

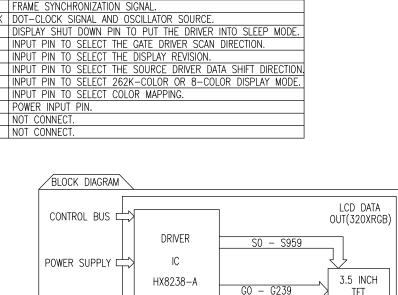
/ INTERFACE PIN CONNECTION

30 R0

REV.

DIGITAL DATA INPUT (RFD)

/ "	/ INTERCACE THE CONNECTION				
PIN	SYMBOL	FUNCTION	PIN	SYMBOL	
1	Α	ANODE OF BACKLIGHT POWER SUPPLY(DC 10V).	31	R1	
2	Α	ANODE OF BACKLIGHT POWER SUPPLY(DC 10V).	32	R2	
3	K	CATHODE OF BACKLIGHT SUPPLY.	33	R3	
4	K	CATHODE OF BACKLIGHT SUPPLY.	34	R4	
5	VSS	GROUND.	35	R5	
6	VSS	GROUND.	36	R6	
7	QXH	DATA SEQUENCE CONTROL PIN.	37	R7	
8	POL	POLARITY SIGNAL TO MONITOR VCOM SIGNAL.	38	DEN	
9	SD0	DATA OUTPUT PIN IN SERIAL MODE.	39	HSYNC	
10	RESB	SYSTEM RESET PIN.	40	VSYNC	
11	CSB	CHIP SELECT PIN OF SERIAL MODE.	41	DOTCLK	
12	SCK	CLOCK PIN OF SERIAL INTERFACE.	42	SHUT	
13	SDI	DATA PIN OF SERIAL INTERFACE.	43	TB	
14	B0	DIGITAL DATA INPUT.(BLUE)	44	REV	
15	B1	DIGITAL DATA INPUT.(BLUE)	45	RL	
16	B2	DIGITAL DATA INPUT.(BLUE)	46	CM	
17	B3	DIGITAL DATA INPUT.(BLUE)	47	BGR	
18	B4	DIGITAL DATA INPUT.(BLUE)	48	VDDIO	
19	B5	DIGITAL DATA INPUT.(BLUE)	49	NC	
20	B6	DIGITAL DATA INPUT.(BLUE)	50	NC	
21	B7	DIGITAL DATA INPUT.(BLUE)			
22	G0	DIGITAL DATA INPUT.(GREEN)			
23	G1	DIGITAL DATA INPUT.(GREEN)			
24	G2	DIGITAL DATA INPUT.(GREEN)			
25	G3	DIGITAL DATA INPUT.(GREEN)			
26	G4	DIGITAL DATA INPUT.(GREEN)			
27	G5	DIGITAL DATA INPUT.(GREEN)			
28	G6	DIGITAL DATA INPUT.(GREEN)			
29	G7	DIGITAL DATA INPUT.(GREEN)			



FUNCTION

DIGITAL DATA INPUT.(RED) DIGITAL DATA INPUT.(RED)

DISPLAY ENABLE PIN FROM CONTROLLER. LINE SYNCHRONIZATION SIGNAL



N/A

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LCD PANEL

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H

PART NUMBER LCT-H320240M35W

3.5" ACTIVE MATRIX FULL COLOR TFT PANEL

6:00 VIEW. LED BACKLIGHT, -20°C TO +70°C OPERATING TEMP

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DATA BUS (

LED ANODE:

