DATA IMAGE CORPORATION

TFT Module Specification
PRELIMINARY
ITEM NO.: FG0700K6DSSWBGT1

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	3	18/MAR/15'		23

2. RECORD OF REVISION

Rev	Date	Item	Page	Comment	Source
1	27/JUL/12'			Initial PRELIMINARY	ESR9810013
2	30/JUL/13'	4 11 12.1.5 12.2 12.3	3 14 15 16 18	1. Add Gray inversion at View Angle direction. 2. Revise TP characteristics. 3. Add Remark. 4. Add Inspection conditions 5. Add Sampling Condition	11S-C50067
3	18/MAR/15'	6 15	3 22	1. Update lifetime from 20K to 40K hours 2. Modify OUTLINE DRAWING from Rev. B to D	11S-F30011

3. APPLICATION

DVD player, Car TV, UMPC, POS

4. GENERAL SPECIFICATIONS

Parameter	Specifications	Unit
Screen Size	7 (diagonal)	inch
Display Format	800(H) x (R,G,B) x 480(V)	dot
Active Area	152.4(H) x 91.44(V)	mm
Dot Pitch	0.0635 (H) x 0.1905 (V)	mm
Pixel Configuration	Stripe	
Outline Dimension	165(W) x 104.44(H) x11.26 (D) Max	mm
Surface treatment	Anti-glare and hard coating (3H)	
Back-light	LED	
Display mode	Normally white	
Weight	182	g
View Angle direction(Gray inversion)	6 o'clock	

5. ABSOLUTE MAXIMUM RATINGS

| Parameter		Symbol	MIN.	MAX.	Unit	Remark
Power supply voltage		Vcc	-0.3	6.0	V	Ta=25°C
Logic input voltage		VI	-0.3	V_{CC}+0.3	V	
Operating temperature		Top	-20	+70	°C	Module surface*
Storage temperature		Tst	-30	+80	°C	-
Humidity	Operation		20%~90% relative humidity			Ta<=38°C
	Non Operation		5%~90% relative humidity			Ta<=38°C

6. ELECTRICAL CHARACTERISTICS

fH=30KHz, fv=60Hz, fCLK=33.3MHz,Ta=25°C

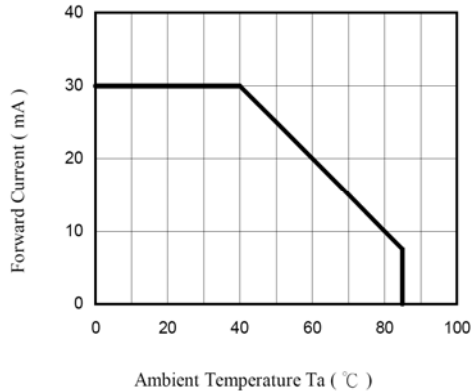| Parameter	Symbol	MIN.	Typ.	MAX.	Unit	Remark
Power Supply voltage for LCD	V_{CC}	+3.0	+3.3	+3.6	V	
Power Supply Current for LCD	I_{CC}		150	200	mA	V_{CC} =3.3V
Power Supply voltage for LED	V_{DD}	3	3.3	5.5	V	
Power Supply Current for LED	I_{DD}		650	850	mA	V_{DD} =3.3V
Power Supply Current for LED	I_{DD}		400	550	mA	V_{DD} =5.0V
Ripple voltage	V_{RF}	-	-	100	mV $_{P-P}$	
ADJ frequency		19K	20K	21K	Hz	
ADJ input voltage	VIH	3.0	-	3.3	V	
	VIL	0	-	0.3	V	
Differential Input High Threshold	VTH	-	-	100	[mV]	VCM=1.2V
Differential input Low Threshold	VTL	-100	-	-	[mV]	Note 1
LED dice life time			40,000		Hr	Note 2,3

Note 1: LVDS Signal Waveform.

Differential Signal
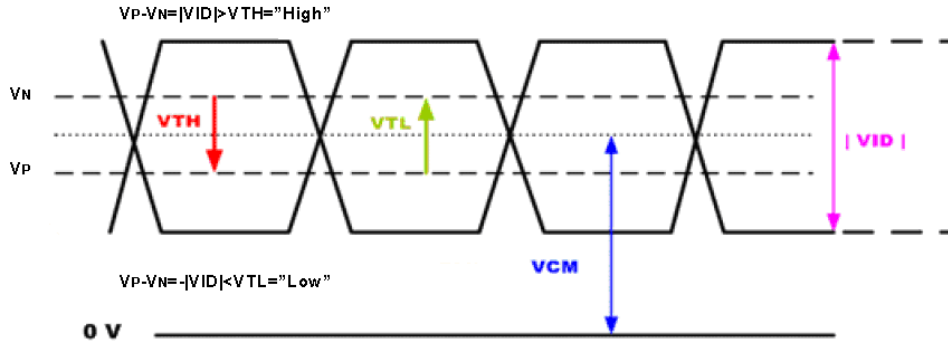
Note 2: The "LED dice life time" is defined as the brightness decrease to 50% original brightness that the ambient temperature is 18 ~28 and LED dice current=20mA.

Note3: The LED Dice's Ambient Temp. vs. Allowable Forward Current Curve.

Ambient Temperature Ta (℃)

7. INPUT SIGNAL CHARACTERISTICS

7.1 AC Characteristics

7.1.1 AC Electrical Characteristics

Parameter	Symbol	MIN.	TYP.	MAX.	Unit
Data setup time	T_{dsu}	6	-	-	ns
Data hold time	T_{dhd}	6	-	-	ns
DE setup time	T_{esu}	6	-	-	ns

7.1.2 Resolution 800x480

Parameter	Symbol	MIN.	TYP.	MAX.	Unit
DCLK frequency	F_{CPH}	25	33.26	40	MHz
DCLK period	T_{CPH}	-	30.06	-	ns
DCLK pulse duty	T_{CWH}	40	50	60	%
DE period	$T_{DEH}+T_{DEL}$	1000	1056	1200	T_{CPH}
DE pulse width	T_{DEH}	-	800	-	T_{CPH}
DE frame blanking	T_{DEB}	10	45	110	$T_{DEH}+T_{DEL}$
DE frame width	T_{DE}	-	480	-	$T_{DEH}+T_{DEL}$

