

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



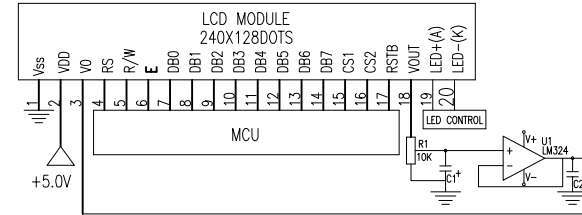
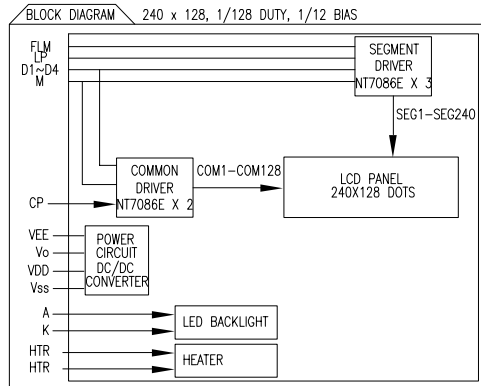
290 E. HELEN ROAD
PALATINE, IL 60067-6976
PHONE: +1.847.359.2790
FAX: +1.847.359.6538
WEB: WWW.LUMEX.COM

240x128 GRAPHIC LCD MODULE, FSTN, W/ HEATER, TRANSFLECTIVE, WHITE LED BACKLIGHT, 6:00 VIEW, VLCD=18.0 V

THE SPECIFICATIONS MAY CHANGE AT ANY TIME WITHOUT NOTICE DUE TO NEW MATERIALS OR PRODUCT IMPROVEMENT.

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.

DATE:	04.01.10	DRAWN BY:	JN
PAGE:	1 OF 2	CHKD BY:	YA
SCALE:	N/A	APRVD BY:	BC
UNIT:	mm [INCH]		



- NOTES:
1. R1 IS THE CONTRAST RESISTOR.
 2. VOUT=-10.0V.
 3. ADJUST R1 TO GET GOOD CONTRAST. TYP: V0 IS -13.0V.

ABSOLUTE MAXIMUM RATINGS

ITEM	SYMBOL	TEST CONDITION	STANDARD VALUE		UNIT
			MIN	MAX	
SUPPLY VOLTAGE FOR LOGIC	V _{DD} -V _{SS}	-	-0.3	7.0	V
SUPPLY VOLTAGE FOR LCD DRIVE	V _{LCD}	-	0	30	V
INPUT VOLTAGE	V _{IN}	To=25°C	-0.3	V _{DD} +0.3	V
OPERATING TEMPERATURE	To _{opr}	W/ HEATER	-40	+85	°C
STORAGE TEMPERATURE	T _{stg}	W/ HEATER	-40	+85	°C

PIN CONFIGURATION

PIN NO.	SYMBOL	FUNCTION
1	FLM	FIRST LINE MAKER
2	M	CONTROL SIGNAL FOR AC DRIVING
3	LP	COMMON DRIVER DATA SHIFT SIGNAL
4	CP	CLOCK PULSE FOR SEGMENT SHIFT REGISTER
5	V _{DD}	POWER SUPPLY
6	V _{SS}	GROUND
7	V _{EE}	POWER SUPPLY VOLTAGE FOR LCD
8	D1_SID	DATA BIT INPUT/OUTPUT
9	D2_DL	
10	D3_DM	
11	D4_DR	
12	V ₀	CONTRAST ADJUSTMENT VOLTAGE
13	LED+ (A)	ANODE OF LED
14	LED- (K)	CATHODE OF LED
15	HTR +	POWER SUPPLY FOR HEATER +12V
16	HTR -	POWER SUPPLY FOR HEATER GND

ELECTRICAL CHARACTERISTICS V_{DD}=2.7V to 5.5V, T_A=25°C

ITEM	SYMBOL	CONDITION	STANDARD VALUE			UNIT
			MIN.	TYP.	MAX.	
SUPPLY VOLTAGE FOR LOGIC	V _{DD} -V _{SS}	-	2.7	5.0	5.5	V
SUPPLY VOLTAGE FOR LCD DRIVE	V _{DD} -V ₀	V _{DD} =5V	6.0	18.0	28.0	V
SUPPLY CURRENT FOR LOGIC	I _{DD}	V _{DD} =5V	-	8.2	13.0	mA
LED BACKLIGHT	VOLTAGE	V _F If=80mA	-	5.0	-	V
	CURRENT	I _F	-	60	80	mA
	POWER CONSUMPTION	P _D	-	192	-	mW
	LUMINOUS	L	-	150	-	cd/m ²
	COLOR COORDINATE	X Y	WHITE	.260 .260	- -	.330 .330
HEATER	VOLTAGE	V _{FH}	-	12	-	V
	RESISTANCE	-	160	210	260	OHM
	CURRENT	I _H	40	60	80	mA
	POWER	P _H	-	0.71	-	W

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



290 E. HELEN ROAD
PALATINE, IL 60067-6976
PHONE: +1.847.359.2790
FAX: +1.847.359.6538
WEB: WWW.LUMEX.COM

240x128 GRAPHIC LCD MODULE, FSTN, W/ HEATER, TRANSFLECTIVE, WHITE LED BACKLIGHT, 6:00 VIEW, V_{LCD}=18.0 V

THE SPECIFICATIONS MAY CHANGE AT ANY TIME WITHOUT NOTICE DUE TO NEW MATERIALS OR PRODUCT IMPROVEMENT.

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.

DATE: 04.01.10	DRAWN BY: JN
PAGE: 2 OF 2	CHKD BY: YA
SCALE: N/A	APRVD BY: BC
UNIT: mm [INCH]	