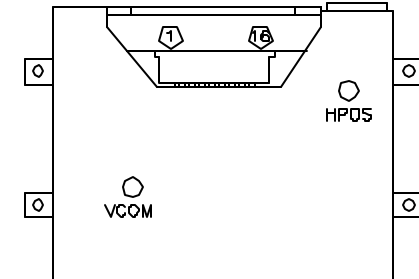
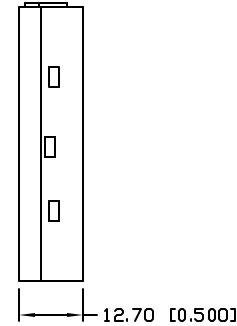
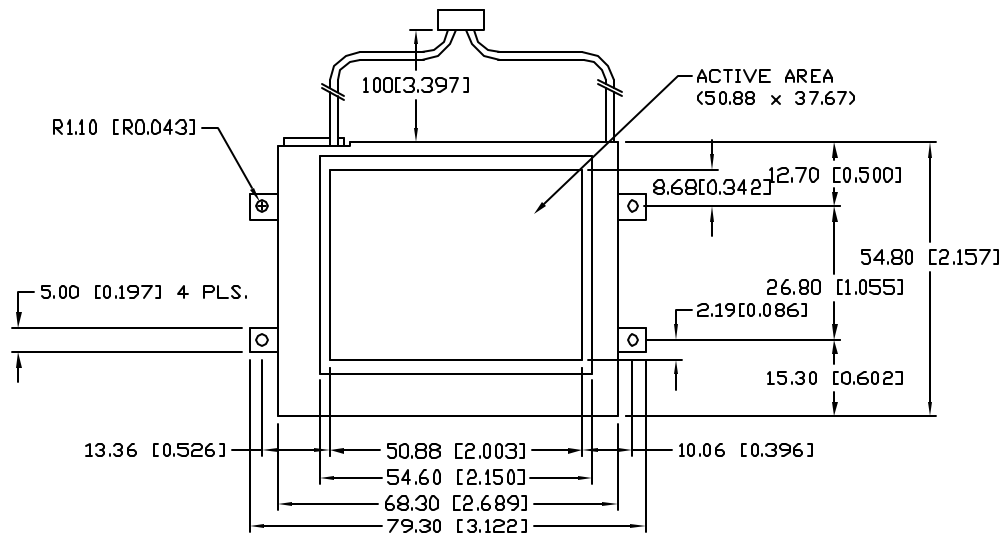


UNCONTROLLED DOCUMENT

PART NUMBER
LCM-480234GF25NOID

REV.

A

REV. E.C.N. NUMBER AND REVISION COMMENTS
A E.C.N. #11148.DATE
4.24.07

PIN NO	SYMBOL	I/O	DESCRIPTION
1	HSY	O	HORIZONTAL SYNC. INPUT/OUTPUT
2	FRP	O	VIDEO POLARITY ALTERNATING SIGNAL
3	CSY	I	COMPOSITE SYNC. SIGNAL
4	VGH	I	SUPPLY VOLTAGE FOR GATE DRIVER (HI LEVEL)
5	VGL	I	SUPPLY VOLTAGE FOR GATE DRIVER LOW LEVEL
6	VB	I	VIDEO SIGNAL (BLUE)
7	VR	I	VIDEO SIGNAL (RED)
8	VG	I	VIDEO SIGNAL (GREEN)
9	GND	I	GROUND
10	VDD	I	SUPPLY VOLTAGE FOR CONTROLLER
11	VSH	I	SUPPLY VOLTAGE FOR SOURCE DRIVER
12	GND	I	GROUND
13	VDD	I	SUPPLY VOLTAGE FOR CONTROLLER
14	VSY	O	VERTICLE SYNC. INPUT/OUTPUT
15	PSI	O	SYNCHRONIZE PULSE FOR BACKLIGHT INVERTER
16	GND	O	GROUND

STATIC SENSITIVE DEVICE
CAUTIONNOTE
FOLLOW PROPER E.S.D. HANDLING PROCEDURES
WHEN WORKING WITH THIS PART.