7.2 Timing Controller Timing Chart
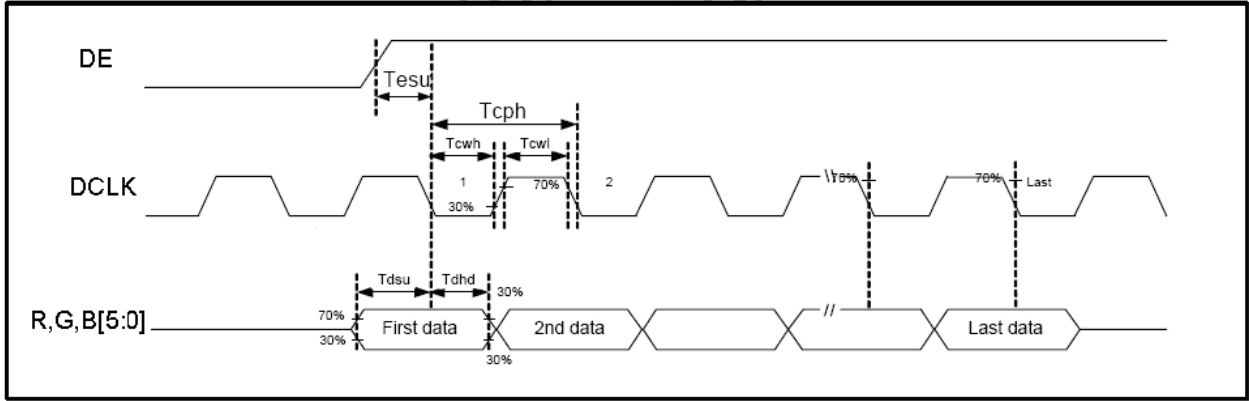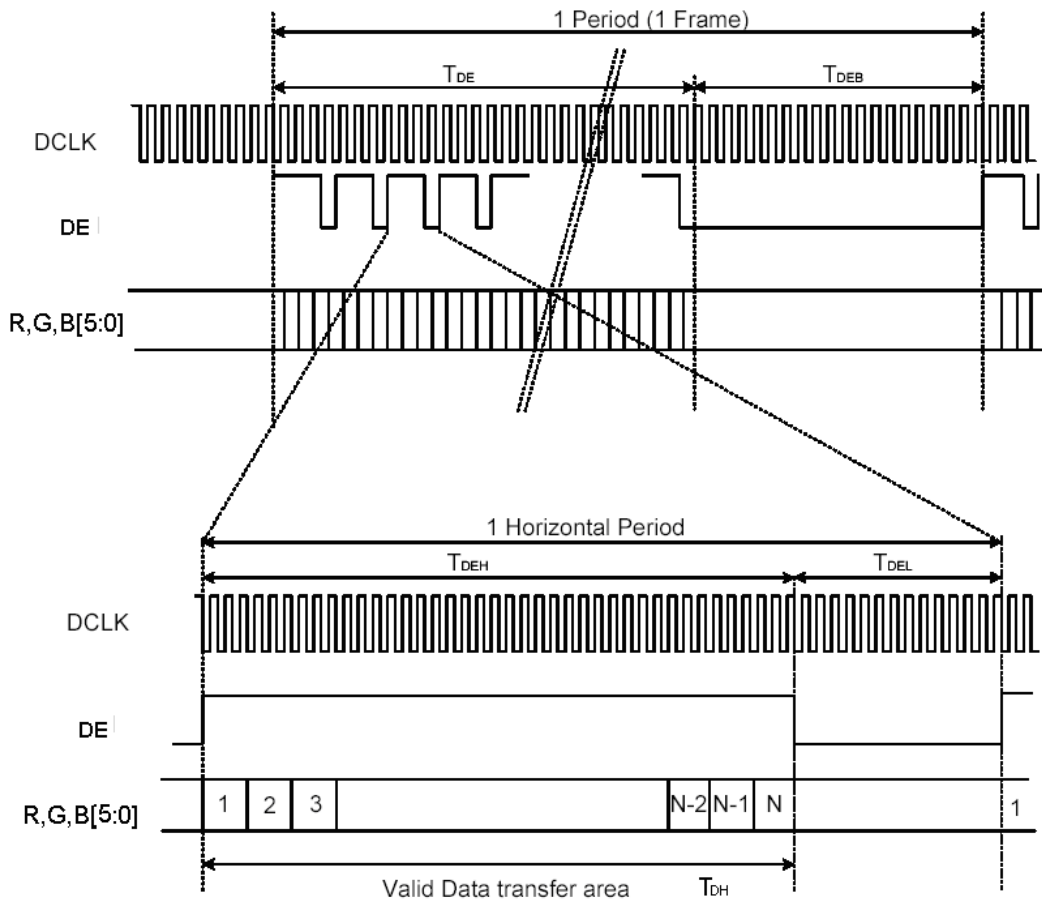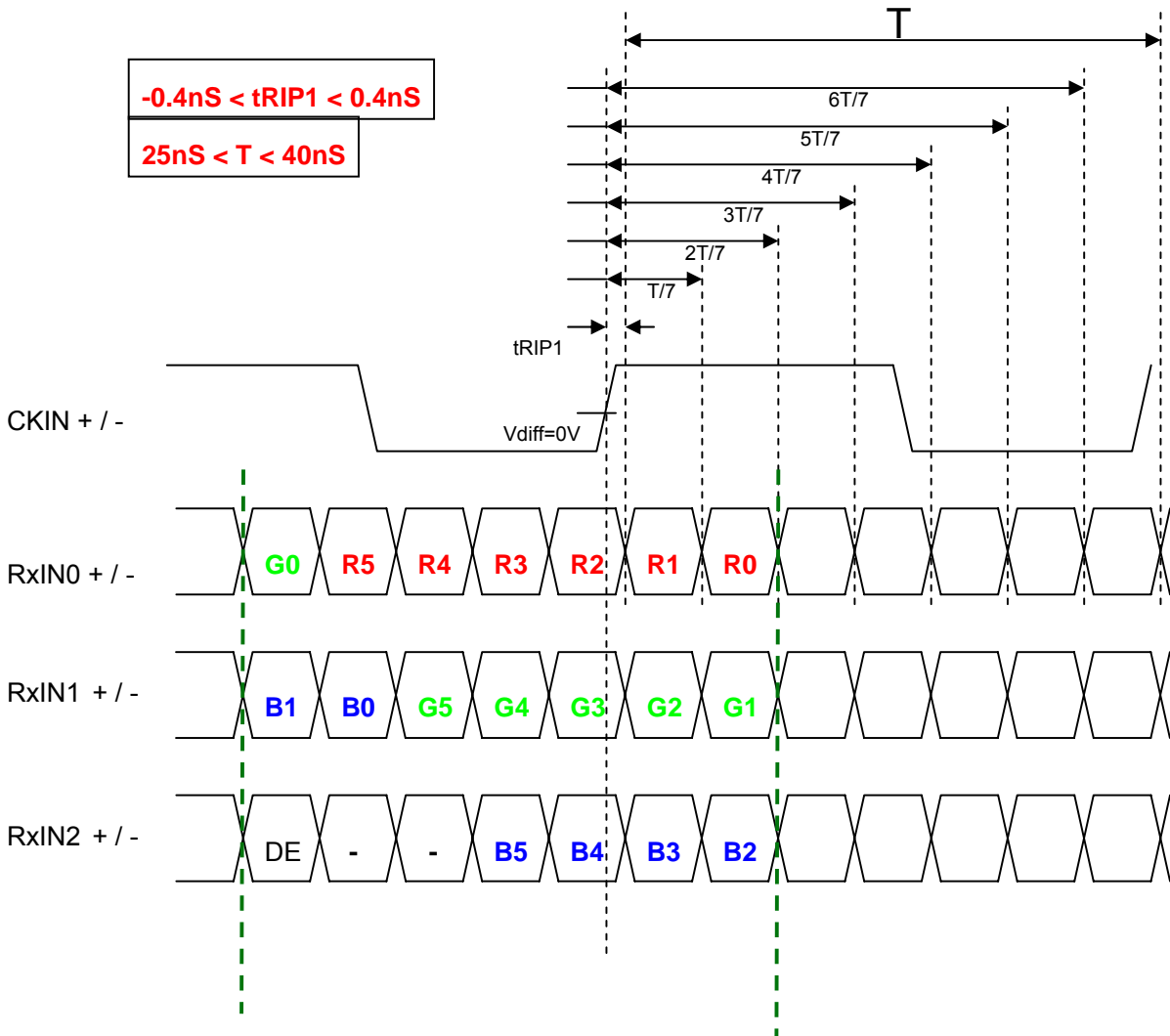### 7.2.1 Clock and Data input waveforms
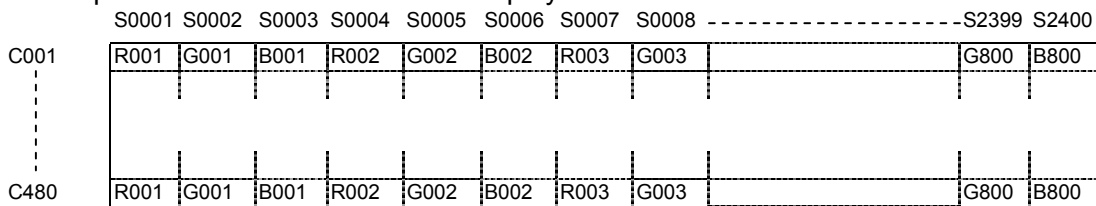

