



DATA IMAGE CORPORATION

TFT Module Specification

ITEM NO.: FG07A0M2DSSWMGL2

☒ Prototype ☐ Pre-prod. ☐ Mass prod.

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Customer Companies	QA Approved	DQA Check	R&D Approved	R&D Check
				PeterPan
Customer Approved by	Version:	Issued Date:	Total Pages:	Prepared
	1	24/SEP/19'	22	Candy

2. RECORD OF REVISION

Rev	Date	Item	Page	Comment	Source
1	24/SEP/19'	All	All	Initial Preliminary	ESR0809009

3. GENERAL SPECIFICATIONS

Parameter	Specifications	Unit
Screen Size	7 (diagonal)	inch
Display Format	1024(H) x (R,G,B) x 600(V)	dot
Active Area	154.2144(H) x 85.92(V)	mm
Pixel Pitch	0.1506(H) x 0.1432(V)	mm
Pixel Configuration	Stripe	
Outline Dimension	165.75(H) x 105.39(V) x 4.9(D)	mm
Surface treatment	Anti-glare 3H	
Back-light	LED	
Display mode	Normally Black	
Weight	TBD	g
View Angle direction	All	
Clearing point	>95	°C
Our components and processes are compliant to RoHS standard		

4. ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Min.	Max.	Unit	Remark
Power Supply Voltage	VDD	-0.3	4	V	
Signal Input Voltage	NIND0 ~ NIND3 PIND0 ~ PIND3 NINC,PINC	-0.5	5	V	
Operating temperature	Top	-30	+85	°C	Note 1
Storage temperature	Tst	-40	+85	°C	Note 1

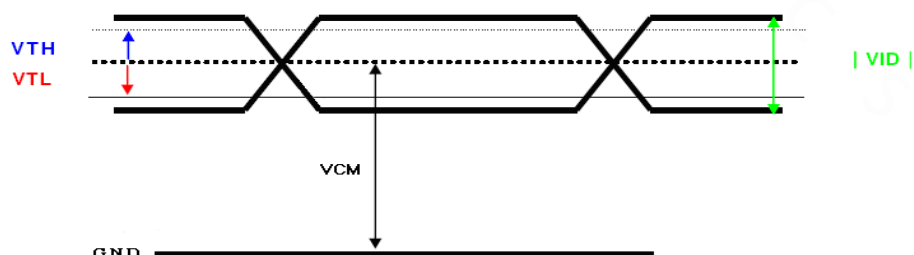
5. ELECTRICAL CHARACTERISTICS

5.1 Operating Conditions

fH=31.5KHz, fV=60Hz, fCLK=33.26MHz, Ta=25°C

Parameter	Symbol	Min.	Typ.	Max.	Unit	Remark
Power Supply Voltage	VDD	+3.0	+3.3	+3.6	V	
Power Supply Current	IDD		230		mA	
Logic Input Voltage (LVDS:IN+,IN-)	VCM	VID /2	-	2.4- VID /2	V	
	VID	200	-	600	mV	
	VTH	-	-	100	mV	
	VTL	-100	-	-	mV	
ADJ input voltage	VIH	0.7VDD	-	VDD	V	
	VIL	GND	-	0.3VDD	V	

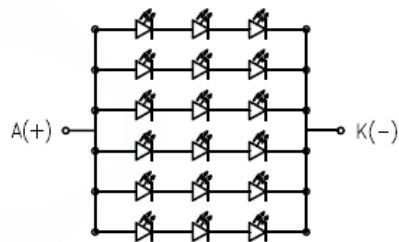
【Note1】 LVDS signal



5.2 Backlight Driving Consumption

Parameter	Symbol	Min.	Typ.	Max.	Unit	Remark
LED voltage	V_F	-	-	10.5	V	Note1
LED current	I_F	-	240	-	mA	Note1
LED dice Life Time		-	50,000	-	hr	Note2

Note 1: LED Circuit Diagram



If : 240mA Vf : 10.5MAX.

LED circuit

Note 2: The "LED life time" is defined as the module brightness decrease to 50% original brightness at $I_F=240\text{mA}$ & $T_a=25^\circ\text{C}$

5.3 Power & Signal sequence

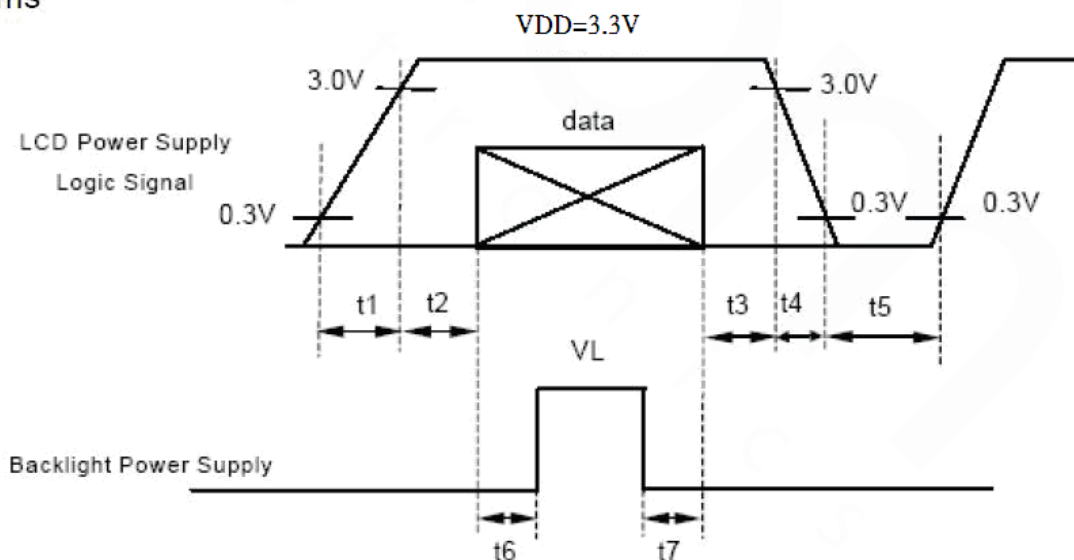
*1) Power Signal sequence:

$t_1 \leq 10\text{ms}$; $1\text{ sec} \leq t_5$

$50\text{ms} \leq t_2$; $200\text{ms} \leq t_6$

$0 < t_3 \leq 50\text{ms}$; $200\text{ms} \leq t_7$

$0 < t_4 \leq 10\text{ms}$



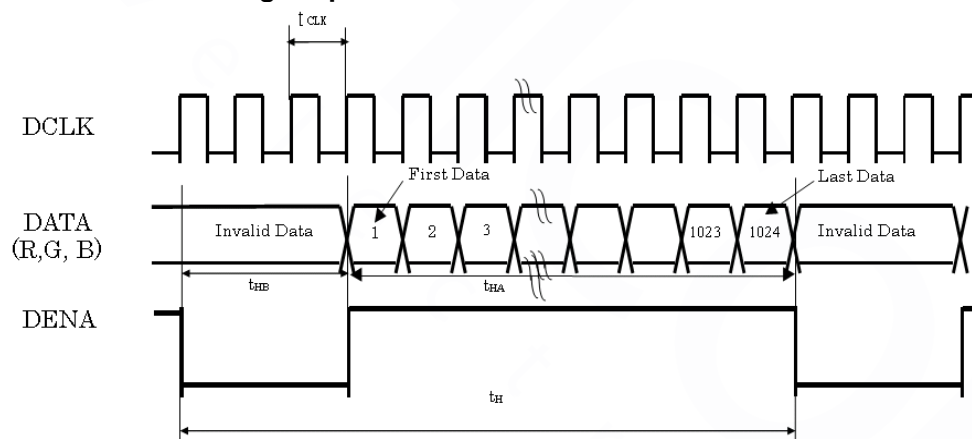
6. INPUT SIGNAL CHARACTERISTICS

6.1 Timing Specification

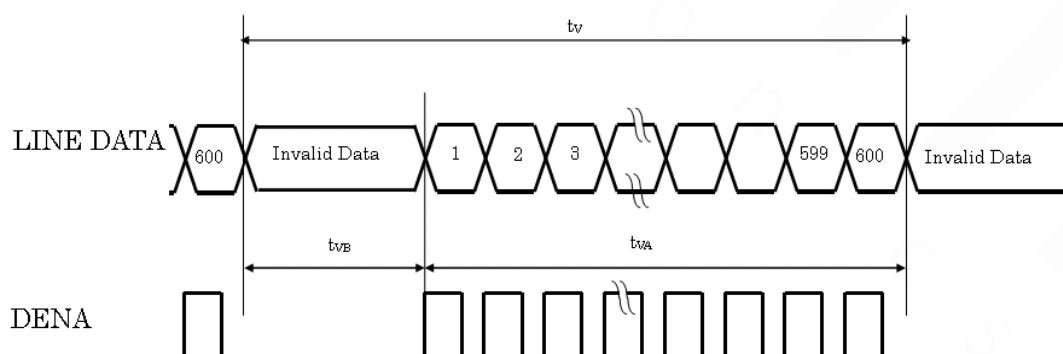
Item				Symbol	Min.	Typ.	Max.	Unit
LVDS input signal sequence	CLK Frequency			tclk	45	51.2	57	MHZ
LCD input signal sequence(Input LVDS Transmitter)	DENA	Horizontal	Horizontal total Time	tH	1324	1344	1364	tCLK
			Horizontal effective Time	tHA	1024			tCLK
			Horizontal Blank Time	tHB	300	320	340	tCLK
	Vertical	Vertical total Time	tV	625	635	645	tH	
		Vertical effective Time	tVA	600			tH	
		Vertical Blank Time	tVB	25	35	45	tH	

6.2 Timing chart

Horizontal Timing Sequence

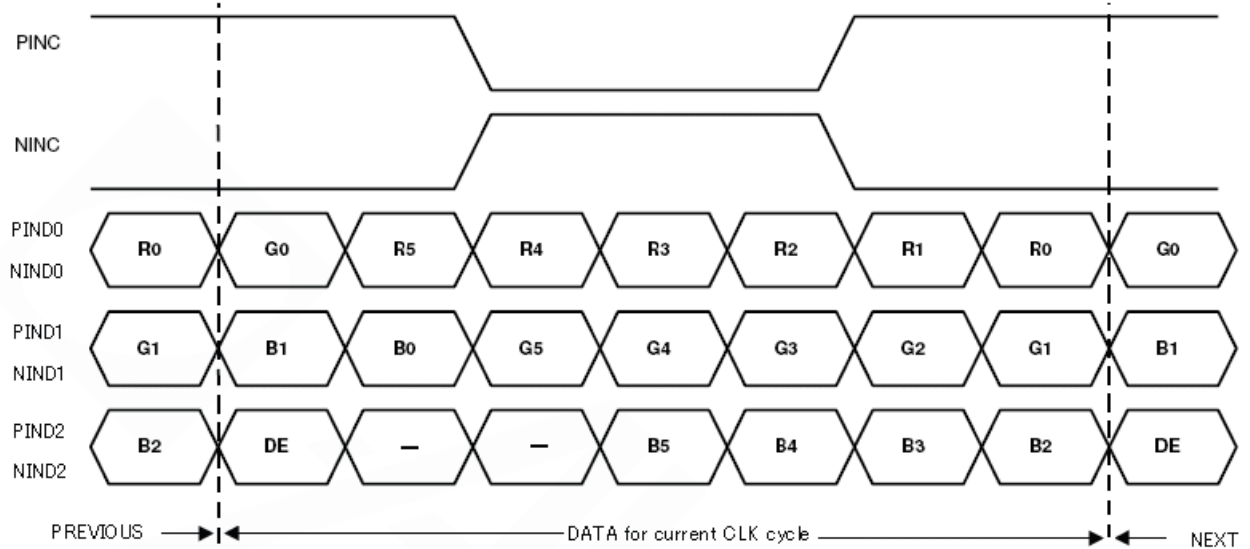


Vertical Timing Sequence

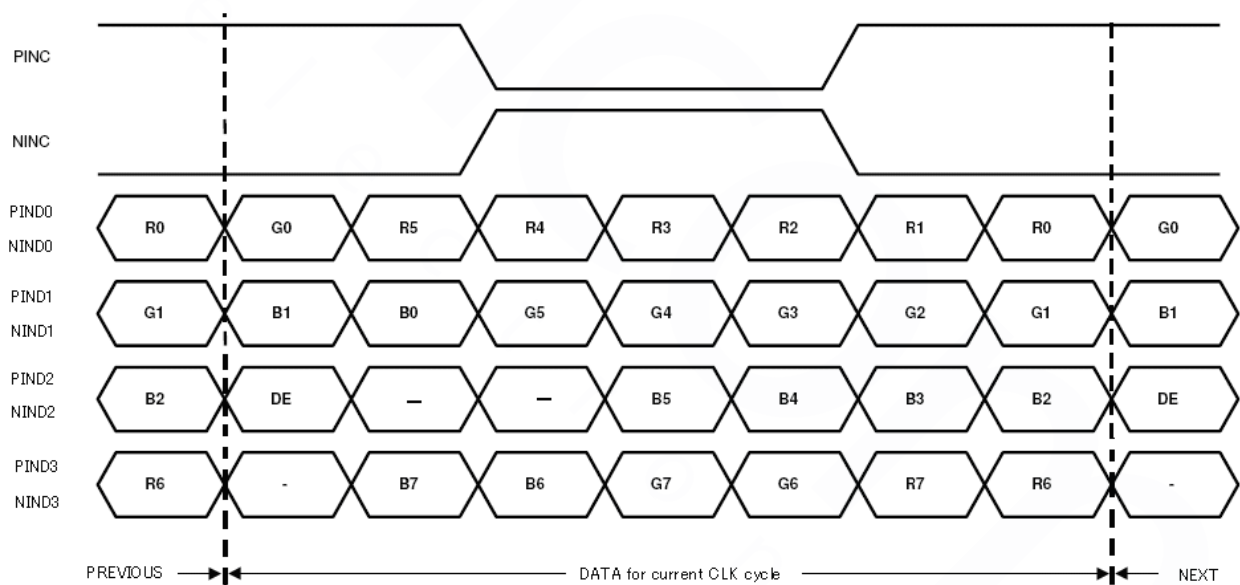


6.3 LVDS Input Data mapping

6 Bit LVDS input



8 Bit LVDS input



6.4 Color Data Assignment

COLOR	INPUT DATA	R DATA								G DATA								B DATA							
		R7	R6	R5	R4	R3	R2	R1	R0	G7	G6	G5	G4	G3	G2	G1	G0	B7	B6	B5	B4	B3	B2	B1	B0
		MSB							LSB	MSB							LSB	MSB							LSB
BASIC COLOR	BLACK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RED(255)	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	GREEN(255)	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
	BLUE(255)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
	CYAN	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	MAGENTA	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
	YELLOW	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	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	1	1	1	1	1	1
RED	RED(0)	0	0	0	0	0	0	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	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RED(2)	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RED(254)	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RED(255)	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GREEN	GREEN(0)	0	0	0	0	0	0	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	0	0	0	0	1	0	0	0	0	0	0	0	0
	GREEN(2)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	GREEN(254)	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0
	GREEN(255)	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
BLUE	BLUE(0)	0	0	0	0	0	0	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	0	0	0	0	0	1	0
	BLUE(2)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	BLUE(254)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0
	BLUE(255)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1

Note :

1) Gray level:

Color(n) : n is level order; higher n means brighter level.