LED CATHODE

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ELECTRICAL CHARASTERISTICS

	0,41001	STA	NDARD V	LINUT	DEMARKS	
ITEM	SYMBOL	MIN	TYP.	MAX	UNIT	REMARKS
	VDD	1.8	_	2.5	٧	
POWER VOLTAGE	VDDIO	1.4	_	3.6	٧	
	VIC	2.5 or VDDIO	_	3.6	٧	
GATE ON VOLTAGE	VGH	9.3	15	16.5	٧	
GATE OFF VOLTAGE	VGL	-15	-10	-5.1	٧	
INPUT HIGH VOLTAGE	VIH	0.8*VDDIO	_	VDDIO	٧	
INPUT LOW VOLTAGE	VIL	Vss	_	0.2*VDDI0	٧	
OUTPUT HIGH VOLTAGE	VOH	0.9*VDDIO	_	V_{DD}	٧	IOH=100uA
OUTPUT LOW WOLTAGE	VOL	Vss	-	0.1*VDDI0	٧	IOL=100uA
VCOM HIGHT OUTPUT VOLTAGE	VCOMH .	2.5	3.6	4.5	٧	
VCOM LOW OUTPUT VOLTAGE	VCOML	-3.0	-2.4	0	٧	

BACKLIGHT SPECIFICATIONS

ITEM	SYMBOL	STA	STANDARD VALUE			REMARKS	
IIEM	STWIDUL	MIN	TYP.	MAX	UNIT	KEWAKKS	
FORWARD VOLTAGE	Vf	8.8	10	10.5	٧	lf=40mA	
ABSOLUTE MAX FORWARD CURRENT	lfm	35	-	50	mA		
REVERSE VOLTAGE	Vr	10.5	-	15	٧		
RESERVE CURRENT	lr	-	-	200	Α	Vr=15V	
CHROMACITY COORDINATES	Χ	0.26	_	0.32	-		
GINOWACITI COORDINATES	Υ	0.26	_	0.32	-		
LUMINANCE (BLU ONLY)	Lv	2800	3000	_	cd/m²	If=40mA	
UNIFORMITY	Δ	80	85	-	%	MIN/MAX*100%	
REMARK	LED PATENTED						
HALF-BRIGHTNESS LIFE TIME	50000 HOURS						

ABSOLUTE MAXIMUM RATINGS

_/	· · · · · · · · · · · · · · · · · · ·	\					
	TEM	SYMBOL	TEST	STA	ALUE	UNIT	
	I EIVI	SIMBOL	CONDITION	MIN	TYP.	MAX	UNII
	POWER VOLTAGE	VDDIO	Vss=0	-0.3	-	4.0	٧
		VDD	Vss=0	-0.3	-	2.7	٧
		VIC	Vss=0	Vss-0.3	-	5.0	٧

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REV.

PART NUMBER LCT-H320240M35W

3.5" ACTIVE MATRIX FULL COLOR TFT PANEL 6:00 VIEW, LED BACKLIGHT, -20°C TO +70°C OPERATING TEMP.

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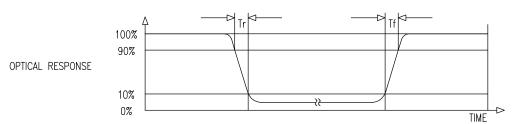
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OPTICAL CHARASTERISTICS

		\						
ITEM	ITEM		CONDITION	STA	STANDARD VALUE			NOTE
II LIVI			CONDITION	MIN	TYP.	MAX	UNIT	NOIL
DECDONCE TIME		Tr	• 0=0 •°C	_	15	20	٧	1
RESPONSE TIME	-	Tf	1 υ=ψ= υ υ	-	35	50] v	
CONTRAST RATIO)	CR	0=0 °C	150	250	-	٧	2
		RIGHT	ф= 0 ° C	-	45	-	DEG	3
VIEWING ANGLE		LEFT	¢= 180°C	-	45	-	DEG	
(CR≱0)		UPPER	¢= 90°C	-	15	-	DEG	
		LOWER	¢= 270°C	-	35	_	DEG	
LUMINANCE OF WHIT	ſΕ	1		200	220		01/2	5
(CENTER POINT OF	LCM)	L	-	200	220	_	Cd/m²	
COLOR CROMACITY		Rx		0.610	0.640	0.670	-	4
(CIE1931)		Ry		0.314	0.344	0.374	-	
		Gx		0.268	0.298	0.328	-	"SIMULATION
		Gy	0=0° C	0.553	0.583	0.613	_	REFERENCE
"SIMULATION DATA		Вх	1	0.102	0.132	0.162	_	ONLY"
REFERENCE ONLY"		Ву		0.107	0.137	0.167	-	
		Wx		0.282	0.312	0.342	-	
		Wy		0.319	0.349	0.379	-	
OPTIMUM VIEWING DIF	RECTION			6 O'CLO(CK			_