Figure 1 Clock and Data input waveforms.

7.2.2 LVDS Timing Chart

-0.4nS < tRIP1 < 0.4nS

25nS < T < 40nS

7.3 Color Data Input Assignment

|		Data Signal																		
		Red						Green						Blue						
Color		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

Correspondence between Data and Display Position

	S0001	S0002	S0003	S0004	S0005	S0006	S0007	S0008	- - - - - - - - - - - - S2399	S2400
C001	R001	G001	B001	R002	G002	B002	R003	G003	G800	B800
:										
C480	R001	G001	B001	R002	G002	B002	R003	G003	G800	B800

8. OPTICAL CHARACTERISTIC

Parameter		Symbol	Condition	MIN.	TYP.	MAX.	Unit	Remarks
Viewing Angle	Horizontal	θ_x+	Center CR≥10	65	70	--	deg	Note 1,4
		θ_x-		65	70	--		
	Vertical	θ_Y+		55	60	--		
		θ_Y-		55	60	--		
Contrast Ratio		CR	at optimized viewing angle	250	400	--		Note 1,3
Response time	Rise	Tr	Center	--	5	10	ms	Note 1,6
	Fall	Tf	$\theta x=\theta y=0°$	--	11	16	ms	
Uniformity		B-uni	$\theta x=\theta y=0°$	70	80	--	%	Note1,5
Brightness		L	$\theta x=\theta y=0°$	200	250	--	cd/	Note 1,2
Chromaticity		x_W	Center $\theta x=\theta y=0°$	0.26	0.31	0.36		Note 1,7
		y_W		0.28	0.33	0.38		
		x_R		0.52	0.57	0.62		
		y_R		0.31	0.36	0.41		
		x_G		0.30	0.35	0.40		
		y_G		0.53	0.58	0.63		
		x_B		0.10	0.15	0.20		
		y_B		0.09	0.14	0.19		
Image sticking		tis	2 hours	--	--	2	Sec	Note 8

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°C±2°C. The measurement method is shown in Note1.