2) DATA:

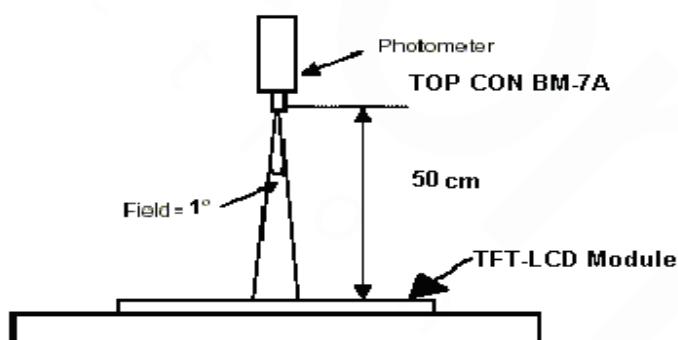
1: high , 0: low

7. OPTICAL CHARACTERISTIC

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit	Remarks
Viewing Angle	Horizontal	θ_x+	Center CR≥10	80	85	--	deg	Note 1,4
		θ_x-		80	85	--		
	Vertical	θ_Y+		80	85	--		
		θ_Y-		80	85	--		
Contrast Ratio		CR	at optimized viewing angle	600	800	--		Note 1,3
Response time	Rise	Tr	Center $\theta_x=\theta_y=0^\circ$	-	30	50	ms	Note 1,6
	Fall	Tf					ms	
Uniformity		B-uni	$\theta_x=\theta_y=0^\circ$	75	--	--	%	Note1,5
Brightness		L	$\theta_x=\theta_y=0^\circ$	480	600	--	cd/m ²	Note 1,2
Chromaticity		x _W	Center $\theta_x=\theta_y=0^\circ$	Typ. -0.05	0.319	Typ. +0.05		Note 1,7
		y _W			0.341			
		x _R			0.614			
		y _R			0.326			
		x _G			0.335			
		y _G			0.536			
		x _B			0.137			
		y _B			0.145			

The following optical specifications shall be measured in a darkroom or equivalent state (ambient luminance ≤ 1 lux, and at room temperature). The operation temperature is $25^\circ\text{C} \pm 2^\circ\text{C}$ and LED Backlight Current=240mA. The measurement method is shown in Note1.

Note1: The method of optical measurement:

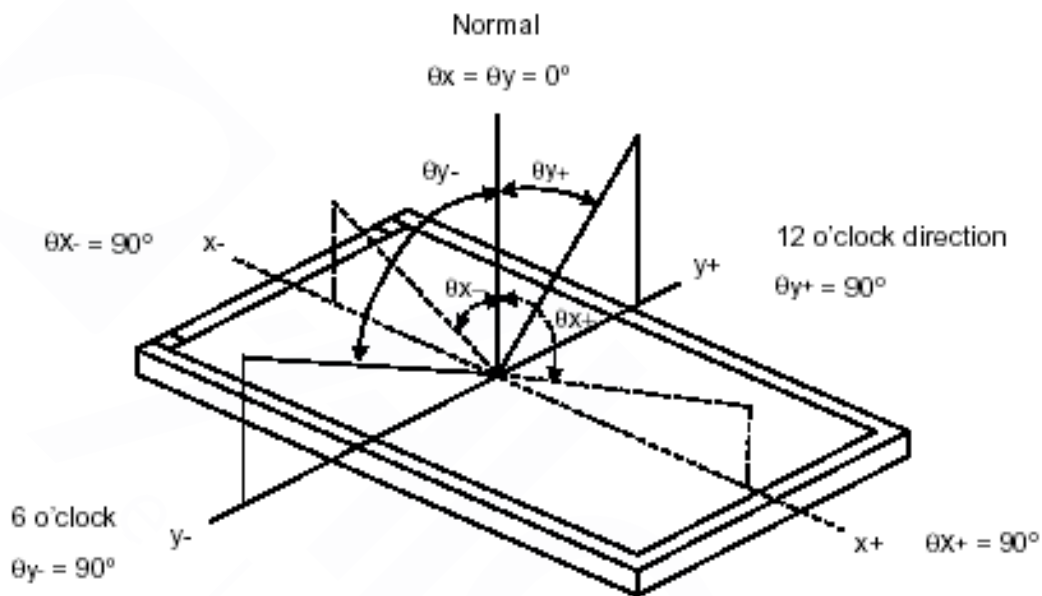


Note2: Measured at the center area of the panel and at the viewing angle of the $\theta_x = \theta_y = 0^\circ$

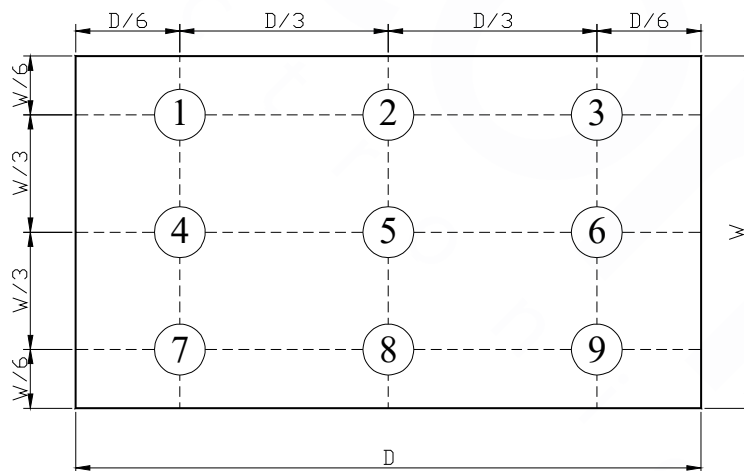
Note3: Definition of Contrast Ratio (CR):

$$CR = \frac{\text{Luminance with all pixels in white state}}{\text{Luminance with all pixels in Black state}}$$

Note4: Definition of Viewing Angle



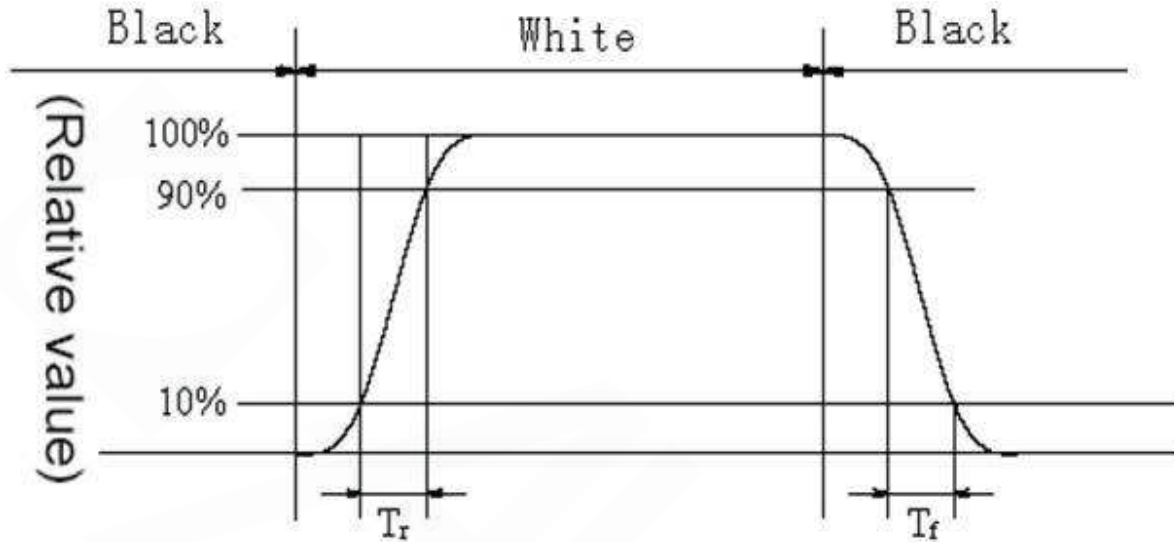
Note 5: Definition of Brightness Uniformity (B-uni):



