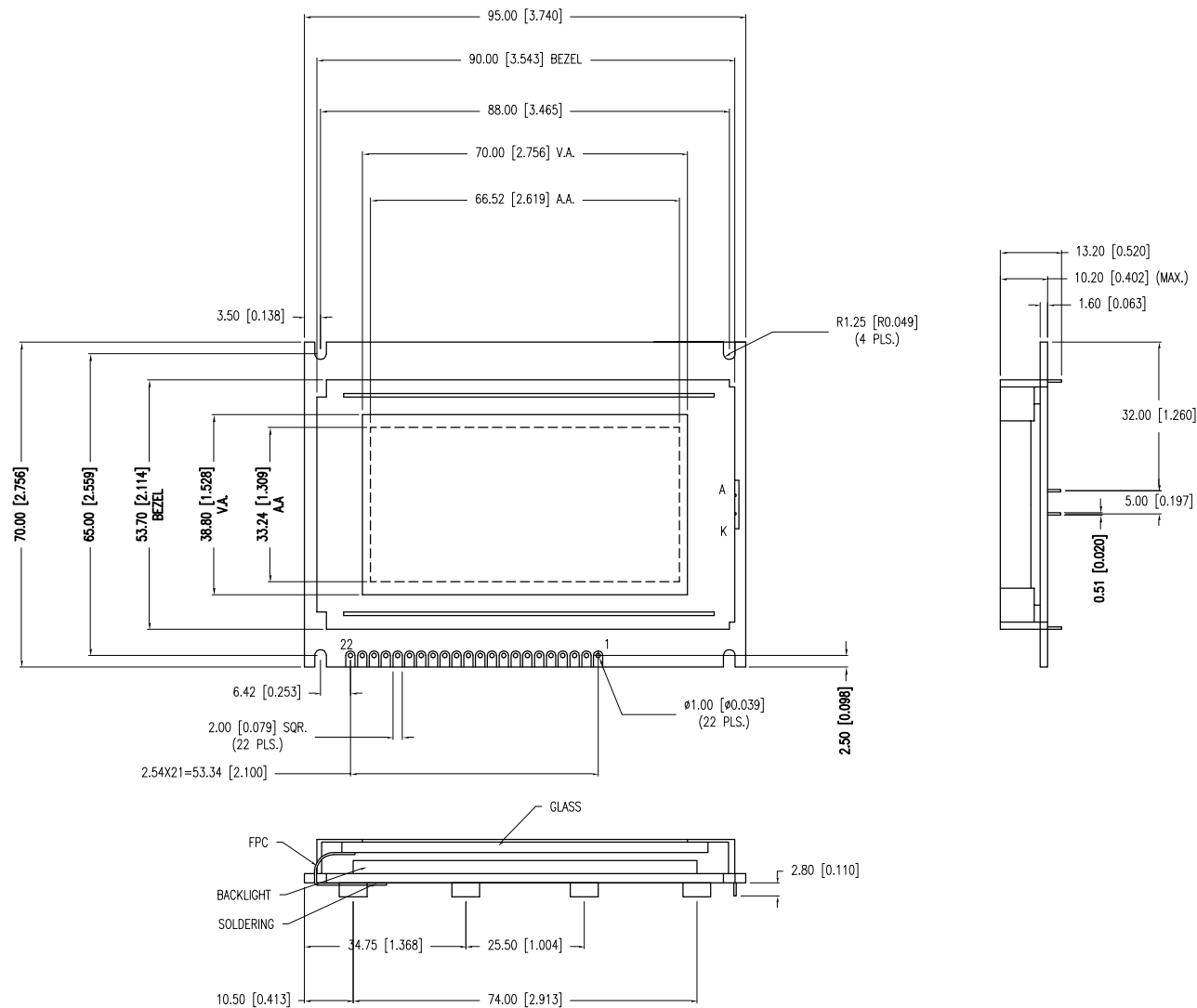




*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.039), X.X=±0.5 (±0.020), X.XX=±0.25 (±0.010), X.XXX=±0.127 (±0.005). LEAD SIZE=±0.05 (±0.002), LEAD LENGTH=±0.75 (±0.030). MIN.= +DECIMAL PRECISION -0.00 MAX.= +0.00 -DECIMAL PRECISION



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

128 x 64 GRAPHIC LCD MODULE, STN GRAY, TRANSFLECTIVE, WHITE LED BACKLIGHT, 6:00 VIEW.