Note1: The method of optical measurement:
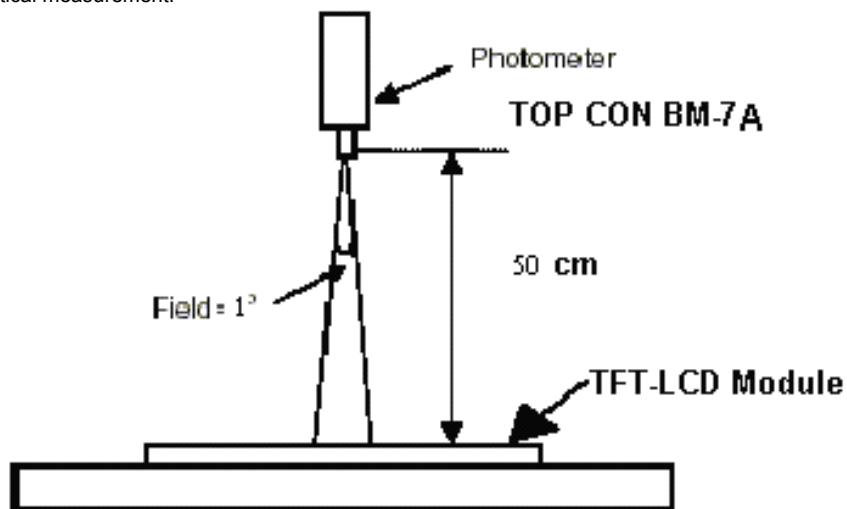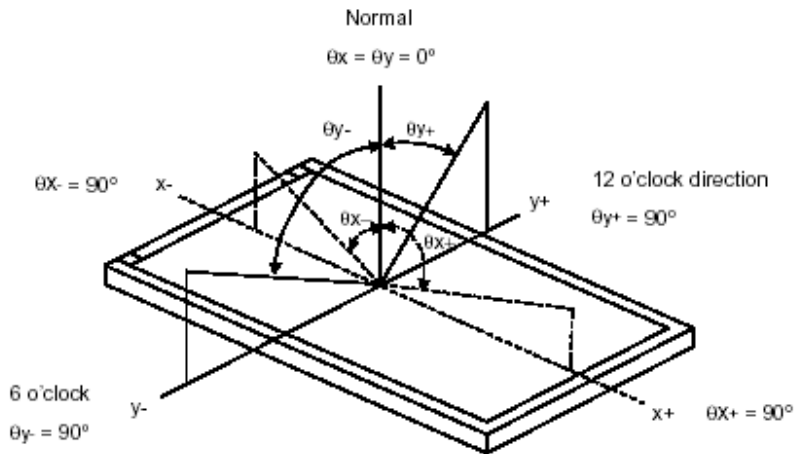
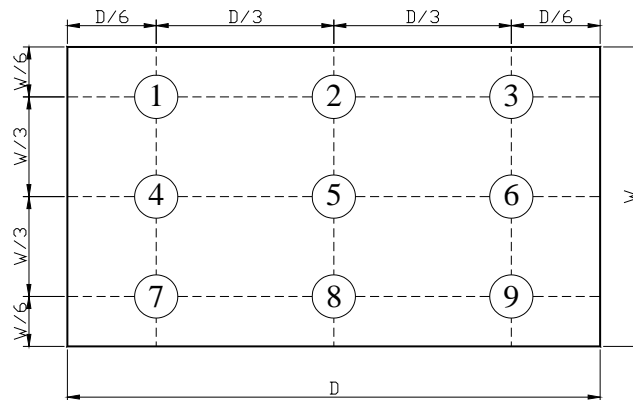Note2: Measured at the center area of the panel and at the viewing angle of the $\theta x = \theta y = 0°$

Note3: Definition of Contrast Ratio (CR):

$$CR = \frac{\text{Luminance with all pixels in white state}}{\text{Luminance with all pixels in Black state}}$$
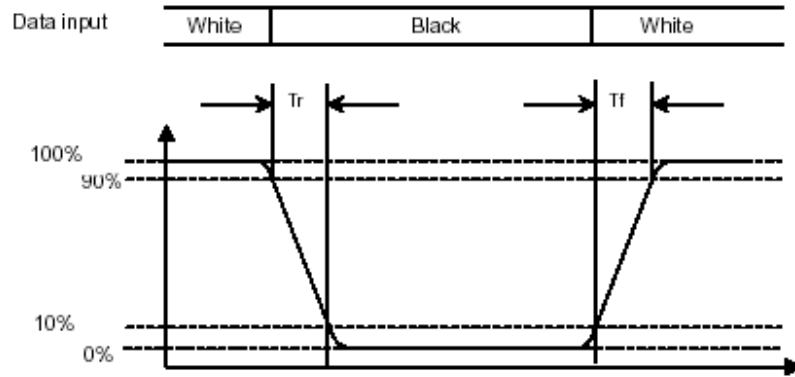
Note4: Definition of Viewing Angle

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

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

Note6: Definition of Response Time:

The Response Time is set initially by defining the "Rising Time (Tr)" and the "Falling Time (Tf)" respectively. Tr and Tf 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.

Note 8: Definition of Image sticking (tis):

Continuously display the test pattern shown in the figure below for 2 hours. Then display a completely white screen. The previous image shall not persist more than 2 sec at 25 °C

Image sticking pattern
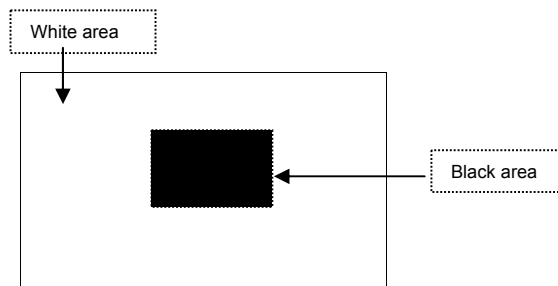
9. PIN CONNECTIONS
TFT PIN Connections

Pin No	Symbol	Function	Remark
1	VCC	power supply for Digital Circuit	
2	VCC	power supply for Digital Circuit	
3	GND	Ground	
4	GND	Ground	
5	RxIN0-	Differential Data Input ,CH0(Negative)	
6	RxIN0+	Differential Data Input ,CH0(Positive)	
7	GND	Ground	
8	RxIN1-	Differential Data Input ,CH1(Negative)	
9	RxIN1+	Differential Data Input ,CH1(Positive)	
10	GND	Ground	
11	RxIN2-	Differential Data Input ,CH2(Negative)	
12	RxIN2+	Differential Data Input ,CH2(Positive)	
13	GND	Ground	
14	CKIN-	Differential Clock Input (Negative)	
15	CKIN+	Differential Clock Input (Positive)	
16	GND	Ground	
17	VDD	Power Supply for LED Driver Circuit	
18	VDD	Power Supply for LED Driver Circuit	
19	GND	Ground	
20	ADJ	Brightness control for LED B/L	