$$B\text{-uni} = \frac{\text{Minimum luminance of 9 points}}{\text{Maximum luminance of 9 points}} \quad (\text{Note 5}).$$

Note6: Definition of Response Time:

The Response Time is set initially by defining the "Rising Time (T_r)" and the "Falling Time (T_f)" respectively. T_r and T_f are defined as following figure.



Note 7: Definition of Chromaticity:

The color coordinates (x_W, y_W) , (x_R, y_R) , (x_G, y_G) , and (x_B, y_B) are obtained with all pixels in the viewing field at white, red, green, and blue states, respectively.

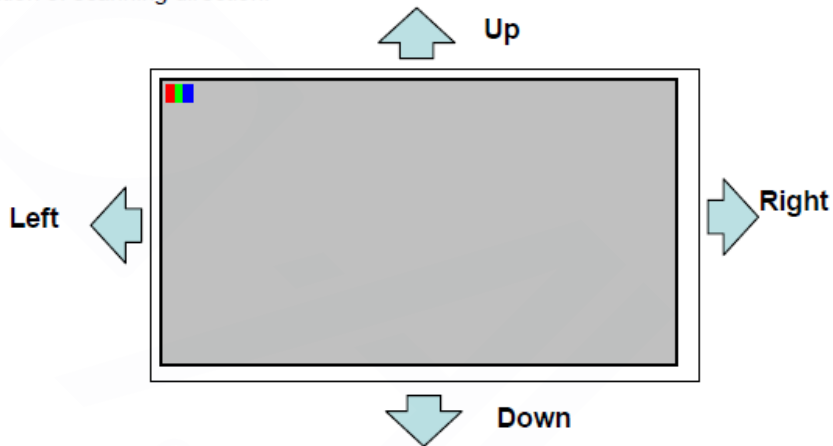
8. PIN CONNECTIONS

Pin NO.	SYMBOL	DESCRIPTION
1	GND	Power Ground
2	VDD	Power Input
3	VDD	Power Input
4	VDD	Power Input
5	GND	Ground
6	GND	Ground
7	GND	Ground
8	DITHB	Dithering function enable control. Normally pull low DITHER = "1", Enable internal dithering function DITHER = "0", Disable internal dithering function
9	SELB	6bit/8bit mode select, SELB = "0", LVDS input data is 8bits SELB = "1", LVDS input data is 6bits
10	GND	Ground
11	PIND3	Positive LVDS differential data input
12	NIND3	Negative LVDS differential data input
13	GND	Ground
14	PIND2	Positive LVDS differential data input
15	NIND2	Negative LVDS differential data input
16	GND	Ground
17	PIND1	Positive LVDS differential data input
18	NIND1	Negative LVDS differential data input
19	GND	Ground
20	PIND0	Positive LVDS differential data input
21	NIND0	Negative LVDS differential data input
22	GND	Ground
23	PINC	Positive LVDS differential clock input
24	NINC	Negative LVDS differential clock input
25	GND	Ground
26	STBYB	Standby mode, normally pull high STBYB="1", normal operation STBYB="0", timing control, source driver will turn off, all output are high-Z
27	GRB	Global reset pin. Active low to enter reset state. Suggest to connecting with an RC reset circuit for stability. Normally pull high.
28	SHLR	Left or right display control
29	UPDN	Up / down display control
30	GND	Ground
31	NC	No Connection
32	NC	No Connection
33	NC	No Connection
34	VLED_A	LED Anode
35	VLED_A	LED Anode
36	VLED_A	LED Anode
37	NC	No Connection
38	VLED_K	LED Cathode
39	VLED_K	LED Cathode
40	VLED_K	LED Cathode

Note 1 : SHLR and UPDN control function

SHLR	UPDN	Data shifting
VDD	GND	Left→Right , Up→Down(default)
GND	GND	Right→Left , Up→Down
VDD	VDD	Left→Right , Down→Up
GND	VDD	Right→Left , Down→Up

Definition of scanning direction.



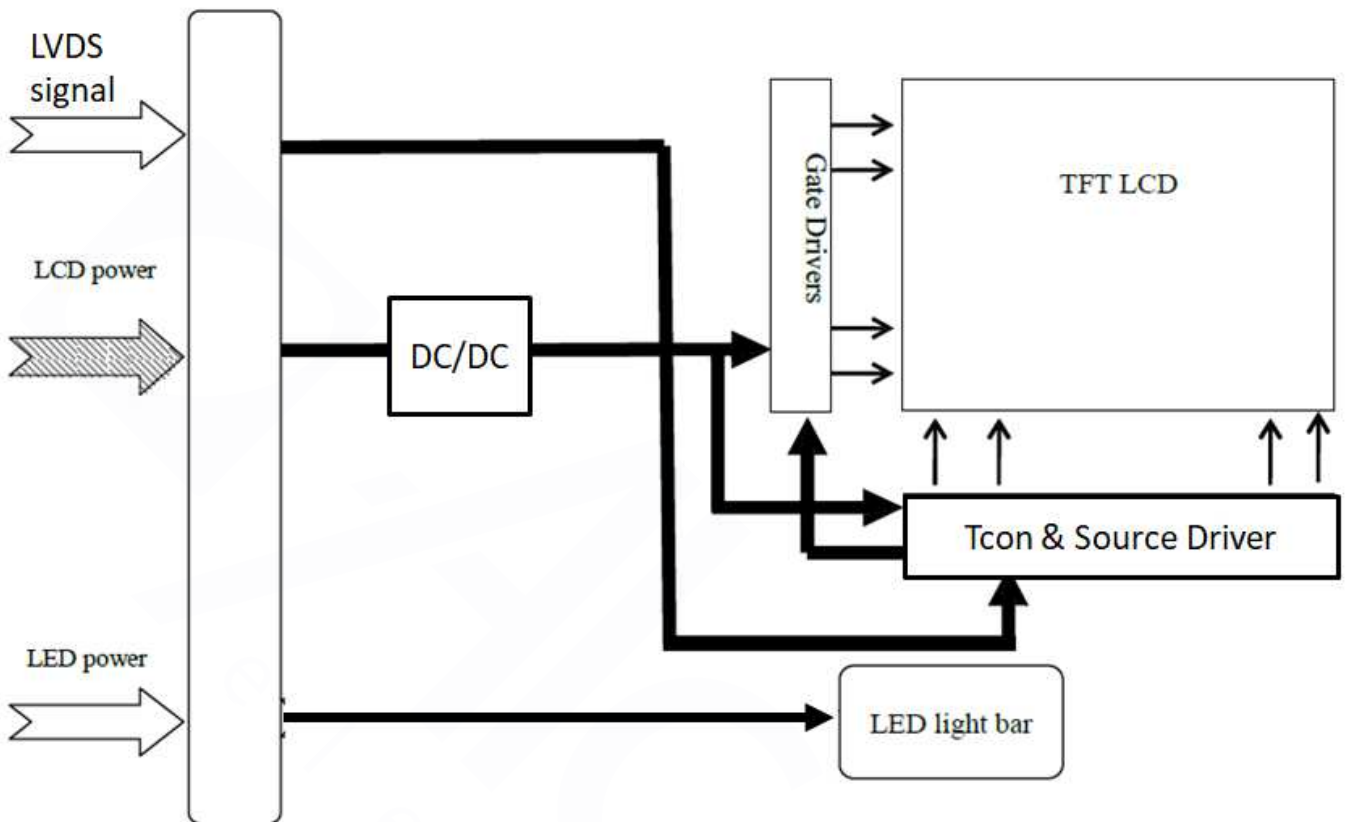
Note 2 : If LVDS input data is 6bits, SELB must be set to High