NOTE(1): DEFINITION OF RESPONSE TIME

WHITE (TFT OFF) BLACK (TFT ON) WHITE (TFT OFF) DISPLAY DATA

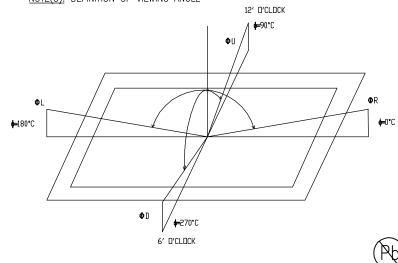


NOTE(2): DEFINITION OF CONTRAST RATIO CR=BRIGHTNESS AT ALL PIXELS "WHITE" / BRIGHTNESS AT ALL PIXELS "BLACK"

NOTE(4): MEASURED AT CENTER POINT VERTICALLY WITH BACKLIGHT ON."

NOTE(5): AFTER STABILIZING AND LEAVING THE PANEL ALONE AT GIVEN TEMPERATURE FOR 30MIN, THE MEASUREMENT SHOULD BE EXECUTED. MEASURMENT SHOULD BE EXECUTED IN STABLE, WINDLESS, AND DARK ROOM 30 MINS AFTER LIGHTING THE BACK-LIGHT. THIS SHOULD BE MEASURED IN THE CENTER OF SCREEN. ENVIROMENT CONDITION: Ta=25±2°C BACK-LIGHT ON CONDITION

NOTE(3): DEFINITION OF VIEWING ANGLE



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STANDARD SPECIFICATION FOR REABILITY

STANDARD SPECIFICATION OF REABILITY TEST

NO	TEST ITEM	CONTENT OF TEST	TEST CONDITION	APPLICABLE STANDARD		
1	HIGH TEMPERATURE STORAGE	ENDURANCE TEST APPLYING THE HIGH STORAGE TEMPERATURE FOR A LONG TIME.	80+/-3°C 240HRS			
2	LOW TEMPERATURE STORAGE	ENDURANCE TEST APPLYING THE LOW STORAGE TEMPERATURE FOR A LONG TIME.	-30+/-3°C 240HRS			
3	HIGH TEMPERATURE OPERATION	ENDURANCE TEST APPLYING THE ELECTRIC STRESS (VOLTAGE & CURRENT) AND THE THERMAL STRESS TO THE ELEMENT FOR A LONG TIME.	70+/-3°C 240HRS			
4	LOW TEMPERATURE OPERATION	ENDURANCE TEST APPLYING THE ELECTRIC STRESS UNDER LOW TEMPERATURE FOR A LONG TIME.	-20+/-3°C 240HRS			
5	HIGH TEMPERATURE/ HUMIDITY OPERATION	ENDURANCE TEST APPLYING THE ELECTRIC STRESS (VOLTAGE & CURRENT) AND TEMPERATURE / HUMIDITY STRESS TO THE ELEMENT FOR A LONG TIME.	40°C, 90%RH 120HRS	MIL-202E-103B JIS-C5023		
6	TEMPERATURE CYCLE	ENDURANCE TEST APPLYING THE LOW AND HIGH TEMPERATURE CYCLE. -20°C \(\sum \frac{25°C}{5 \text{ MIN}} \sum \frac{70°C}{30 \text{ MIN}} \) 1 CYCLE	-20°C/ 70°C 10 CYCLES			
MECHANICAL TEST						
7	DROP TEST		PACKED,100cm FREE FALL(6 SLIDES, 1 CORNER, 3 EDGES)			

REMARKS:

- 1. FOR OPERATION TEST, ABOVE SPECIFICATION IS APPLICABLE WHEN TEST PATTERN IS CHANGING DURING ENTIRE OPERATION TEST.
- 2. INSPECTIONS AFTER RELIABILITY TESTS ARE PERFORMED WHEN THE DISPLAY TEMPERATURE RESUMES BACK TO ROOM TEMPERATURE.
- 3. IT IS A NORMAL CHARACTERISTIC THAT SOME DISPLAY ABNORMALITY CAN BE SEEN DURING REABILITY TEST. IF THE DISPLAY ABNORMALITY CAN RESUME BACK TO NORMAL CONDITION AT ROOM TEMPERATURE WITHIN 24 HOURS, THERE IS NO PERMANENT DESTRUCTION OVER THE DISPLAY. THE DISPLAY STILL POSSESSES ITS FUNCTIONALITY AFTER REABILITY TESTS.



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QUALITY ASSURANCE

ACCEPTABLE QUALITY LEVEL (AQL)

EACH LOT SHOULD SATISFY THE QUALITY LEVEL DEFINED AS FOLLOWS:

A. INSPECTION METHOD: MIL-SDT-105E LEVEL II NORMAL ONE TIME SAMPLING.

B. AQL LEVEL.

	CATEGORY	AQL	DEFINITION
I	MAJOR	0.25%	FUNCTIONAL DEFECTIVE AS PRODUCT.
	MINOR	1.00%	SATISFY ALL FUNCTIONS AS PRODUCT BUT NOT SATISFY COSMETIC STANDARD.

COSMETIC SCREENING CRITERIA

NO	DEFECT	JUDGMENT CRITERIA	CATEGORY
1	SPOTS/DUST /BUBBLE (ROUND TYPE)	SIZE, D(mm) ACCEPTABLE QUANTITY IN ACTIVE AREA D≤0.15 DISREGARD 0.15<0≤0.20 3 D>0.20 0	MINOR
2	DUST/ SCRATCHES/ BLACK STREAK (LINE TYPE)	ACCEPTABLE QUANTITY WIDTH, W(mm) LENGTH, L(mm) IN ACTIVE AREA W≤0.02 DISREGARD DISREGARD W≤0.03 L ≤ 1.0 DISREGARD W≤0.05 L ≤ 2.0 3 W>0.05 DISREGARD 0	MINOR
3	ALLOWABLE DENSITY	ABOVE DEFECTS SHOULD BE SEPARATED MORE THAN 5mm EACH OTHER.	MINOR
4	RAINBOW	OBVIOUS UNVEN COLOR (RAINBOW) SHALL NOT BE NOTICEABLE.	MINOR
5	DISPLAY CONDITION	DIM DISPLAY ON THE PATTERNS, EXTRA PATTERN AND SHORT CIRCUIT ARE NOT ACCEPTABLE.	MAJOR
6	NO DISPLAY OR MISSING DISPLAY	THE PATTERNS OF DISPLAY SHALL LIGHT UP AS REQUIRED. NO DISPLAY OR MISSING DISPLAY ARE NOT ACCEPTABLE.	MAJOR

NOTE: D= (LONG LENGTH + SORTH LENGTH)/2

FAILURE JUDGMENT CRITERIA

AFTER REABILITY TEST ABOVE, TEST SAMPLE SHALL BE LET RUN TO ROOM TEMPERATURE AND HUMIDITY AT LEAST 4 HOURS BEFORE FINAL TESTS ARE CARRIED OUT.

CRITERION ITEM	FAILURE JUDGMENT CRITERIA
ELECTRICAL CHARACTERISTIC	ELECTRICAL SHORT AND OPEN.
MECHANICAL CHARACTERISTIC	OUT OF MECHANICAL SPECIFICATION.
OPTICAL CHARACTERISTIC	OUT OF APPERANCE STANDARD.

