged.

(4) Always follow the correct power sequence when LCD module is connecting and operating. This can prevent damage to the CMOS LSI chips during latch-up.

(5) Do not pull the I/F connector in or out while the module is operating.

(6) Do not disassemble the module.

(7) Use a soft dry cloth without chemicals for cleaning, because the surface of polarizer is very soft and easily scratched.

(8) It is dangerous that moisture come into or contacted the LCD module, because moisture may damage LCD module when it is operating.

(9) High temperature or humidity may reduce the performance of module. Please store LCD module within the specified storage conditions.

(10) When ambient temperature is lower than 10ºC may reduce the display quality. For example, the response time will become slowly.

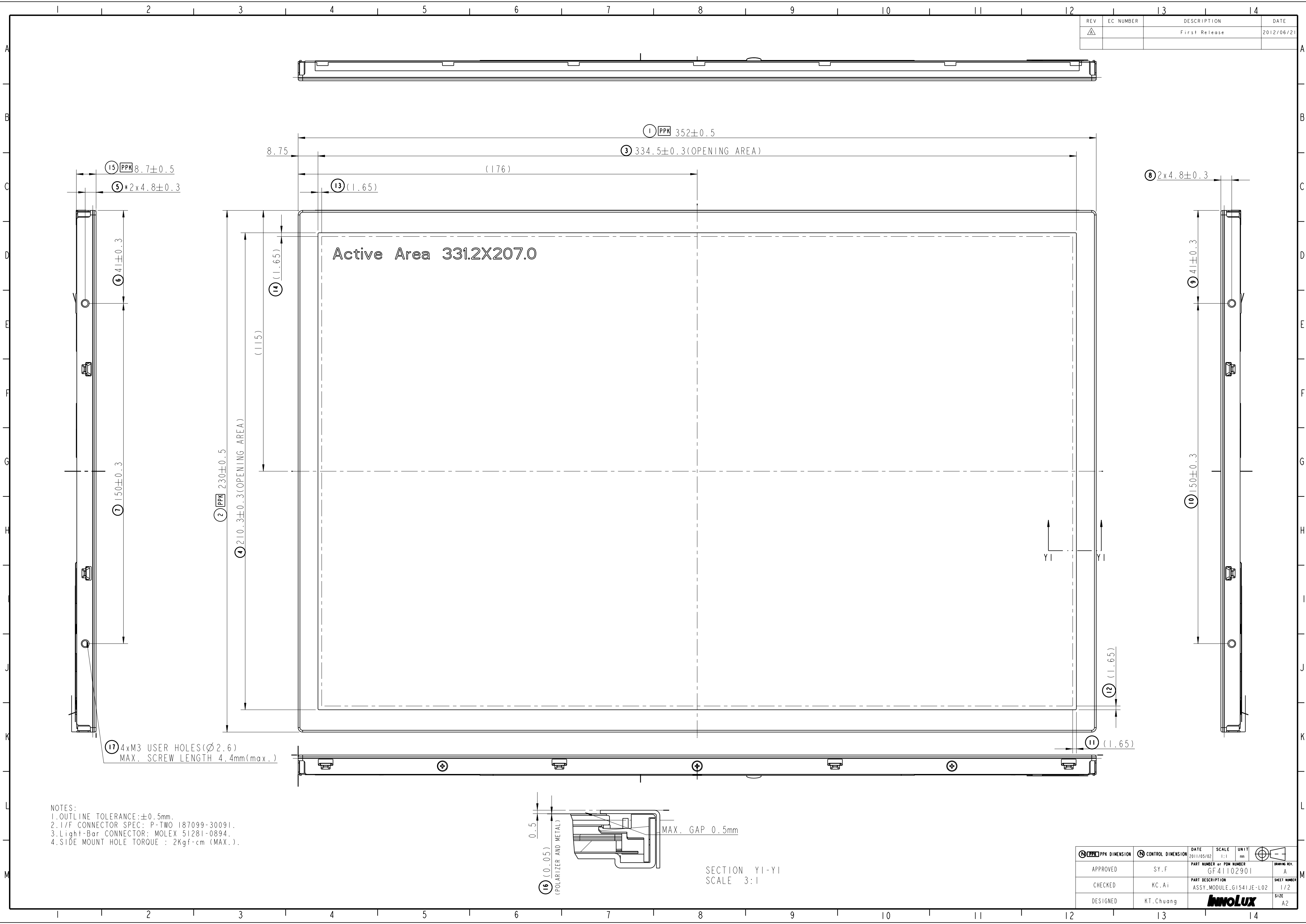(11) Do not keep same pattern in a long period of time. It may cause image sticking on LCD.