If LVDS input data is 8bit , SELB must be set to Low

DITH and SELB control function

DITH	SELB	FUNCTION
0	1	Colors (262K)
0	0	Colors (262K)
1	1	Colors (262K)
1	0	Colors (16.7M)

9. BLOCK DIAGRAM



10. QUALITY ASSURANCE

10.1 Test Condition

10.1.1 Temperature and Humidity(Ambient Temperature)

Temperature : $25 \pm 5^{\circ}\text{C}$

Humidity : $65 \pm 5\%$

10.1.2 Operation

Unless specified otherwise, test will be conducted under function state.

10.1.3 Container

Unless specified otherwise, vibration test will be conducted to the product itself without putting it in a container.

10.1.4 Test Frequency

In case of related to deterioration such as shock test. It will be conducted only once.

10.1.5 Test Method

Reliability Test Item & Level			Remark
No.	Test Item	Test Level	
1	High Temperature Storage Test	Ta=85°C,240hrs	IEC60068-2-2
2	Low Temperature Storage Test	Ta=-40°C,240hrs	IEC60068-2-1
3	High Temperature Operation Test	Ta=85°C,240hrs	IEC60068-2-2
4	Low Temperature Operation Test	Ta=-30°C,240hrs	IEC60068-2-1
5	High Temperature and High Humidity (No operation)	T=60°C,90%RH,240hrs	IEC60068-2-3
6	Thermal Cycling Test (No operation)	-30°C → +25°C → +80°C ,100 Cycles 30 min 5 min 30 min	IEC60068-2-14
7	Vibration test (Package)	Frequency:10~55HZ Amplitude:1.5mm Sweep time:11min Test period:6Cycles for each direction of X,Y,Z	IEC60068-2-6
8	Drop test (Package)	Height :60cm 1 conner,3edges,6surfaces	IEC60068-2-32
9	Electrostatic Discharge Test	State: operating Location: LCM/TP surface Condition:150pf 330Ω Contact +/- 8kV Air +/-15kV Criteria: Class C	IEC61000-4-2

10.2 Inspection condition

10.2.1 Inspection conditions

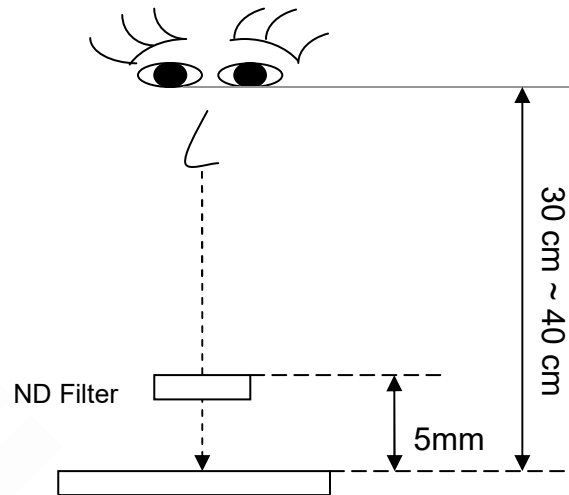
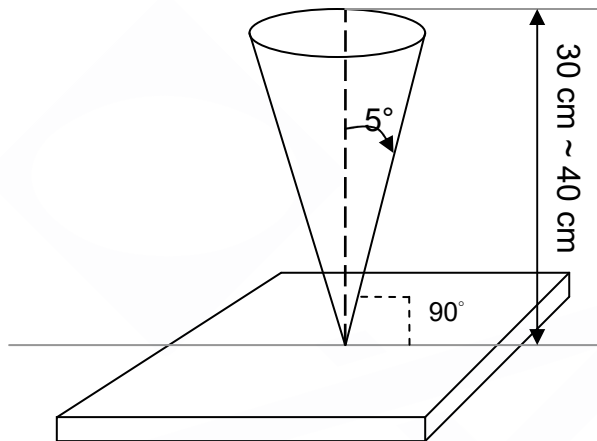
10.2.1.1 Inspection Distance: 35 ± 5 cm

10.2.1.2 View Angle:

(1) Inspection under operating condition : $\pm 5^\circ$

(2) Inspection under non-operating condition : $\pm 45^\circ$

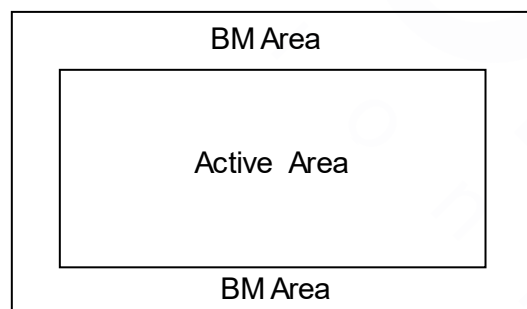
10.2.1.3 Appearance inspection time: ≤ 15 second



10.2.1.4 Environment conditions:

Ambient Temperature :		25±5°C
Ambient Humidity :		65±5%
Ambient Illumination	Cosmetic Inspection	More than 600lux
	Functional Inspection	300 ~ 800lux