Remarks

1) ADJ is brightness control Pin. The larger of the pulse duty is, the higher of the brightness.
2) ADJ signal is 0~3.3V.Operation frequency is 20KHz
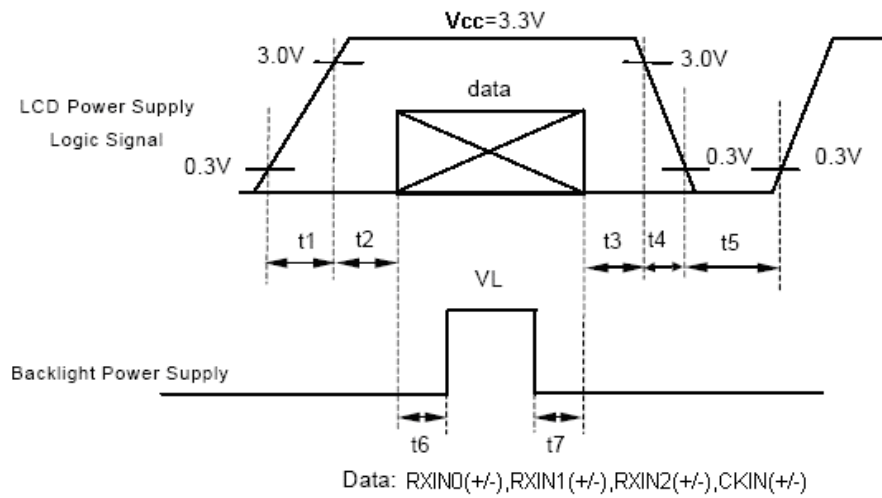3) GND PIN must be grounding, can not be floating.

Remarks**:**
Power Signal sequence**:**
t1 $\leq$10ms　　**;** 1 sec$\leq$ t5
50ms$\leq$ t2　　**;** 200ms $\leq$t6
0<t3 $\leq$50ms **;** 200ms$\leq$ t7
0<t4 $\leq$10ms

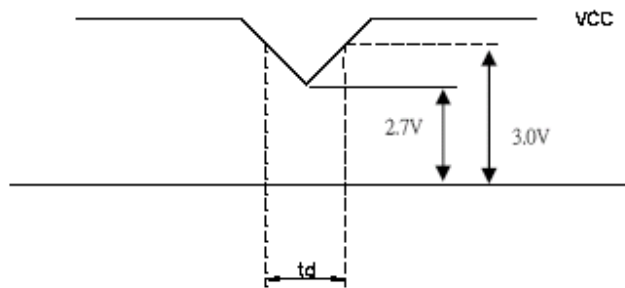Data: RXIN0(+/-),RXIN1(+/-),RXIN2(+/-),CKIN(+/-)
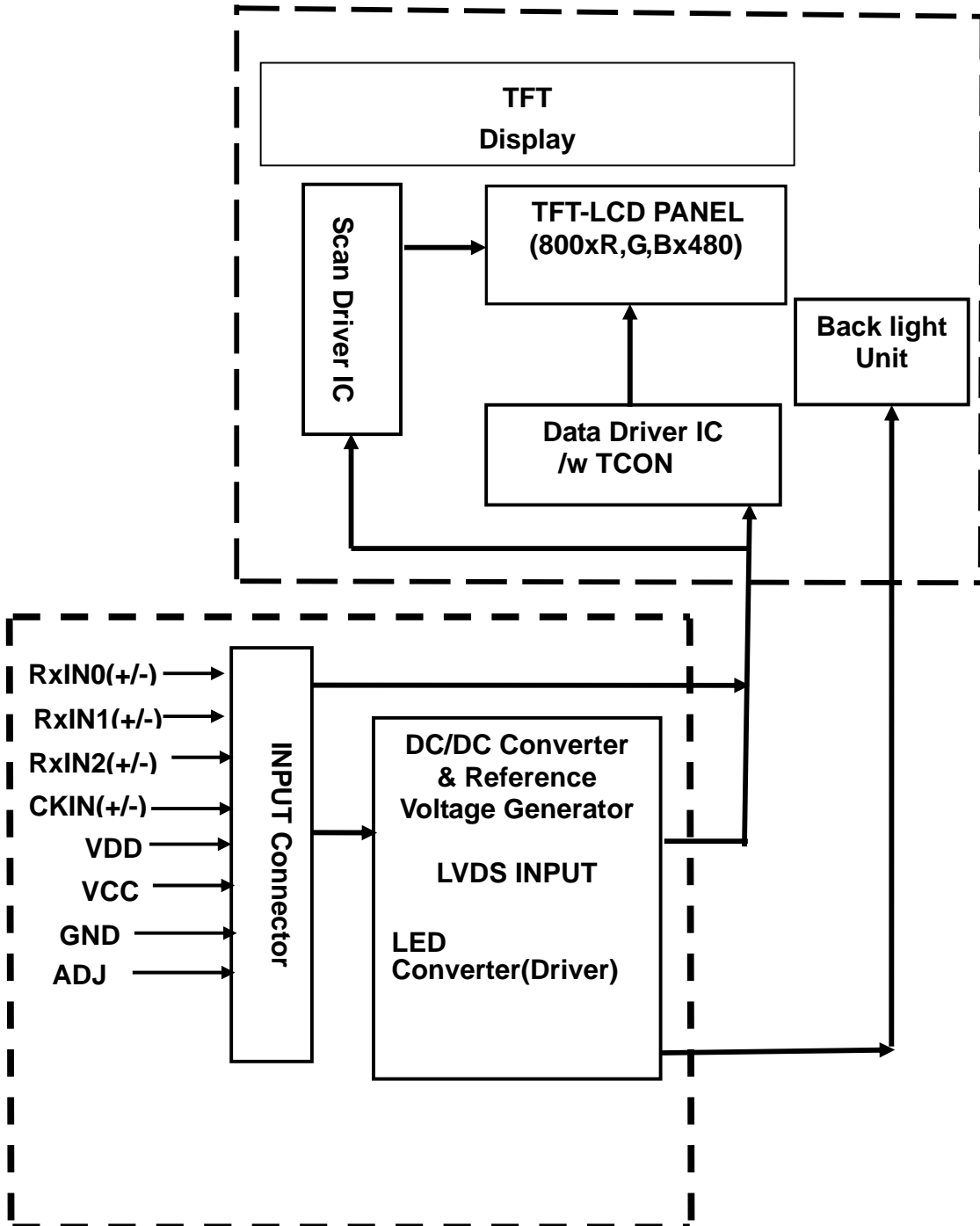
VCC-dip condition**:**
(1) 2.7 V $\leq$VCC <3.0V,td $\leq$ 10 ms
(2) VCC>3.0V,VCC-dip condition should be the same with VCC-turn-on condition

