

<h1>G240128-5</h1>	240 DOTS×128 DOTS	1/128 DUTY	1/12 BIAS
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**FEATURE:**

LCD TYPE	STN/FSTN
LCM BACKLIGHT TYPE	EL/FL/LED BACKLIGHT
LCM CONTROLLER IC	BUILT IN T6963C OR EQUIVALENT
POWER SUPPLY FOR LCM	DC +5.0V
LED BACKLIGHT INPUT	DC +5.0V
EL BACKLIGHT INPUT	----
EL INVERTER	----
FL BACKLIGHT INPUT	----
FL INVERTER	----
LCM DIMENSION	140.0×86.0×13.0 mm
LCM VIEWING AREA	114.0×64.0 mm
LCD DOT SIZE	0.44×0.44 mm
LCD DOT PITCH	0.48×0.48 mm

**3.ABSOLUTE MAXIMUM RATINGS:**

ITEM	SYM	MIN	TYP	MAX	UNIT
OPERATING TEMP.	Top	-10	-	+70	
STORAGE TEMP.	Tst	-20	-	+80	
INPUT VOLTAGE	Vi	Vss	-	VDD	V
SUPPLY VOL. FOR LOGIC	VDD-VSS	-	-	7.0	V
SUPPLY VOL. FOR LCD	VDD-VEE	15.0	-	-	V

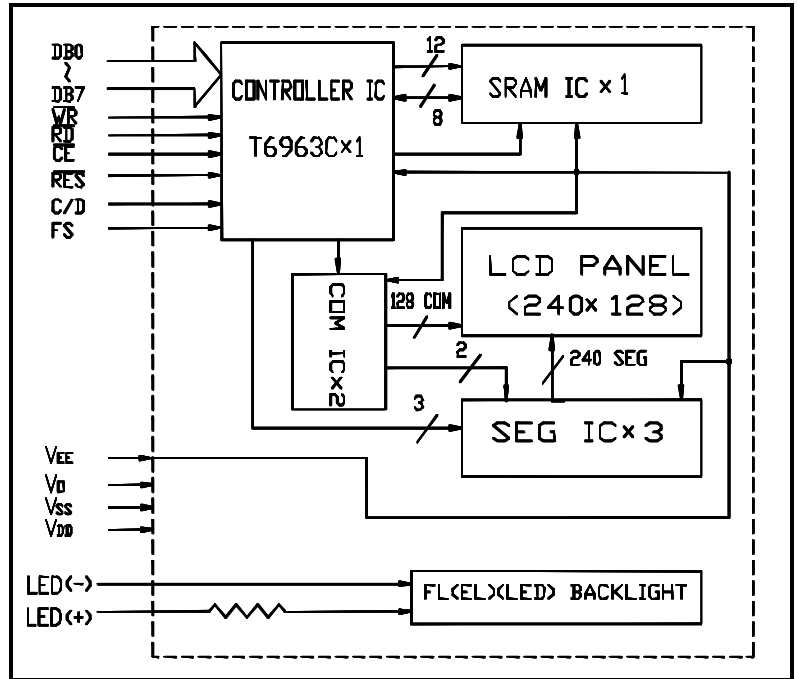
**5.INTERFACE PIN CONNECTIONS:**

NO	SYM	LEVEL	FUNCTION
1	VSS	-	0V
2	VDD	-	+5V
3	VO	-	CONTRAST ADJ.
4	C/D	H/L	Command/Data
5	RD	L	READ SIGNAL
6	WR	L	WRITE SIGNAL
7	DB0	H/L	DATA BIT0
8	DB1	H/L	DATA BIT1
9	DB2	H/L	DATA BIT2
10	DB3	H/L	DATA BIT3
11	DB4	H/L	DATA BIT4
12	DB5	H/L	DATA BIT5
13	DB6	H/L	DATA BIT6
14	DB7	H/L	DATA BIT7
15	CE	L	CHIP ENABLE SIGNAL
16	RES	L	CONTROLLER RESET
17	VEE	-	NEGATIVE VOLTAGE INPUT (-10.0V)
18	MD2	H/L	H:32column;L:40 column
19	FS	H/L	CONNECT TO VDD6×8DOTS(TO VSS 8×8DOTS)
20	LED(+)	-	LED BACKLIGHT +5.0V

**2.ELECTRICAL CHARACTERISTICS:**

ITEM	SYM	CONDITION	MIN	TYP	MAX	UNIT
SUPPLY VOLTAGE FOR LOGIC	VDD-VSS	Ta = 25	4.5	5.0	5.5	V
SUPPLY VOLTAGE FOR LCD DRIVER	VEE-VSS	Ta = 25	-	-	-5.0	V
OPERATING VOL. FOR LCD MODULE	VDD-VO	Ta = 25	-	13.0	-	V
INPUT HIGH VOL.	Vih	-	0.7VDD	-	VDD	V
INPUT LOW VOL.	Vil	-	0	-	0.3VDD	V
SUPPLY CURRENT FOR LOGIC	IDD	VDD=5.0V	-	-	15.0	mA
SUPPLY CURRENT FOR LCD	ILCD	VO=-8.0V	-	-	20.0	mA
LED CURRENT	If	Ta = 25	-	100	-	mA
LED DISSIPATION	Pd	Ta = 25	-	500	-	mW

**4. BLOCK DIAGRAM:**



**6.DIMENSIONAL DRAWING :**