10.2.2 Definition of applicable Zones



10.3 Inspection Parameters

No.	Parameter	Criteria																
1	Operating	Display function: No Display malfunction (Major)																
		Contrast ratio (Black, White): Does not meet specified range in the spec. (Major) (Note:3)																
		Line Defect: No obvious Vertical and Horizontal line defect in bright, dark and colored. (Major) (Note:1)																
		Point Defect (Red, green, blue, dark): Active area ≤8dots (Minor)(Note:1)																
		<table><tr><th>Item</th><th>Acceptable number</th><th>Total</th><th>Class Of Defects</th><th>AQL Level</th></tr><tr><td>Bright</td><td>4</td><td rowspan="4">8</td><td rowspan="4">Minor</td><td rowspan="4">1.5</td></tr><tr><td>Dark</td><td>4</td></tr><tr><td>Adjacent Bright</td><td>1</td></tr><tr><td>Adjacent Dark</td><td>1</td></tr></table>	Item	Acceptable number	Total	Class Of Defects	AQL Level	Bright	4	8	Minor	1.5	Dark	4	Adjacent Bright	1	Adjacent Dark	1
		Item	Acceptable number	Total	Class Of Defects	AQL Level												
		Bright	4	8	Minor	1.5												
		Dark	4															
		Adjacent Bright	1															
		Adjacent Dark	1															
Non-uniformity: Visible through 2%ND filter white, R, G, B and gray 50%pattern. (Minor)																		
Foreign material in Black or White spots shape (W>1/4L) (Note: 5)																		
<table><tr><th>Dimension</th><th>Acceptable number</th><th>Class Of Defects</th><th>AQL Level</th></tr><tr><td>D ≤ 0.3</td><td>*</td><td rowspan="3">Minor</td><td rowspan="3">1.5</td></tr><tr><td>0.3 < D ≤0.5</td><td>4</td></tr><tr><td>D> 0.5</td><td>0</td></tr></table> D = (Long + Short) / 2 * : Disregard	Dimension	Acceptable number	Class Of Defects	AQL Level	D ≤ 0.3	*	Minor	1.5	0.3 < D ≤0.5	4	D> 0.5	0						
Dimension	Acceptable number	Class Of Defects	AQL Level															
D ≤ 0.3	*	Minor	1.5															
0.3 < D ≤0.5	4																	
D> 0.5	0																	
Foreign Material in Line or spiral shape (W≤1/4L) (Note: 4)																		
<table><tr><th>Dimension</th><th>Acceptable number</th><th>Class Of Defects</th><th>AQL Level</th></tr><tr><td>W>0.1mm,L>10mm</td><td>0</td><td rowspan="3">Minor</td><td rowspan="3">1.5</td></tr><tr><td>L ≤ 10mm,0.07mm<W ≤0.1mm</td><td>4</td></tr><tr><td>L ≤ 10mm,W<0.07mm</td><td>*</td></tr></table> L : Length W : Width * : Disregard	Dimension	Acceptable number	Class Of Defects	AQL Level	W>0.1mm,L>10mm	0	Minor	1.5	L ≤ 10mm,0.07mm<W ≤0.1mm	4	L ≤ 10mm,W<0.07mm	*						
Dimension	Acceptable number	Class Of Defects	AQL Level															
W>0.1mm,L>10mm	0	Minor	1.5															
L ≤ 10mm,0.07mm<W ≤0.1mm	4																	
L ≤ 10mm,W<0.07mm	*																	
2	External Inspection (non-operating)	Dimension: Outline (Major)																
		Bezel appearance: uneven (Minor)																
		Scratch on the Polarize & Touch Panel : (Note:2)																
		<table><tr><th>Dimension</th><th>Acceptable number</th><th>Class Of Defects</th><th>AQL Level</th></tr><tr><td>W>0.1mm,L>10mm</td><td>0</td><td rowspan="3">Minor</td><td rowspan="3">1.5</td></tr><tr><td>L ≤ 10mm,0.07mm<W ≤0.1mm</td><td>4</td></tr><tr><td>L ≤ 10mm,W<0.07mm</td><td>*</td></tr></table> L : Length W : Width * : Disregard	Dimension	Acceptable number	Class Of Defects	AQL Level	W>0.1mm,L>10mm	0	Minor	1.5	L ≤ 10mm,0.07mm<W ≤0.1mm	4	L ≤ 10mm,W<0.07mm	*				
		Dimension	Acceptable number	Class Of Defects	AQL Level													
		W>0.1mm,L>10mm	0	Minor	1.5													
		L ≤ 10mm,0.07mm<W ≤0.1mm	4															
		L ≤ 10mm,W<0.07mm	*															
		Dent and spots shape on the polarize (Note:2): (Note: 5)																
		<table><tr><th>Dimension</th><th>Acceptable number</th><th>Class Of Defects</th><th>AQL Level</th></tr><tr><td>D ≤ 0.3</td><td>*</td><td rowspan="3">Minor</td><td rowspan="3">1.5</td></tr><tr><td>0.3 < D ≤0.5</td><td>6</td></tr><tr><td>D> 0.5</td><td>0</td></tr></table> D = (Long + Short) / 2 * : Disregard	Dimension	Acceptable number	Class Of Defects	AQL Level	D ≤ 0.3	*	Minor	1.5	0.3 < D ≤0.5	6	D> 0.5	0				
Dimension	Acceptable number	Class Of Defects	AQL Level															
D ≤ 0.3	*	Minor	1.5															
0.3 < D ≤0.5	6																	
D> 0.5	0																	

Class of defects	Definition		
	Major	AQL 0.65	It is a defect that is likely to result in failure or to reduce materially the usability of the product for the intended function.
	Minor	AQL 1.5	It is a defect that will not result in functioning problem with deviation classified.

Note:1.(a)Bright point defect is defined as point defect of R,G,B with area >1/2 dot respectively

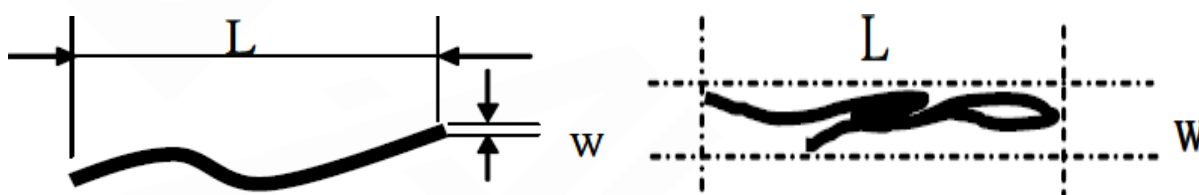
(b)Dark point defect is defined as visible in full white pattern.

(c)The point defect must under 2% ND Filter visible .

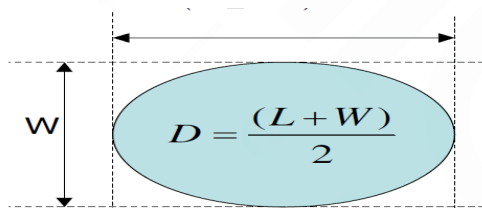
Note:2 The external inspection should be conducted at the distance 35 ± 5 cm between the eyes of inspector and the panel .

Note:3 Luminance measurement for contrast ratio is at the distance 50 ± 5 cm between the detective head and the panel with ambient luminance less than 1 lux. Contrast ratio is obtained at optimum view angle.

Note:4 W-Width in mm , L-length of Max.(L1,L2) in mm.



Note:5 Spot Foreign Material ($W \geq L/4$)



10.4 Sampling Condition

Unless otherwise agree in written, the sampling inspection shall be applied to the incoming inspection of customer.

Lot size: Quantity of shipment lot per model.

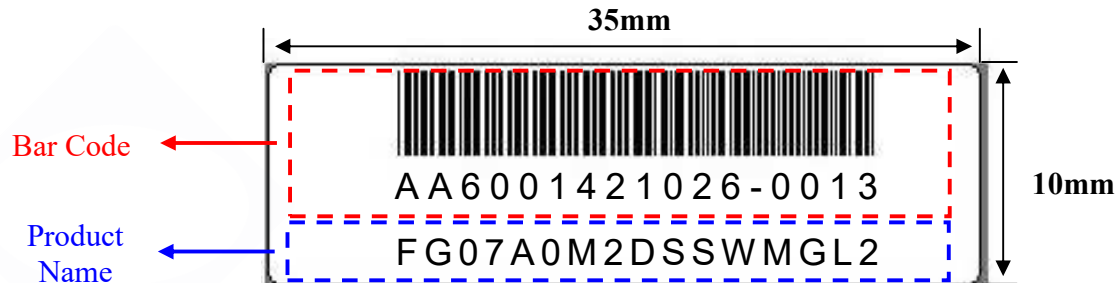
Sampling type: normal inspection, single sampling