10. BLOCK DIAGRAM

11. TOUCH PANEL CHARACTERISTICS

1.Input Method and Activation Force

Input Method	Activation Force
0.8mm dia. Delrin Polyacetal stylus	60~100gf

2.Typical Optical Characteristics

ITEM	Parameter
Visible Light Transmission	≥80%
Haze	≤10%
Surface Hardness	≥3H

3. Electrical Specification

ITEM		Parameter
Operating Voltage		DC 7V Max
Circuit close resistance	X	100~800Ω
	Y	300~1000Ω
Circuit open resistance		>20MΩ at 25V DC
Contact bounce		≤10ms
Linear Test		≤1.5%

4.Linearity

ITEM		Parameter
Linear Test Specification Direction	X	≤1.5%
	Y	≤1.5%

5.Specification

ITEM	Parameter
Operating Temperature	-20°C~+70°C
Storage Temperature	-30°C~+80°C

### 6.Durability test:

6.1 Touch panel is hit 1 millions times with a R0.8 sty
   second. The measurement must satisfy the follow
- Circuit close resistance: x 100~800Ω ;
            y 300~1000Ω
- Circuit open resistance: >20MΩ at 25V DC
- Contact bounce: ≤10ms
- Linearity test: ≤1.5%

6.2 Stylus writing
   Touch panel is drawn by R0.8 Darling stylus pen,
   at 150g forces, repeat one inch by 100k times. The
   measurement must satisfy the following:
- Circuit close resistance: x 100~800Ω ;
            y 300~1000Ω
- Circuit open resistance: >20MΩ at 25V DC
- Contact bounce: ≤10ms
- Linearity test: ≤1.5%
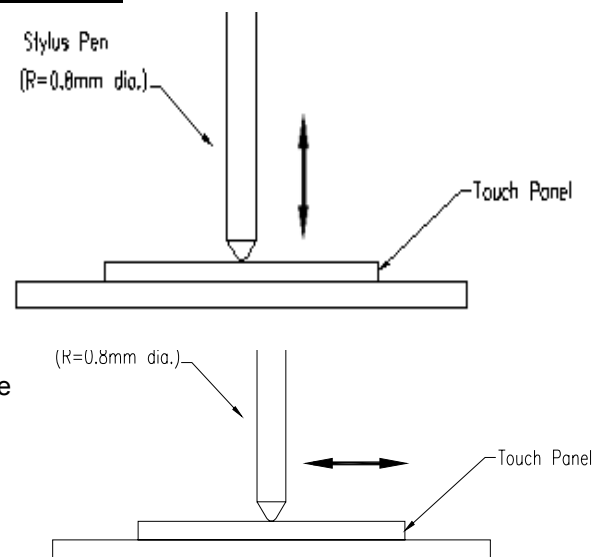
12. QUALITY ASSURANCE
12.1 Test Condition

12.1.1 Temperature and Humidity(Ambient Temperature)
Temperature : $25 \pm 5°C$
Humidity   : $65 \pm 5\%$

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

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

12.1.4 Test Frequency
In case of related to deterioration such as shock test.   It will be

conducted only once.

12.1.5 Test Method

| No.	Reliability Test Item & Level Test Item	Test Level	Remark
1	High Temperature Storage Test	T=80 ,240hrs	IEC68-2-2
2	Low Temperature Storage Test	T=-30 ,240hrs	IEC68-2-1
3	High Temperature Operation Test	T=70 ,240hrs	IEC68-2-2
4	Low Temperature Operation Test	T=-20 ,240hrs	IEC68-2-1
5	High temperature and high humidity operation test	T=60 ,90%RH,240H	IEC68-2-3
6	Thermal cycling storage test (No operation)	-30 ----25 ------80 ,200Cycle 30min 5min 30min	IEC68-2-14
7	vibration test (No operation)	Frequency:10~55HZ Amplitude:1.5mm Sweep time:11min Test period:6Cycles for each direction of X,Y,Z	IEC68-2-6
8	Shock Test (No operation)	100G,6ms,Direction:±X±Y±Z Cycle:3times	IEC68-2-27
9	Drop test	Height :60cm 1 conner,3edges,6surfaces	IEC68-2-32
10	ESD Test	State: operating Location: LCM/TP surface Condition:150pf 330Ω Contact +/- 8kV Air +/-15kV Criteria: Class C	IEC61000-4-2

12.2 Inspection condition

12.2.1 Inspection conditions

12.2.1.1 Inspection Distance : 35 ± 5 cm

12.2.1.2 View Angle :
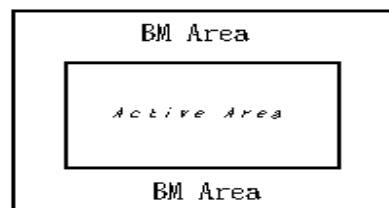
(1) Inspection under operating condition : ±5°

(2) Inspection under non-operating condition : ± 45°
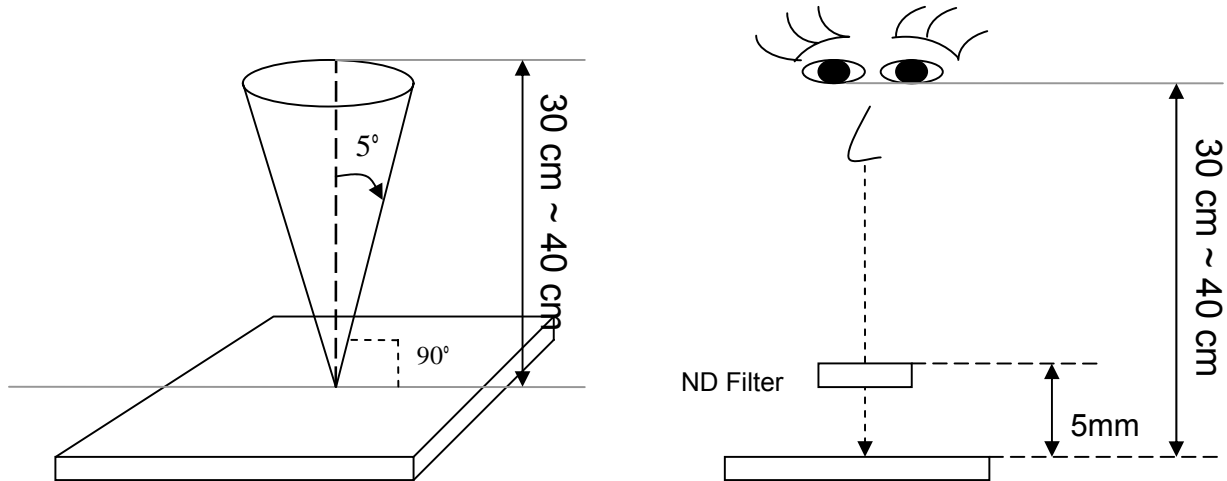
12.2.2 Environment conditions :