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PRECAUTIONS FOR USING LCD MODULE

HANDLING PRECAUTIONS

- 1, THE DISPLAY PANEL IS MADE OF GLASS AND POLARIZER. DO NOT SUBJECT IT TO MECHANICAL SHOCK BY 1, OBSERVE THE FOLLOWING WHEN SOLDERING LEAD WIRE, CONNECTOR CABLE AND ETC. TO THE LCD DROPPING OR IMPACT WITCH MAY CAUSE CHIPPING ESPECIALLY ON THE EDGES.
- 2. DO NOT TOUCH, PUSH OR RUB THE EXPOSED POLARIZERS WITH ANYTHING HARDER THAN AN HB PENCIL LEAD (GLASS,TWEEZERS, ETC.). THE POLARIZER COVERING THE DISPLAY SURFACE OF THE LCD MODULE IS SOFT AND EASILY SCRATCHED. HANDLE THIS POLARIZER CAERFULLY.
- ALCOHOL. AVOID USING SOLVENTS LIKE ACETONE (KETENE), WATER, TOLUENE, ETHANOL TO CLEAN THE POLARIZER SURFACE.
- 4. PLEASE KEEP THE TEMPERATURE WITHIN SPECIFIED RANGE FOR USE AND STORAGE. POLARIZATION DEGRADATION. BUBBLE GENERATION OR POLARIZER PEEL-OFF MAY OCCUR WITH HIGH TEMPERATURE AND
- 5. DO NOT APPLY EXCESSIVE FORCE TO THE DISPLAY SURFACE OR THE ADJOINING AREAS SINCE THIS MAY CAUSE THE COLOR TONE TO VARY.
- 6. INSTALL THE LCD MODULE BY USING THE MOUNTING HOLES. WHEN MOUNTING THE LCD MODULE MAKE SURE IT IS FREE OF TWISTING, WARPING AND DISTORTION.
- 7. EXERCISE CARE TO MINIMIZE CORROSION OF THE ELECTRODE. CORROSION OF THE ELECTRODES IS ACCELERATED BY WATER DROPLETS, MOISTURE CONDENSATION OR A CURRENT FLOW IN A HIGH-HUMIDITY ENVIRONMENT.
- 8. NC TERMINAL SHOULD BE OPEN. DO NOT CONNECT ANYTHING.
- 9. IF THE LOGIC CIRCUIT POWER IS OFF. DO NOT APPLY THE INPUT SIGNALS.
- 10. AVOID CONTACTING OIL AND FATS.
- 11. CONDENSATION ON THE SURFACE AND CONTACT WITH TERMINALS DUE TO COLD WILL DAMAGE, STAIN OR HOWEVER, IT WILL RETURN TO NORMAL IF IT IS TURNED OFF AND THEN BACK ON. DIRTY THE POLARIZERS. AFTER PRODUCTS ARE TESTED AT LOW TEMPERATURE THEY MUST BE WARMED UP IN 5. WHEN TURNING THE POWER ON, INPUT EACH SIGNAL AFTER THE POSITIVE/NEGATIVE VOLTAGE BECOMES A CONTAINER BEFORE COMING IN CONTACT WITH ROOM TEMPERATURE AIR.
- 12. WIPE OFF SALIVA OR WATER DROPS IMMIDEATLY, CONTACT WITH WATER OVER A LONG PERIOD OF TIME MAY CAUSE DEFORMATION OR COLOR FADING.

ELECTRO-STATIC DISCHARGE CONTROL

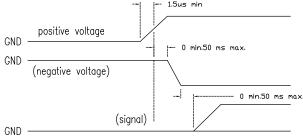
- 1. SINCE THIS MODULE USES A CMOS LSI. THE SAME CAERFUL ATTENTION SHOULD BE PAID TO ELECTROSTATIC DISCHARGE AS FOR AN ORDINARY CMOS IC.
- 2. BE SURE TO GROUND THE BODY WHEN HANDLING THE LCD MODULES. TOOLS REQUIRED FOR ASSEMBLING, SUCH AS SOLDERING IRONS, MUST BE PROPERLY GROUNDED.
- 3. TO REDUCE THE AMOUNT OF STATIC ELECTRICITY GENERATED, DO NOT CONDUCT ASSEMBLING AND OTHER WORK UNDER DRY CONDITIONS. TO REDUCE THE GENERATION OF STATIC ELECTRICITY, BE CARFUL THAT THE AIR IN THE WORK AREA IS NOT TOO DRY. A RELATIVE HUMIDITY OF 50%-60% IS RECOMMENDED.
- 4. THE LCD MODULE IS COATED WITH A FILM TO PROTECT THE DISPLAY SURFACE, EXERCISE CARE WHEN PEELING OFF THIS PROTECTIVE FILM SINCE STATIC ELECTRICITY MAY BE GENERATED.
- 5. WHEN SOLDERING THE TERMINAL OF LCM. MAKE CERTAIN THE AC POWER SOURCE FOR THE SOLDERING IRON DOES NOT LEAK.

