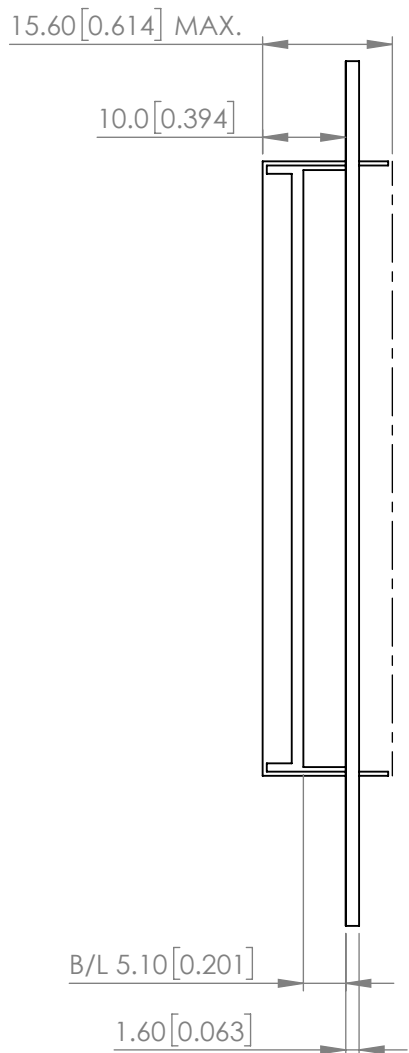
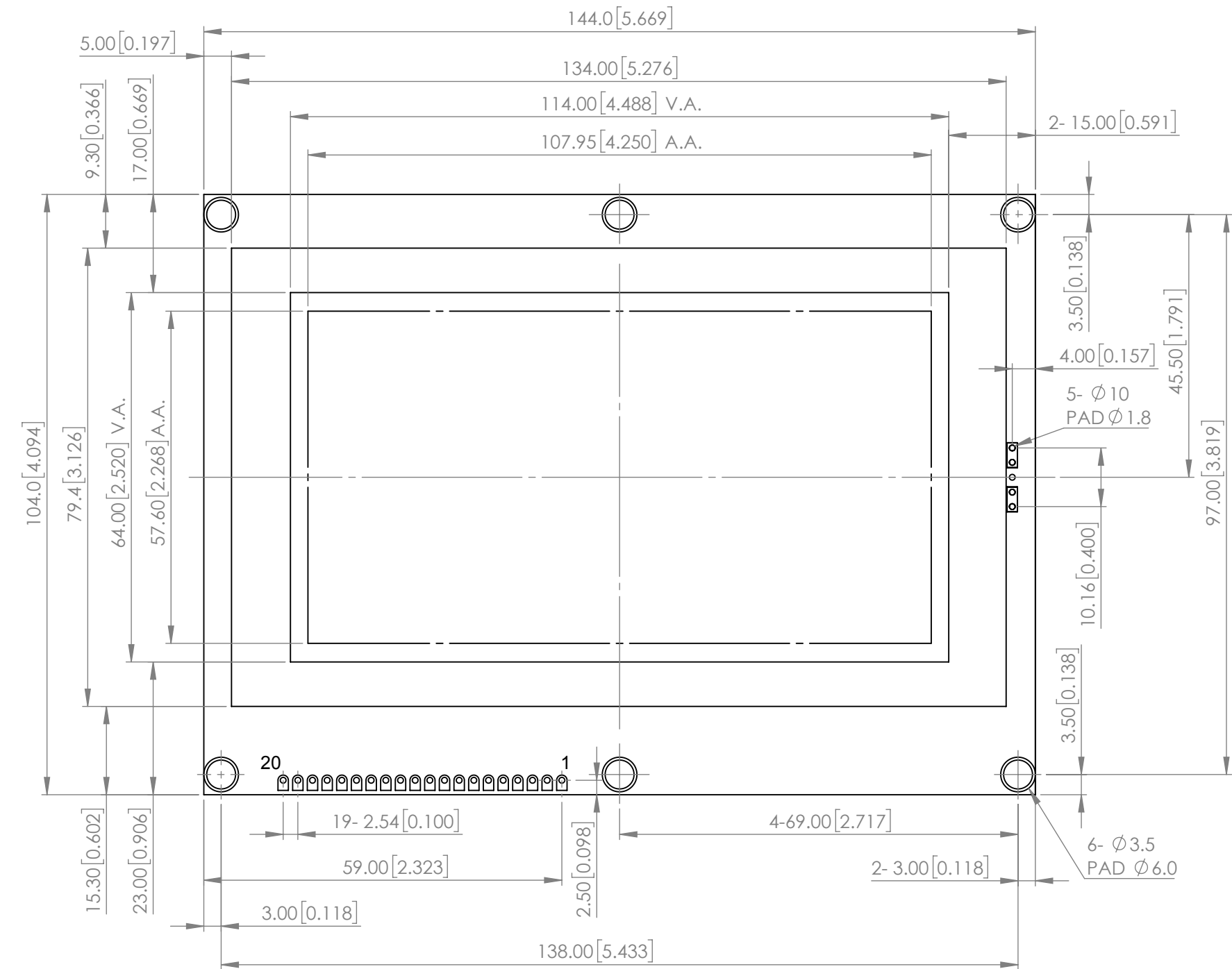
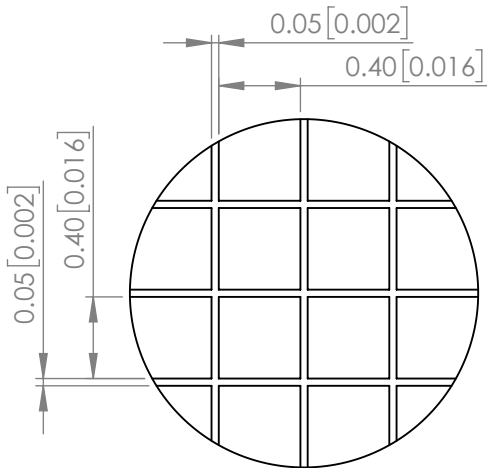