Ambient Temperature :		25±5℃
Ambient Humidity :		65±5%
Ambient Illumination	Cosmetic Inspection	more than 600 lux
	Functional Inspection	300 ~ 800 lux

12.2.3 Definition of applicable Zones

12.2.4 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 ≤5dots (Minor)(Note:1)
		Non-uniformity: Visible through 6%ND filter white, R, G, B and gray 50%pattern. (Minor)
		Foreign material in Black or White spots shape (W>1/4L) (Note: 5)
		Foreign Material in Line or spiral shape (W≤1/4L) (Note: 4)
2	External Inspection (non-operating)	Dimension: Outline (Major)
		Bezel appearance: uneven (Minor)
		Scratch on the polarizer: (Note:2)

Point Defect table:

Item	Acceptable number	Total	Class Of Defects	AQL Level
Bright	2	5	Minor	1.5
Dark	3			
Adjacent Bright	0	0		
Adjacent Dark	1	1		

Foreign material in Black or White spots shape:

Dimension	Acceptable number	Class Of Defects	AQL Level
D ≤ 0.3	*	Minor	1.5
0.3 < D ≤0.5	4		
D> 0.5	0		

D = (Long + Short) / 2   * : Disregard

Foreign Material in Line or spiral shape:

Dimension	Acceptable number	Class Of Defects	AQL Level
W>0.1mm,L>5mm	0	Minor	1.5
L 5mm,0.05mm<W 0.1mm	4		
L 5mm,W<0.05mm	*		

L : Length   W : Width   * : Disregard

Scratch on the polarizer:

Dimension	Acceptable number	Class Of Defects	AQL Level
W>0.1mm,L>5mm	0	Minor	1.5
L 5mm,0.05mm<W 0.1mm	4		
L 5mm,W<0.05mm	*		

L : Length   W : Width   * : Disregard

Dent and spots shape on the polarize (Note:2): (Note: 5)

Dimension	Acceptable number	Class Of Defects	AQL Level
D ≤ 0.3	*		
0.3 < D ≤0.5	4	Minor	1.5
D> 0.5	0		

D = (Long + Short) / 2　　＊: Disregard

Class of defects	Major	AQL 0.65%	**Definition** 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 pixel 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 30± 5cm between the eyes of inspctor and thepanel .

Note:3 Luminance measurement for contrast ratio is at the distance 50± 5cm between the detective head and the panelwith ambient illuminance 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.
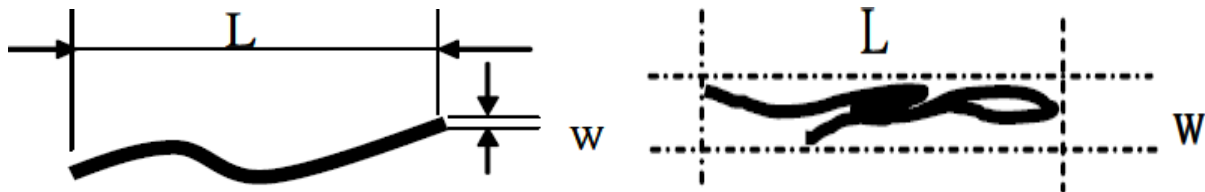
Note:5 Spot Foreign Material (W　L/4)

$$D = \frac{(L + W)}{2}$$
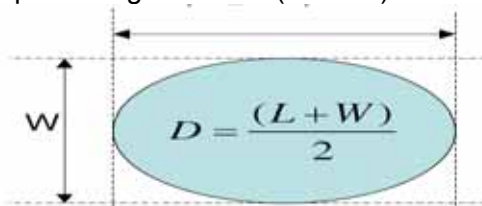
12.3 Sampling Condition

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: MIL-STD-105E

Inspection level: Level II

13. LCM PRODUCT LABEL DEFINE

Product Label style:

35mm

Bar Code ← A A 6 0 0 1 4 2 1 0 2 6 - 0 0 1 3

Product Name ← F G 0 7 0 0 K 6 D S S W B G T 1

10mm
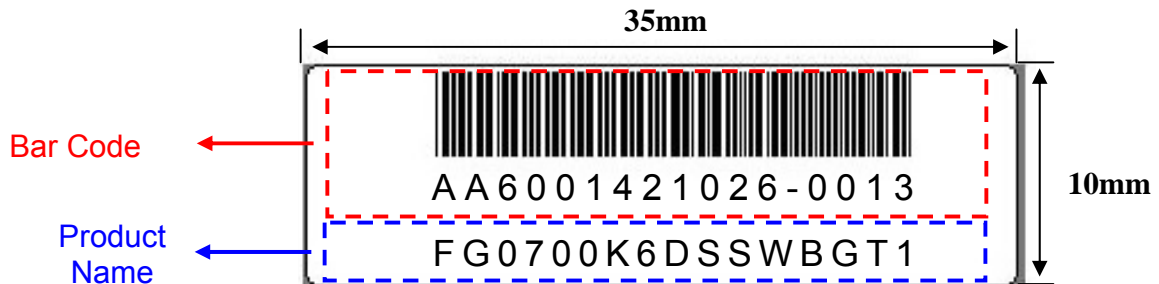
BarCode Define:

A A 6 0014 2 10 26-0013

Serial number of the products
Serial number starts from 0000
Every work order is 10K at most

Week of production

Year of production

Storage area

Serial number of work order
Serial number starts from 0000 each month

Month of work order

Year of work order

The first 3 numbers of work order

Product Name Define:

FG 0700K6　D　S　S　W　B　G　T1

└─── **VERSION: T1**

└─── **RoHS**

└─── **View direction & Temp. Range**

A– Bottom view 6H & Normal temp.

B– Bottom view 6H & Wide temp.