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

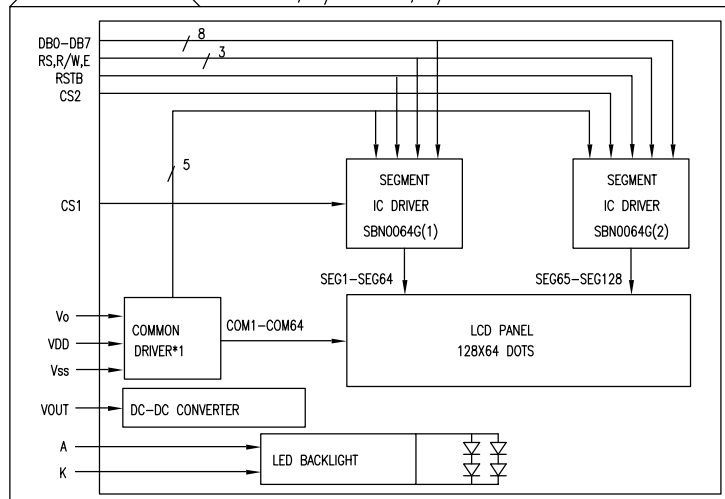
CONFIDENTIAL INFORMATION

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:	11.24.09	DRAWN BY:	JN
PAGE:	1 OF 2	CHKD BY:	JD
SCALE:	N/A	APRVD BY:	SA
UNIT:	mm [INCH]		(P)

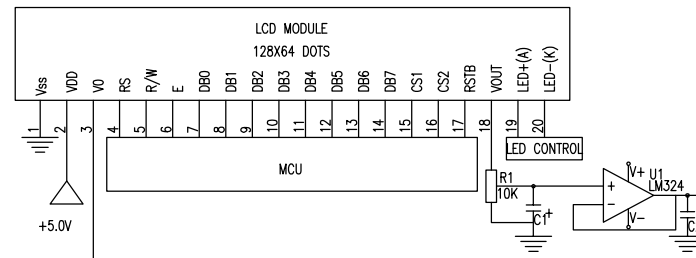
UNCONTROLLED DOCUMENT

BLOCK DIAGRAM 128 x 64, 1/64 DUTY, 1/9 BIAS



NOTES:

1. R1 IS THE CONTRAST RESISTOR.
2. VOUT=-10.0V
3. ADJUST R1 TO GET GOOD CONTRAST. TYP: V0 IS -7.9V.



ABSOLUTE MAXIMUM RATINGS

ITEM	SYMBOL	TEST CONDITION	STANDARD VALUE		UNIT
			MIN	MAX	
SUPPLY VOLTAGE FOR LOGIC	$V_{DD}-V_{SS}$	$T_a=25^{\circ}\text{C}$	4.7	5.3	V
SUPPLY VOLTAGE FOR LCD DRIVE	$V_{DD}-V_0$	-	0	15	V
INPUT VOLTAGE	V_I	$T_a=25^{\circ}\text{C}$	V_{SS}	V_{DD}	V
OPERATING TEMPERATURE	T_{opr}	-	-30	+85	$^{\circ}\text{C}$
STORAGE TEMPERATURE	T_{stg}	-	-30	+85	$^{\circ}\text{C}$

PIN CONFIGURATION

PIN NO.	SYMBOL	FUNCTION	
1	V_{SS}	POWER SUPPLY	GND (0V)
2	V_{DD}		5V
3	V_0		FOR LCD DRIVE
4	RS	REGISTER SELECT RS=0...INSTRUCTION REGISTER RS=1...DATA REGISTER	
5	R/W	READ/WRITE R/W=0...READ R/W=1...WRITE	
6	E	CHIP ENABLE SIGNAL	
7-14	DB0-DB7	DISPLAY DATA SIGNAL	
15	CS1	CHIP SELECT SIGNAL FOR SBN0064G(1)	
16	CS2	CHIP SELECT SIGNAL FOR SBN0064G(2)	
17	RSTB	CONTROL RESET (MODULE RESET)	
18	VOUT	OUTPUT VOTAGE FOR LCD DRIVING, -10.0V.	
19	LED- (A)	ANODE OF LED	
20	LED- (K)	CATHODE OF LED	
21	N/C	NO CONNECTION	
22	N/C	NO CONNECTION	

ELECTRICAL CHARACTERISTICS

 $V_{DD}=4.7\text{V to }5.3\text{V}, T_A=25^{\circ}\text{C}$

ITEM	SYMBOL	CONDITION	STANDARD VALUE			UNIT
			MIN.	TYP.	MAX.	
SUPPLY VOLTAGE FOR LOGIC	$V_{DD}-V_{SS}$	-	4.5	5.0	5.5	V
SUPPLY VOLTAGE FOR LCD DRIVE	$V_{DD}-V_0$	$V_{DD}=5\text{V}$	12.6	12.9	13.2	V
SUPPLY CURRENT FOR LOGIC	I_{DD}	$V_{DD}=5\text{V}$	-	8.2	13.0	mA
LED BACKLIGHT	VOLTAGE	$I_f=30\text{mA}$	-	6.4	7.2	V
	CURRENT	-	-	30	-	mA
	POWER CUNSUMPTION	-	-	192	-	mW
	LUMINOUS	-	70	-	-	cd/m ²
	COLOR	WHITE	.260	-	.330	
	COORDINATE		.260	-	.330	

*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