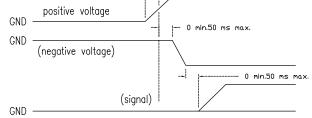
PRECAUTION OF SOLDERING TO THE LCM

- MODULE.
- SOLDERING IRON TEMPERATURE: 300~350°C.
- SOLDERING TIME: ≤3 SEC.
- SOLDER: EUTECTIC SOLDER.
- 3. IF THE DISPLAY SURFACE BECOMES CONTAMINATED, BREATHE ON THE SURFACE AND GENTLY WIPE IT WITH ABOVE IS A RECOMMENDED APPROACH. DUE TO DIFFERENT SOLDER COMPOSITION AND PROCESSING METHOD. A SOFT DRY CLOTH. IF IT IS HEAVILY CONTAMINATED, MOISTEN CLOTH WITH ISOPROPYL ALCOHOL OR ETHYL IT IS RECOMMENDED THAT CUSTOMER TO STUDY AND FINE TUNING THEIR SOLDERING PROCESS PARAMETERS ACCORDINGLY.
 - 2. IF SOLDERING FLUX IS USED, BE SURE TO REMOVE ANY REMANING FLUX AFTER FINISHING TO SOLDERING OPERATION. (THIS DOES NOT APPLY IN THE CASE OF A NON-HALOGEN TYPE OF FLUX.) IT IS RECOMMENDED THAT YOU PROTECT THE LCD SURFACE WITH A COVER DURING SOLDERING TO PREVENT ANY DAMAGE DUE TO FLUX SPATTERS.

PRECAUTION FOR OPERATION

- VIEWING ANGLE VARIES WITH THE CHANGE OF LIQUID CRYSTAL DRIVING VOLTAGE (Vo). ADJUST Vo TO SHOW THE BEST CONTRAST.
- 2. DRIVING THE LCD IN THE VOLTAGE ABOVE THE LIMIT SHORTERNS ITS LIFETIME.
- 3. RESPONSE TIME IS GREATLY DELAYED AT TEMPERATURE BELOW THE OPERATING TEMPERATURE RANGE. HOWEVER, IT WILL RECOVER WHEN IT RETURNS TO THE SPECIFIED TEMPERATURE RANGE.
- 4. IF THE DISPLAY AREA IS PUSHED HARD DURING OPERATION, THE DISPLAY WILL BECOME ABNORMAL.
- STABLE (BELOW FIGURE IS A GENERAL ILLUSRATION WHERE TYPICAL VALUE DEPENDS ON INDIVIDUAL PRODUCT DESIGN).





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REV.

PART NUMBER LCT-H320240M35W

3.5" ACTIVE MATRIX FULL COLOR TFT PANEL

6:00 VIEW. LED BACKLIGHT, -20°C TO +70°C OPERATING TEMP

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RELIABILITY NOTE OUR MANY YEARS OF EXPERIENCE DATA ACCUMULATION INDICATE THAT SOLDER HEAT IS A MAJOR CAUSE OF EARLY AND FUTURE FAILURE. PLEASE PAY ATTENTION TO YOUR SOLDERING PROCESS.