11.2 SAFETY PRECAUTIONS

(1) Do not disassemble the module or insert anything into the Backlight unit.

(2) If the liquid crystal material leaks from the panel, it should be kept away from the eyes or mouth. In case of contact with hands, skin or clothes, it has to be washed away thoroughly with soap.

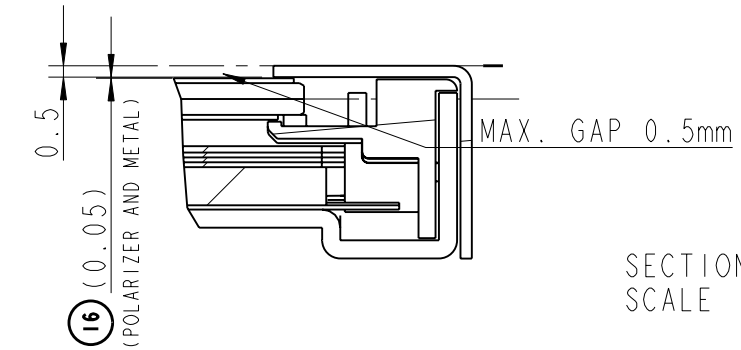(3) After the module's end of life, it is not harmful in case of normal operation and storage.

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12. MECHANICAL CHARACTERISTICS

Version 2.4

① PPK 352±0.5

③ 334.5±0.3(OPENING AREA)

8.75

⑮ PPK 8.7±0.5

⑤ ※2x4.8±0.3

⑬ (1.65)

⑧ 2x4.8±0.3

(176)

⑭ (1.65)

(115)

Active Area 331.2X207.0

⑥ 4I±0.3

⑨ 4I±0.3

② PPK 230±0.5

④ 2I0.3±0.3(OPENING AREA)

⑦ 150±0.3

⑩ 150±0.3

Y1 Y1

(1.65)

⑫ (1.65)

⑰ 4xM3 USER HOLES(∅2.6)
MAX. SCREW LENGTH 4.4mm(max.)

