

Standard Graphic LCD Module

PSG240128A

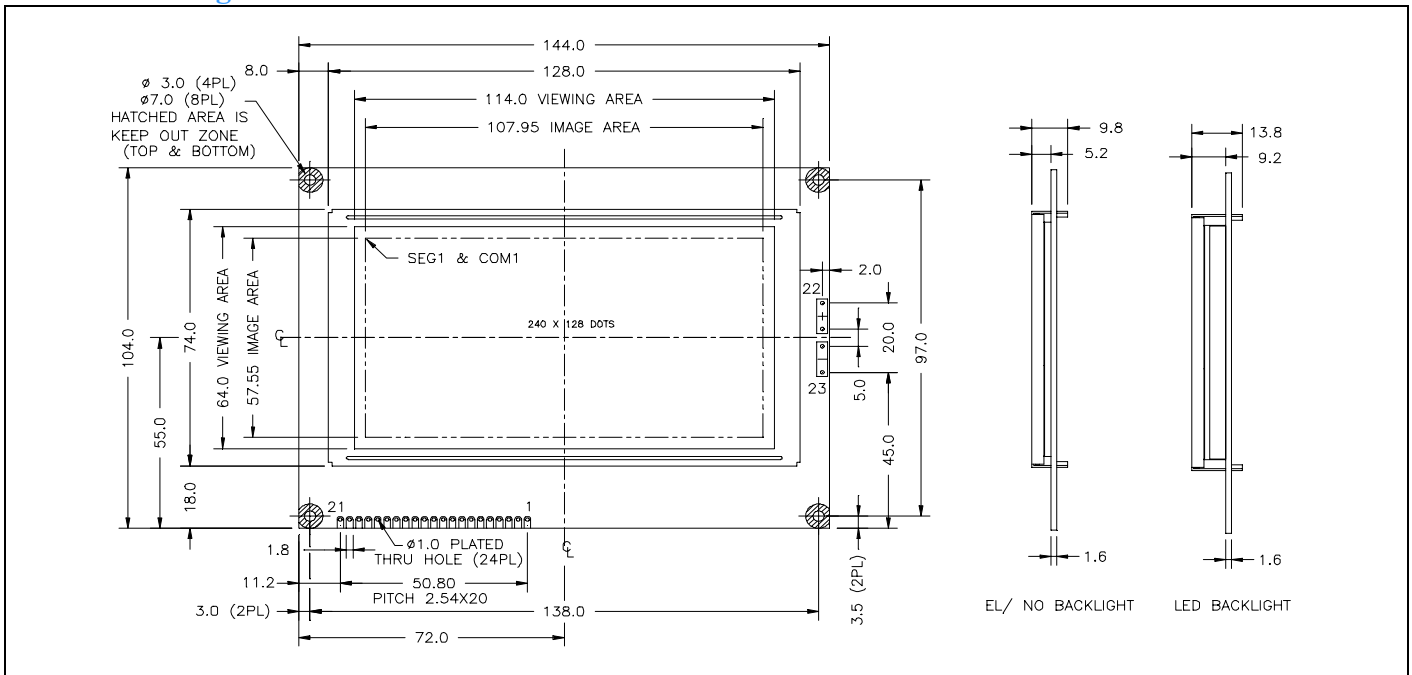
Feature

1. Dot Format (240 x 128)
2. 8-Bit parallel bus interface
3. Built-in LCD controller (T6963)
4. Wide operating temperature range (Option)
5. High contrast ratio
6. LED or EL Backlight (Option)
7. Built-in negative voltage circuit (Option)