PART NUMBER		LCM-S240128GSF	REV	D
REV	E.C.N. NUMBER AND REVISION COMMENTS		DATE	
A	E.C.N. #10BRDR. & REDRAWN		09.10.98	
B	E.C.N. #10516.		05.10.99	
C	E.C.N. #10BRDR. & #10969		03.14.03	
D	ECN-Lumex201800069		05.02.18	



PIN NO	SIGNAL
1	VSS
2	VDD
3	VO
4	C/D
5	/RD
6	/WR
7	DB0
8	DB1
9	DB2
10	DB3
11	DB4
12	DB5
13	DB6
14	DB7
15	/CE
16	/RST
17	VEE
18	MD
19	FS
20	NC



NOTE:
1. RoHS COMPLIANT.

*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}

 425 N. GARY AVE. CAROL STREAM, IL 60188 PHONE : 800-278-5666 FAX : 630-315-2150 WEB : WWW.LUMEX.COM	144.0(W)×104.0(H)×10.8/15.6(D)MAX. mm, 240x128 DOT MATRIX GRAPHIC LCD MODULE, STN GRAY, POSITIVE, 1/128 DUTY, LED BACKLIGHT.		DATE : 2018.05.02	DRAWN BY : C.C.
	THE SPECIFICATIONS MAY CHANGE AT ANY TIME WITHOUT NOTICE DUE TO NEW MATERIALS OR PRODUCT IMPROVEMENT.		PAGE : 1 OF 4	CHKD BY : E.C.
	CONFIDENTIAL INFORMATION		SCALE : NTF	APRVD BY : G.Y.
	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.		UNIT : mm [INCH]	Ⓢ