⑪ (1.65)
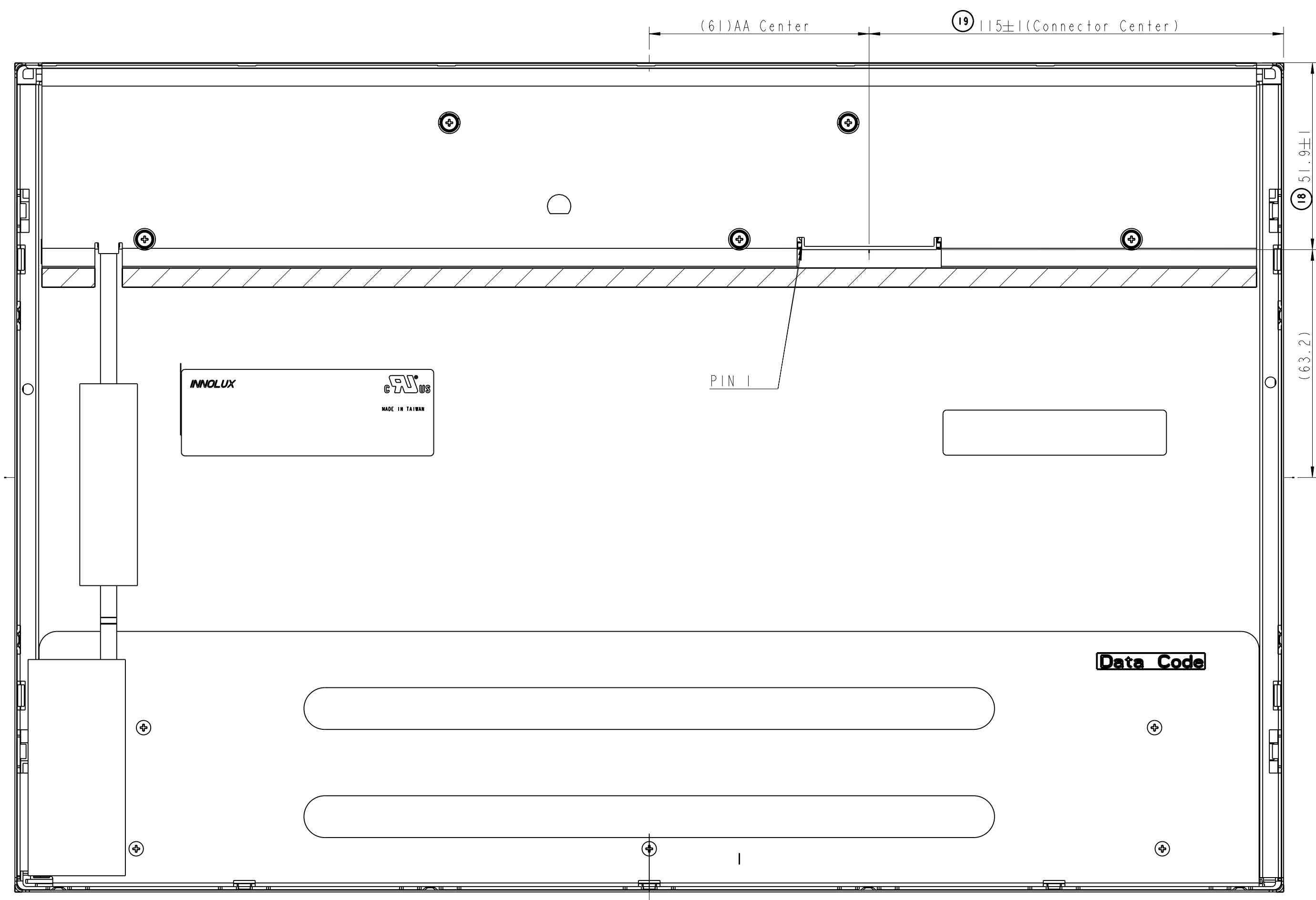
NOTES:
1.OUTLINE TOLERANCE:±0.5mm.
2.I/F CONNECTOR SPEC: P-TWO 187099-30091.
3.Light-Bar CONNECTOR: MOLEX 51281-0894.
4.SIDE MOUNT HOLE TORQUE : 2Kgf-cm (MAX.).

0.5

⑯ (0.05)
(POLARIZER AND METAL)

MAX. GAP 0.5mm

SECTION Y1-Y1
SCALE 3:1

REV	EC NUMBER	DESCRIPTION	DATE
⚠		First Release	2012/06/21

(61)AA Center

⑲ 115±1(Connector Center)

⑱ 51.9±1

(63.2)

PIN 1

INNOLUX

c ⚛ us

MADE IN TAIWAN

Data Code

1

NOTES:
1.OUTLINE TOLERANCE:±0.5mm.
2.I/F CONNECTOR SPEC: P-TWO 187099-30091.
3.Light-Bar CONNECTOR: MOLEX 51281-0894.
4.SIDE MOUNT HOLE TORQUE : 2Kgf-cm(MAX.)

	PPK DIMENSION		CONTROL DIMENSION	DATE 2011/05/02	SCALE 1:1	UNIT mm	⊕		
APPROVED	SY.F			PART NUMBER or PDM NUMBER GF41102901				DRAWING REV. A	
CHECKED	KC.Ai			PART DESCRIPTION ASSY_MODULE_G154IJE-L02				SHEET NUMBER 2/2	
DESIGNED	KT.Chuang			INNOLUX				SIZE A2	