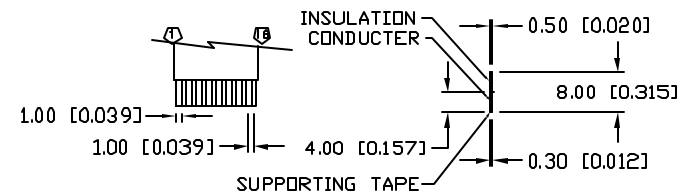
ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	MIN	MAX	UNIT	REMARK
SUPPLY VOLTAGE FOR SOURCE DRIVER	V _{SH}	-0.5	+16	V	
SUPPLY VOLTAGE FOR GATE DRIVER	V _{GH}	-0.3	+26.5	V	
GATE DRIVER	V _{GL}	V _{GH} -27	V _{GH} +0.3	V	
SUPPLY VOLTAGE FOR CONTROLLER	V _{DD}	-0.3	+6.5	V	
DC BIAS VOLTAGE OF COMMON ELECTRODE	V _{com}	+2	+6	V	
ANALOG INPUT SIGNALS	V _B , V _R , V _G	-	12	V	
DIGITAL INPUT SIGNALS		-0.5	V _{DD} +5	V	NOTE 1
DIGITAL OUTPUT SIGNALS		-0.5	V _{DD} +5	V	NOTE 2

NOTE 1: CSY

NOTE 2: FRP, HSY, VSY, PSI

CONNECTOR RIBBON CABLE



UNCONTROLLED DOCUMENT

*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.039), XX=±0.5 (±0.020), XXX=±0.25 (±0.010), XXXX=±0.127 (±0.005). LEAD SIZE=±0.05 (±0.002), LEAD LENGTH=±0.75 (±0.030), MIN.=+0.00 DECIMAL PRECISION MAX.=+0.00 DECIMAL PRECISION

REV.

A

PART NUMBER

LCM-480234GF25NOID

2.5" FULL COLOR TFT MODULE,
480 x 234 RESOLUTION

CONFIDENTIAL INFORMATION

THE INFORMATION CONTAINED IN THIS DOCUMENT IS THE PROPERTY OF LUMEX INC. EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING BY LUMEX INC., THE HOLDER OF THIS DOCUMENT SHALL KEEP ALL INFORMATION CONTAINED HEREIN CONFIDENTIAL AND SHALL PROTECT SAME IN WHOLE OR IN PART FROM DISCLOSURE AND DISSEMINATION TO ALL THIRD PARTIES.

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.

290 E. HELEN ROAD
PALATINE, IL 60067-6976
PHONE: +1.847.359.2790
US WEB: www.lumex.com
TW WEB: www.lumex.com.tw

DRAWN BY:

JC

CHECKED BY:

APPROVED BY:

DATE: 10.31.97

PAGE: 1 OF 1

SCALE: N/A

PART NUMBER		REV.
LCM-480234GF25N0ID		A
REV.	E.C.N. NUMBER AND REVISION COMMENTS	DATE
A	SEE PAGE 1	

TFT OPERATING CONDITIONS

ELECTRICAL CHARACTERISTICS @ Ta=25°C, GND = 0V

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	REMARK
SUPPLY VOLTAGE FOR SOURCE DRIVER	$V_{EE}^{DVE}, V_{EE}^{AVE}, V_{PP}^{VP+}$	+13.5	+14	+14.5	V	
SUPPLY VOLTAGE FOR GATE DRIVER	H LEVEL L LEVEL	V_{CC} $V_{BBA}, V_{BBB}, V_{BBC}$	+19 -5	+20 -4	V	
SUPPLY VOLTAGE FOR CONTROLLER	V_{DD}, V_{DD}	+4.7	+5	+5.3	V	
ANALOG INPUT VOLTAGE	AMPLITUDE D.C. COMPONENT	$V_{B,R}, V_G$ +4	12 +8	V		
D.C. BIAS VOLTAGE OF COMMON ELECTRODE	V_{com}		3.4		V	TBD