Sampling table: ISO 2859

Inspection level: Level II

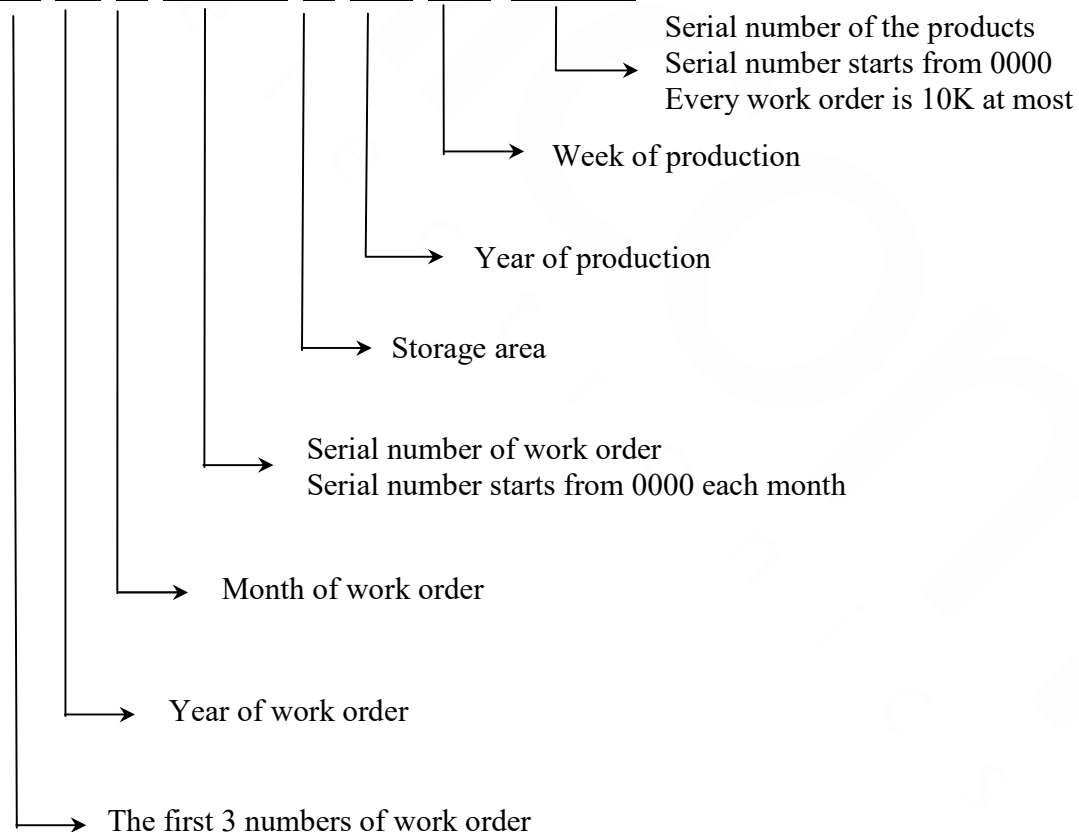
11. LCM PRODUCT LABEL DEFINE

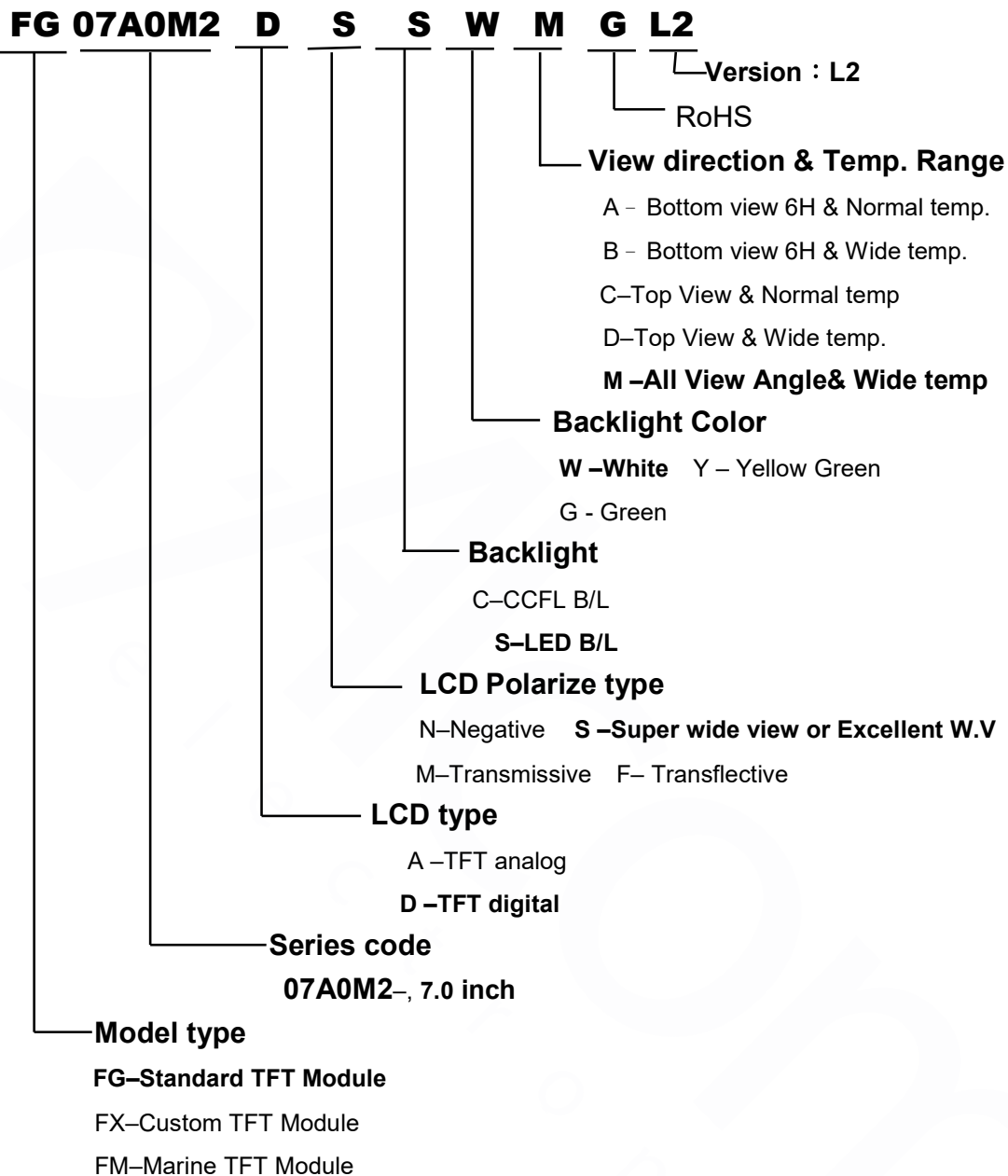
Product Label style:



BarCode Define:

A A 6 0014 2 10 26 -0013



Product Name Define:


12. PRECAUTIONS IN USE LCM

1. ASSEMBLY PRECAUTIONS

- (1) You must mount a module using holes arranged in four corners or four sides.
- (2) You should consider the mounting structure so that uneven force (ex. Twisted stress) is not applied to the module. And the case on which a module is mounted should have sufficient strength so that external force is not transmitted directly to the module.
- (3) Do not touch, push or rub the exposed polarizers with glass, tweezers or anything harder than HB pencil lead. And please do not rub with dust clothes with chemical treatment.
- (4) Wipe off saliva or water drops as soon as possible. Their long time contact with polarizer causes deformations and color fading.
- (5) Do not open the case because inside circuits do not have sufficient strength.
- (6) Please do not take a LCD module to pieces and reconstruct it. Resolving and reconstructing modules may cause them not to work well.
- (7) Please do not touch metal frames with bare hands and soiled gloves. A color change of the metal frames can happen during a long preservation of soiled LCD modules.
- (8) Please pay attention to handling lead wire of backlight so that it is not tugged in connecting with inverter.