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N/A

SCALE:

RoHS COMPLIANT PRODUCT

1.	CADMIUM AND CADMIUM COMPOUNDS	LESS	THAN	100PPM
2.	HEXAVALENT CHROMIUM COMPOUNDS	LESS	THAN	1000PPM
3.	LEAD AND LEAD COMPOUNDS	LESS	THAN	1000PPM
4.	MERCURY AND MERCURY COPMPOUNDS	LESS	THAN	1000PPM
5.	POLYBROMINATED BIPHENYLS (PBBs)	LESS	THAN	1000PPM
6.	POLYBROMINATED DIPHENYL ETHERS (PBDEs)	LESS	THAN	1000PPM

PACKAGING STANDARD

PRODUCT NO.	LCT-H320240M35W	RELEASE DATE	2009
PRODUCT NAME.	TFT MODULE	PREPARE BY:	
QUANTITY/ EACH BOX	168 PCS.	BOX MATERIAL	PAPER CARTON
OUTER CARTON BOX SIZE	465mm x 405mm x 305mm	BOX TYPE	NEW
QUANTITY/ INER BOX QUANTITY/ OUTER BOX	12 X 7 X 2 = 168 PCS.	WEIGHT	8.6 KG

THERE ARE 12 PCS LCD PER EACH ANTI-STATIC PLASTIC PLATE. THERE ARE 7 LAYER PLASTIC PLATES PER EACH INNER CARTON BOX. THERE ARE 2 INNER CARTON BOX PER EACH OUTER CARTON BOX.

STORAGE

- 1. WHEN STORING LCDS AS SPARES FOR SOME YEARS, THE FOLLOWING PRECAUCTIONS ARE NECESSARY.
- 2. STORE THEM IN A SEALED POLYETHYLENE BAG. IF PROPERLY SEALED, THERE IS NO NEED FOR DESICCANT.
- 3. STORE THEM IN A DARK PLACE. DO NOT EXPOSE TO SUNLIGHT OR FLUORESCENT LIGHT, KEEP THE TEMPERATURE BETWEEN 0°C AND 35°C.
- 4. ENVIRONMENTAL CONDITIONS:
- 5. DO NOT LEAVE THEM FOR MORE THAN 168HRS. AT 60°C.
- 6. SHOULD NOT BE LEFT FOR MORE THAN 48HRS. AT -20°C.

SAFETY

- 1. ITS RECOMMENDED TO CRUSH DAMAGED OR UNNECESSARY LCD INTO PIECES AND WASH THEM OFF WITH SOLVENTS SUCH AS ACETONE AND ETHANOL, WHICH SHOULD LATER BE BURNED.
- 2. IF ANY LIQUID LEAKS OUT OF DAMAGED GLASS CELL AND COMES IN CONTACT WITH THE HANDS, WASH OFF THOROUGHLY WITH SOAP AND WATER.

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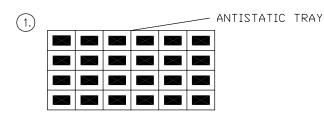
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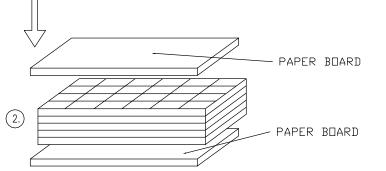
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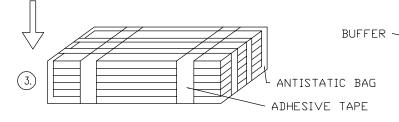
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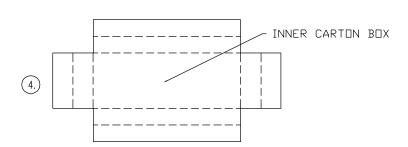
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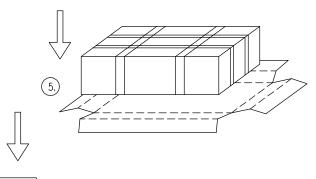
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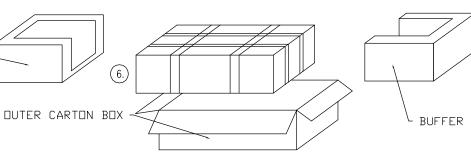












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