			PART NUMBER	LCM-S240128GSF		REV	D
GENERAL SPECIFICATION							
ITEM		DESCRIPTION					
LCD TYPE		STN, POSITIVE					
REAR POLARIZER		TRANSFLECTIVE					
BACKLIGHT TYPE		LED					
BACKLIGHT COLOR		YELLOW GREEN					
TEMPERATURE RANGE		NORMAL TEMP., 5V					
VIEWING DIRECTION		6 O'CLOCK					
VIEWING AREA		114.0 (W)mm x 64.0 (H)mm					
MODULE SIZE		144.0 (W)mm x 104.0 (H)mm x 15.6 MAX(D)mm					
PIXELS SIZE		0.40 x 0.40					
PIXELS PITCH		0.45 x 0.45					
DISPLAY FORMAT		240(W) x 128(H)					
DUTY RATIO		1 / 128 DUTY					
ABSOLUTE MAXIMUM RATING							
(1) Electrical Absolute Ratings							
ITEM		SYMBOL	MIN.	MAX.	UNIT		
POWER SUPPLY FOR LOGIC		VDD-VSS	0	5.5	VOLT		
POWER SUPPLY FOR LCD		VDD-Vout	0	22	VOLT		
INPUT VOLTAGE		V1	VSS	VDD	VOLT		
LED POWER DISSIPATION		PAD	-	7590	mW		
LED FORWARD CURRENT		IAF	-	1650	mA		
LED REVERSE VOLTAGE		VR	-	8	V		
(2) Environmental Absolute Maximum Ratings							
ITEM		WIDE TEMPERATURE					
		OPERATING		STORAGE			
		MIN.	MAX.	MIN.	MAX.		
AMBIENT TEMPERATURE		0℃	+50℃	-20℃	+70℃		
HUMIDITY (WITHOUT CONDENSATION)		NOTE 1, 2		NOTE 3, 4			
Note 1: Ta≤50℃: 80% RH max Ta>50℃: Absolute humidity must be lower than the humidity of 85%RH at 50℃							
Note 2: Background color changes slightly depending on ambient temperature. This phenomenon is reversible.							
Note 3: Ta at -20℃ will be<48hrs at 70℃will be <120hrs when humidity is higher than 75%.							
Note 4: Ta≤70℃: 75RH max Ta>70℃: absolute humidity must be lower than the humidity of 75%RH at 70℃							

ELECTRICAL CHARACTERISTICS

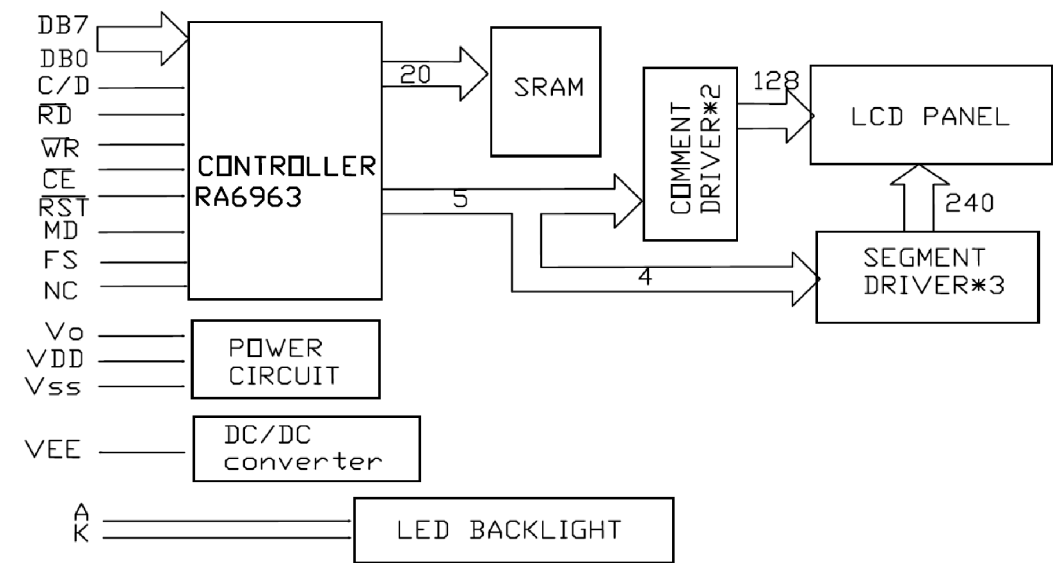
ITEM	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
POWER SUPPLY FOR LOGIC	VDD-VSS	-	4.5	5.0	5.5	VOLT
POWER SUPPLY FOR LCD	VEE-VSS	-	-14.2	-15.0	-15.9	VOLT
INPUT VOLTAGE	VIL	L LEVEL	0	-	0.8	VOLT
	VIH	H LEVEL	-2.2 VDD	-	VDD	VOLT
	VDD-VO	Ta=25°C	16.9	18.0	19.2	VOLT
POWER SUPPLY CURRENT FOR LCM	IDD	VDD=5.0V VDD-VO=18.0V	-	17.5	23.0	mA
	IOUT		-	5.0	-	
THE BRIGHTNESS OF BACKLIGHT	L	If =1100mA	-	180	-	cd/m ²
PEAK EMISSION WAVELENGTH	λP	If =1100mA	-	570	-	nm
LED FORWARD VOLTAGE	VF	If=1100mA	-	4.1	4.6	VOLT