C–Top View & Normal temp

M–Wide View Angle& Wide temp

└─── **Backlight Color**

W –White Y – Yellow Green

G - Green

└─── **Backlight**

S –edge light LED B/L

C–CCFL B/L

└─── **LCD Polarize type**

N–Normal view **S – Super wide view or Excellent W.V.**

M–transmissive W– Sunlight readable

└─── **LCD type**

A –TFT analog

D –TFT digital

└─── **Series code**

0700K6–, **7.0 inch**

└─── **Model type**

FG–Standard TFT Module

FX–Custom TFT Module

14. PRECAUTIONS IN USE LCM

1. LIQUID CRYSTAL DISPLAY (LCD)

LCD is made up of glass, organic sealant, organic fluid, and polymer based polarizers. The following precautions should be taken when handing,

(1). Keep the temperature within range of use and storage. Excessive temperature and humidity could cause polarization degradation, polarizer peel off or bubble.

(2). Do not contact the exposed polarizers with anything harder than an HB pencil lead.   To clean dust off the display surface, wipe gently with cotton, chamois or other soft material soaked in petroleum benzin.

(3). Wipe off saliva or water drops immediately. Contact with water over a long period of time may cause polarizer deformation or color fading, while an active LCD with water condensation on its surface will cause corrosion of ITO electrodes.

(4). Glass can be easily chipped or cracked from rough handling, especially at corners and edges.

(5). Do not drive LCD with DC voltage.

2. Liquid Crystal Display Modules

2.1 Mechanical Considerations

LCM are assembled and adjusted with a high degree of precision. Avoid excessive shocks and do not make any alterations or modifications. The following should be noted.

(1). Do not tamper in any way with the tabs on the metal frame.

(2). Do not modify the PCB by drilling extra holes, changing its outline, moving its components or modifying its pattern.

(3). Do not touch the elastomer connector, especially insert an backlight panel (for example, EL).

(4). When mounting a LCM make sure that the PCB is not under any stress such as bending or twisting . Elastomer contacts are very delicate and missing pixels could result from slight dislocation of any of the elements.

(5). Avoid pressing on the metal bezel, otherwise the elastomer connector could be deformed and lose contact, resulting in missing pixels.

2.2. Static Electricity

LCM contains CMOS LSI's and the same precaution for such devices should apply, namely

(1). The operator should be grounded whenever he/she comes into contact with the module. Never touch any of the conductive parts such as the LSI pads, 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.

2.3 Soldering

(1). Solder only to the I/O terminals.

(2). Use only soldering irons with proper grounding and no leakage.

(3). Soldering temperature : $280°C \pm 10°C$

(4). Soldering time: 3 to 4 sec.

(5). Use eutectic solder with resin flux fill.

(6). If flux is used, the LCD surface should be covered to avoid flux spatters. Flux residue should be removed after wards.

2.4 Operation

(1). The viewing angle can be adjusted by varying the LCD driving voltage V0.

(2). Driving voltage should be kept within specified range; excess voltage shortens display life.

(3). Response time increases with decrease in temperature.

(4). Display may turn black or dark blue at temperatures above its operational range; this is (however not pressing on the viewing area) may cause the segments to appear "fractured".

(5). Mechanical disturbance during operation (such as pressing on the viewing area) may cause the segments to appear "fractured".

2.5 Storage

If any fluid leaks out of a damaged glass cell, wash off any human part that comes into contact with soap and water. Never swallow the fluid. The toxicity is extremely low but caution should be exercised at all the time.

2.6 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.

15. OUTLINE DRAWING

PRELIMINARY

RESOLUTION: 800(H) x RGB x 480(V)

7"

Top Y2
Left X1
Right X2
Bottom Y1
View direction

Stiffener Board
Conductive Face

11.26 Max. * include component height
6.86(WITH TP)

165±0.4*
164±0.3
155.3 (BEZEL OPENING)
154.4 (TP V.A)
153 (TP A.A.)
152.4 A.A.
80.2
120±1*

104.44±0.4*
103±0.3
94.3 (BEZEL OPENING)
93.4 (TP V.A)
92.04 (TP A.A.)
91.44 A.A.
48.87
73.24±1*

61±1*
131.5±0.5
7.5±1
46.5±1*
27.5±1
50.05±0.5

UL-Label   Bar-code
CN6   CN1

NOTE:
1. Tolerance is ±0.3 unless otherwise noted.
2. Touch-panel front surface is antiglare treatment.
3. Touch Panel flex tail do not bend to less than 3.175mm radius.
4. For RoHS.
5. * is important dimension.
6. Center brightness : 320 cd/m² (Min.) 400 cd/m² (Typ.)
7. CN1 connector: Hirose DF14A-20P-1.25H or equivalent, matching side connector: Hirose DF14-20S-1.25C or equivalent.
8. CN6 connector: Hirose DF14A-5P-1.25H or equivalent, matching side connector: Hirose DF14-5S-1.25C or equivalent.

SMD-LED: 3*8=24PCS
20mA*8=160mA
LED circuit

Detail "A"
SCALE 5:1

Touch Panel Pin Assignment

PIN #	Description
1	Top
2	Right
3	Bottom
4	Left

CN6 PIN FUNCTION

1 VDD	3 GND	5 ADJ
2 VDD	4 GND	

CN1 PIN FUNCTION

1 Vcc	6 RxIN0+	11 RxIN2-	16 GND
2 Vcc	7 GND	12 RxIN2+	17 VDD
3 GND	8 RxIN1-	13 GND	18 VDD
4 GND	9 RxIN1+	14 CKIN-	19 GND
5 RxIN0-	10 GND	15 CKIN+	20 ADJ

REVISIONS

AUTH	DESCRIPTION		DATE	APPROVED
⚠3	Change the LCM brightness.	<<ECR110-E70029>>	2014/8/5	
⚠2	Modify the brightness from 250 cd/m^2 to 280 cd/m^2	<<ECR110-D40012>>	07/02/12'	
⚠1	Change the FPC dimension	<<ECR11S-C50067>>	06/01/12'	
	Change the drawing <<FG0700K6SGT1>>from Rev.3 to Rev.A	<<ECR11S-C50067>>	07/22/11'	

DATE: 11/5/09'
DRAWN:
CHECK:
APPROVE:

TITLE: 7" TFT Outline Dimension
DWG. NO. FG0700K6SGT1
UNITS MM
REV. D
SCALE 1/1
SHEET 1 OF 1

DATA IMAGE

DATA IMAGE

16. PACKAGE INFORMATION

Anti-static bag

LCM

Carton

Item	Size(L*W*H)		Quantity	Note
Master Carton	482*282*279		1	
Quantity Per Master Carton		30		
N . W	5.5 (kg)	G . W		7.1 (kg)