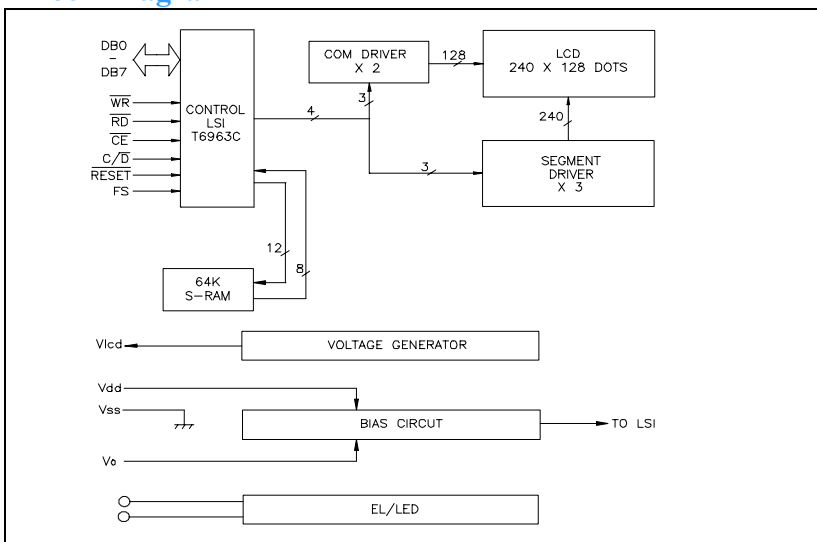


Mechanical Figure

Unit: mm

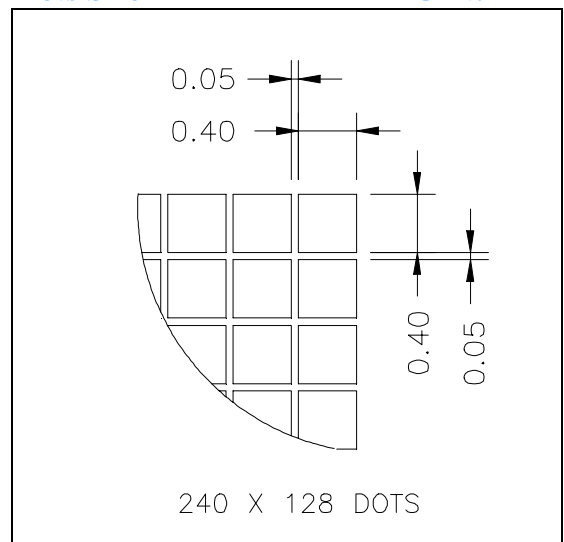


Block Diagram



Dots Size

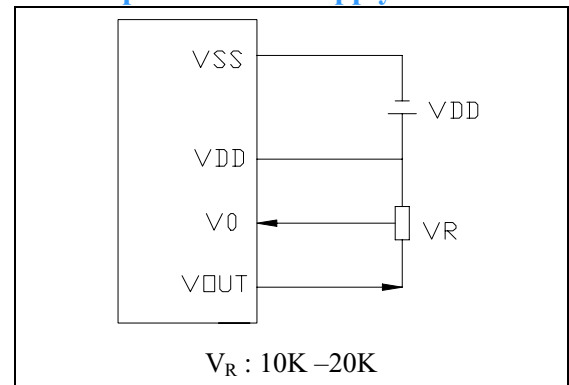
Unit: mm



Specification

ITEM	Standard Value	Unit
Number of dots	240x128 Dots	-
Module Dimension	144.0(W)x104.0(H)x9.8/13.8(T)	mm
Viewing Area	114.0 (W)x 64.0 (H)	mm
Dot Size	0.4 (W)x 0.40 (H)	mm
Dot Pitch	0.45 (W)x 0.45 (H)	mm
LCD Type	STN	
Driver Method	1/128 Duty , 1/ 12 Bias	
Viewing Direction	6 O'clock	
Controller IC	T6963C	

Example of Power Supply



Absolute Maximum Ratings

ITEM	Symbol	MIN.	TYP.	MAX.	Unit
Operating Temperature	T_{op}	0	-	+50	C
Storage Temperature	T_{ST}	-20	-	+70	C
Input Voltage	V_I	-0.3	-	$V_{DD}+0.3$	V
Supply Voltage For Logic	$V_{DD}-V_{SS}$	-0.3	-	7.0	V
Supply Voltage For LCD	$V_{DD}-V_5$	-0.3	-	19.0	V

Electrical Characteristics

ITEM	Symbol	Condition	MIN.	TYP.	MAX.	Unit
Supply Voltage For Logic	$V_{DD}-V_{SS}$	$T_a=25\text{ }^\circ\text{C}$	-	5.0	5.5	V
Supply Voltage For LCD	$V_{DD}-V_{EE} (V_{OP})$		15.0	17.0	19.0	V
Input High Voltage			$0.8 V_{DD}$	-	V_{DD}	V
Input Low Voltage			0	-	$0.2 V_{DD}$	V
Output High Voltage		$I_{OH}=-0.5\text{mA}$	$0.8 V_{DD}$	-	V_{DD}	V
Output Low Voltage			0	-	$0.2 V_{DD}$	V

Pin Assignment

Pin Assignment				Value			Unit
Pin	Symbol	Level	Function	MIN.	TYP.	MAX.	
1	V_{SS}	0V	Power Supply for Logic (GND)		0		
2	V_{dd}	+5V	Power Supply for Logic (+5V)	4.5	5.0	5.5	V
3	V_0	-	Contrast Adjust	-	-	-	V
4	C/(/D)	H/L	H: Command Write/Status Read; L: Data Write/Read				
5	/RD	L	Read Signal ("L" Active)				
6	/WR	L	Write Signal ("L" Active)				
7	DB0	H/L	Data Bus				
8	DB1	H/L					
9	DB2	H/L					
10	DB3	H/L					
11	DB4	H/L					
12	DB5	H/L					
13	DB6	H/L					
14	DB7	H/L					
15	/CE	L	Chip Enable Signal ("L" Active)				
16	/RESET	L	Reset Signal ("L" Active)				
17	V_{lcd}	-	Negative Voltage Output				
18	MD2		Select Number of Columns				
19	FS	H/L	Font Switch				
20	LED(+)	-	Power Supply for LED Backlight (+) / EL	-	4.2	-	V
21	LED(-)	-	Power Supply for LED Backlight (-) / EL	-	0	-	V