2. OPERATING PRECAUTIONS

- (1) Please be sure to turn off the power supply before connecting and disconnecting signal input cable.
- (2) Please do not change variable resistance settings in LCD module. They are adjusted to the most suitable value. If they are changed, it might happen LCD does not satisfy the characteristics specification
- (3) Be careful for condensation at sudden temperature change. Condensation makes damage to polarizer or electrical contacted parts. And after fading condensation, smear or spot will occur.
- (4) When fixed patterns are displayed for a long time, remnant image is likely to occur.
- (5) Module has high frequency circuits. Sufficient suppression to the electromagnetic interference shall be done by system manufacturers. Grounding and shielding methods may be important to minimize the interference.
- (6) Please consider that LCD backlight takes longer time to become stable of radiation characteristics in low temperature than in room temperature.

3. ELECTROSTATIC DISCHARGE CONTROL

- (1) The operator should be grounded whenever he/she comes into contact with the module. Never touch any of the conductive parts such the copper leads on the PCB and the interface terminals with any parts of the human body.

- (2) The modules should be kept in antistatic bags or other containers resistant to static for storage.
- (3) Only properly grounded soldering irons should be used.
- (4) If an electric screwdriver is used, it should be well grounded and shielded from commutator sparks.
- (5) The normal static prevention measures should be observed for work clothes and working benches; for the latter conductive (rubber) mat is recommended
- (6) Since dry air is inductive to statics, a relative humidity of 50-60% is recommended.

4. STORAGE PRECAUTIONS

- (1) When you store LCDs for a long time, it is recommended to keep the temperature between 0°C-40°C without the exposure of sunlight and to keep the humidity less than 90%RH.
- (2) Please do not leave the LCDs in the environment of high humidity and high temperature such as 60°C 90%RH
- (3) Please do not leave the LCDs in the environment of low temperature; below -20°C.

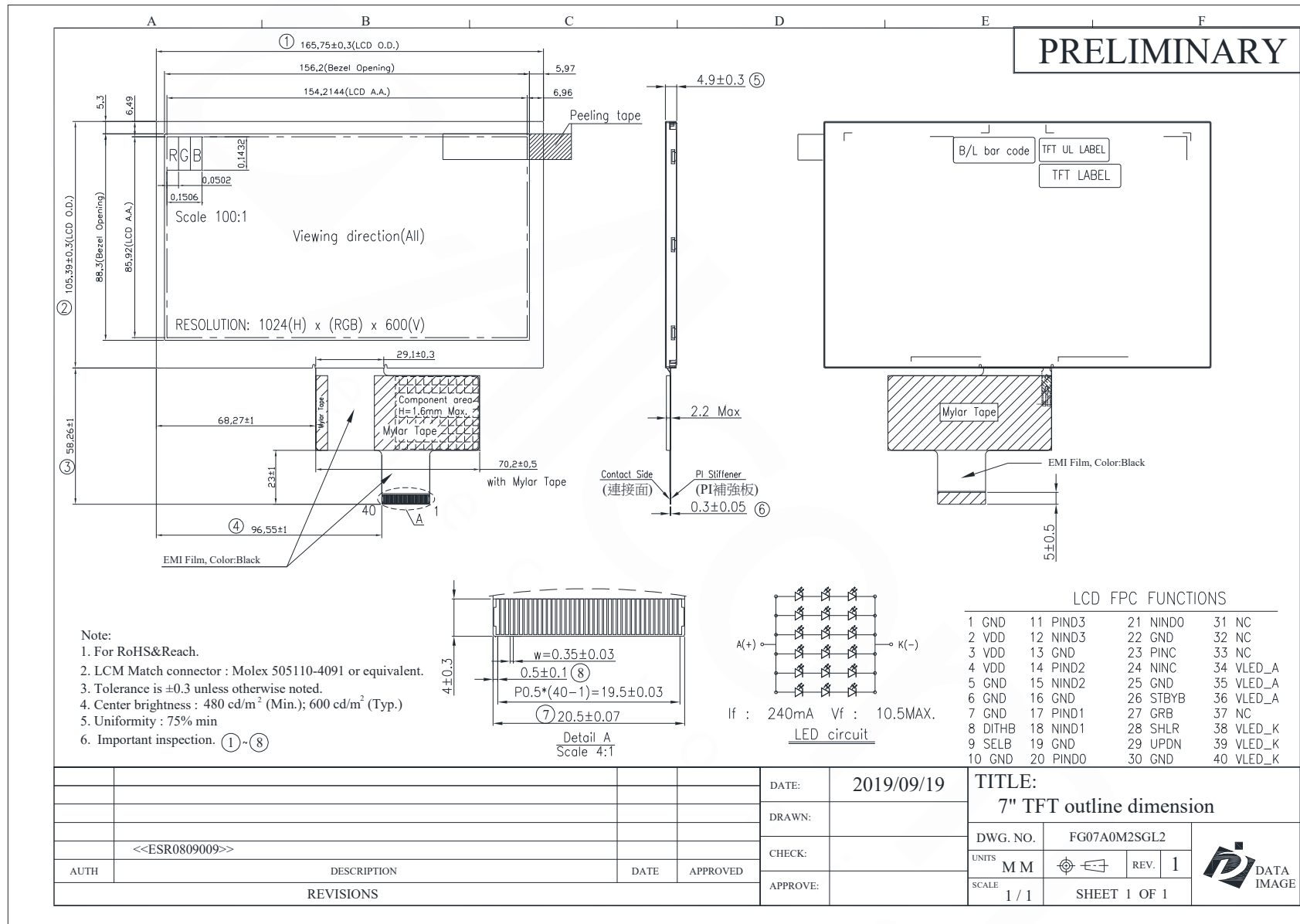
5. OTHERS

- (1) A strong incident light into LCD panel might cause display characteristics' changing inferior because of polarizer film, color filter, and other materials becoming inferior. Please do not expose LCD module direct sunlight and strong UV rays
- (2) Please pay attention to a panel side of LCD module not to contact with other materials in preserving it alone.
- (3) For the packaging box, please pay attention to the followings:
 - a. Please do not pile them up more than 5 boxes. (They are not designed so.) And please do not turn over.
 - b. Please handle packaging box with care not to give them sudden shock and vibrations. And also please do not throw them up.
 - c. Packing box and inner case for LCDs are made of cardboard. So please pay attention not to get them wet. (Such like keeping them in high humidity or wet place can occur getting them wet.)
- (4) Waste
Liquid crystal module products shall not be arbitrarily discarded; the water and soil have a negative impact on the environment, the need to be handled by a qualified unit.

6. LIMITED WARRANTY

Unless otherwise agreed between DATA IMAGE and customer, DATA IMAGE will replace or repair any of its LCD and LCM which is found to be defective electrically and visually when inspected in accordance with DATA IMAGE acceptance standards, for a period on one year from date of shipment. Confirmation of such date shall be based on freight documents. The warranty liability of DATA IMAGE is limited to repair and/or replacement on the terms set forth above. DATA IMAGE will not responsible for any subsequent or consequential events.

Confidential Document
13. OUTLINE DRAWING



14. PACKAGE INFORMATION

TBD

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