** TURN ON SEQUENCE: -5V → +5V → C_{sync} INPUT → +14V → R,G,B INPUT +20V
TURN OFF SEQUENCE: +20 → R,G,B INPUT → +14V → C_{sync} INPUT → +5V → -5V

INPUT/OUTPUT SIGNAL TIMING CHART

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT
HORIZONTAL SYNC. OUTPUT PULSE	WIDTH	T _{HO}	4.2	4.7	5.2
	PHASE DIFFERENCE	T _{HP}	0	2	us
	RISE TIME	T _{HR}	-	-	0.5
	FALLING TIME	T _{HF}	-	-	0.5
VERTICAL SYNC. OUTPUT PULSE	WIDTH	T _{VO}	-	4H	-
	PHASE DIFFERENCE	T _{VP0}	-	1H	-
	PHASE DIFFERENCE	T _{VP1}	-	1.5H	-
	RISE TIME	T _{VR}	-	-	2
	FREQUENCY	f _{FRP}	7.67	7.87	8.07
POLARITY	DELAY TIME	T _{FD}	-	-	4
ALTERNATING CURRENT	FALLING TIME	T _{VF}	-	-	2

POWER CONSUMPTION

OPTICAL CHARACTERISTICS Ta=25°C

PARAMETER	SYMBOL	CONDITION	MIN	TYP	MAX	UNIT
VIEWING ANGLE	HORIZONTAL	θ	CR>10	±45	±55	deg
	VERTICAL	θ (to 12 o'clock)	-10	-15		deg
		θ (to 6 o'clock)	30	35		deg
CONTRAST RATIO	CR		80	120		
RESPONSE TIME	RISE	T _r	θ=0°	30		ms
	FALL	T _f		50		ms
TRANSMITTANCE RATIO	T			6.8		%
REFLECTANCE RATIO	R			6.0		%
BRIGHTNESS			230	300		cd/m2
LAMP LIFE	+25°C		10,000			hr

PARAMETER	SYMBOL	CONDITIONS	TYP	MAX	UNIT
SUPPLY CURRENT FOR GATE DRIVER (Hi level)	I _{GH}	V _{GH} =+20V	TBD		mA
SUPPLY CURRENT FOR GATE DRIVER (Low level)	I _{GL}	V _{GL} =-5V	TBD		mA
SUPPLY CURRENT FOR SOURCE DRIVER	I _{SH}	V _{SH} =+14V	TBD		mA
SUPPLY CURRENT FOR CONTROLLER	I _{DD}	V _{DD} =+5V	TBD		mA
TOTAL POWER CONSUMPTION			TBD		W
BACKLIGHT LAMP POWER CONSUMPTION			2.04		W

REV.	PART NUMBER	CONFIDENTIAL INFORMATION				290 E. HELEN ROAD	
A	LCM-480234GF25N0ID	THE INFORMATION CONTAINED IN THIS DOCUMENT IS THE PROPERTY OF LUMEX INC. EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING BY LUMEX INC., THE HOLDER OF THIS DOCUMENT SHALL KEEP ALL INFORMATION CONTAINED HEREIN CONFIDENTIAL AND SHALL PROTECT SAME IN WHOLE OR IN PART FROM DISCLOSURE AND DISSEMINATION TO ALL THIRD PARTIES.				PALATINE, IL 60067-6976	
2.5" FULL COLOR TFT MODULE,		RELIABILITY NOTE		DRAWN BY:		CHECKED BY:	
480 x 234 RESOLUTION		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.		JG		APPROVED BY:	
						DATE: 10.31.97	
						PAGE: 1 OF 1	
						SCALE: N/A	