ELECTRICAL CHARACTERISTICS

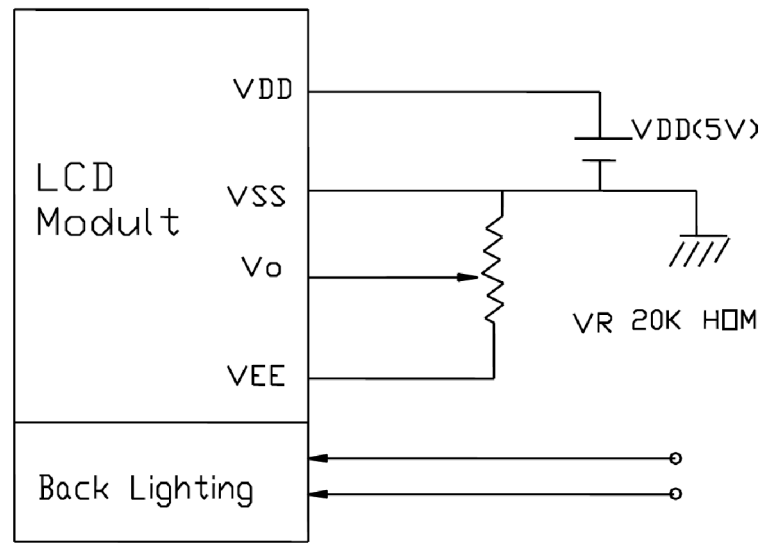
PIN NO.	PIN OUT	FUNCTION DESCRIPTION
1	VSS	Power Supply Ground
2	VDD	Power Supply Voltage
3	Vo	Contrast Adjustment Voltage
4	C/D	WR='L', C/D='H': Command Write WR='L', C/D='L': Data Write RD='L', C/D='H': Status Read RD='L', C/D='L': Data Read
5	/RD	Data Read
6	/WR	Data Write
7	DB0	Data Bit 0
8	DB1	Data Bit 1
9	DB2	Data Bit 2
10	DB3	Data Bit 3
11	DB4	Data Bit 4
12	DB5	Data Bit 5
13	DB6	Data Bit 6
14	DB7	Data Bit 7
15	/CE	Enable Signal
16	/RST	Reset Signal
17	VEE	No Connection
18	MD	H : 32/L : 40 Select of Columns
19	FS	H : 6*8/L : 8*8 Select of Font
20	NC	No Connection

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BLOCK DIAGRAM



POWER SUPPLY



*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}