

**Standard Graphic LCD Module PSG12864D**

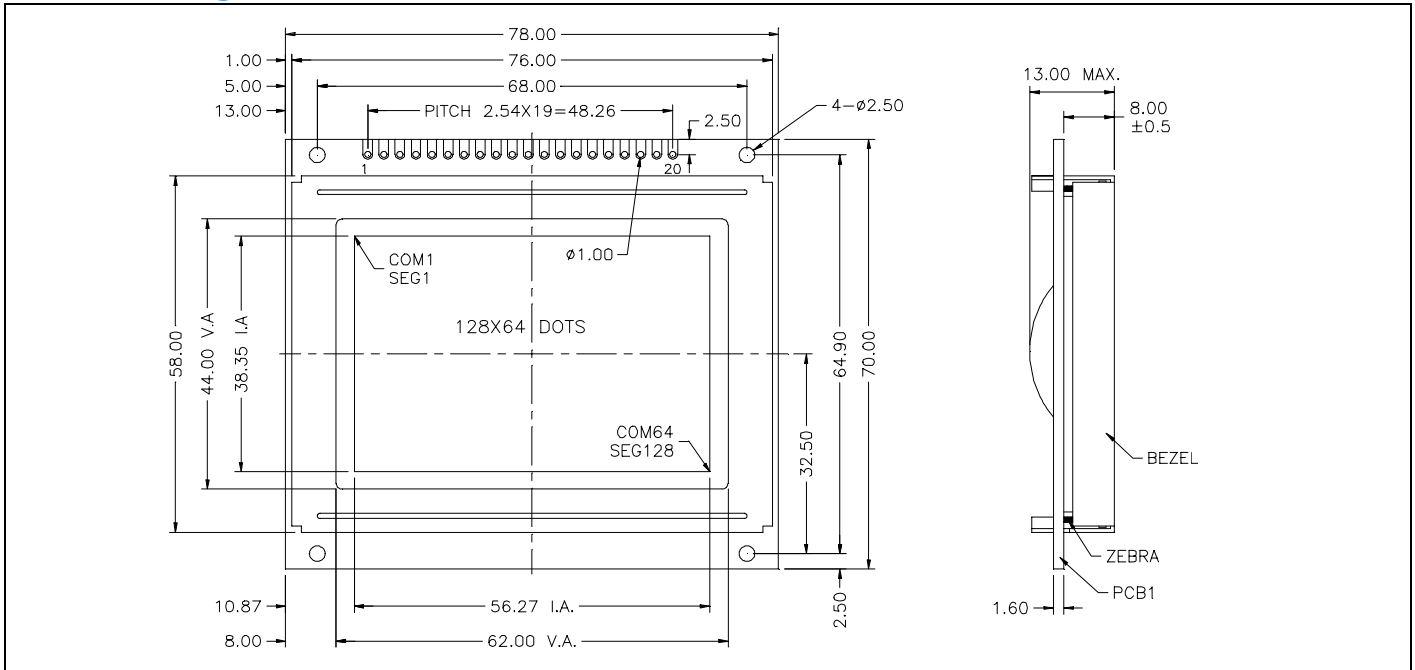
**Feature**

1. Dot Format ( 128 x 64 )
2. 8-Bit parallel bus interface
3. Built-in LCD controller (KS0107 & KS0108)
4. Wide operating temperature range( Option )
5. High contrast ratio
6. LED or EL Backlight ( Option )
7. Built-in negative voltage circuit ( Option )

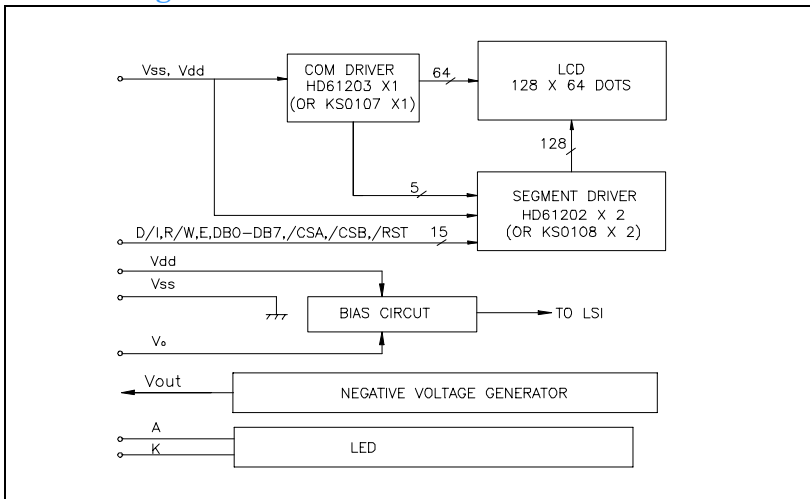


**Mechanical Figure**

Unit: mm

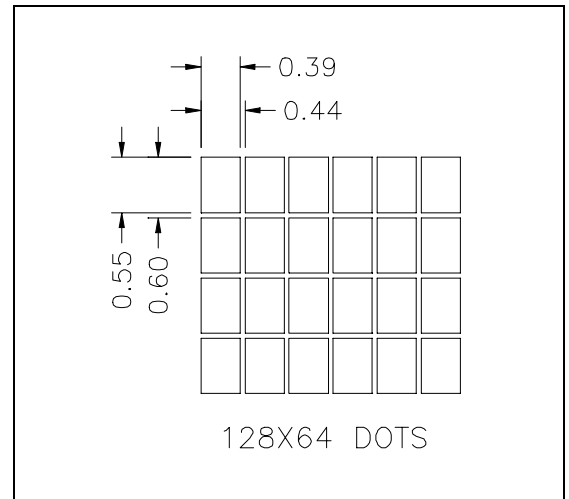


**Block Diagram**



**Dots Size**

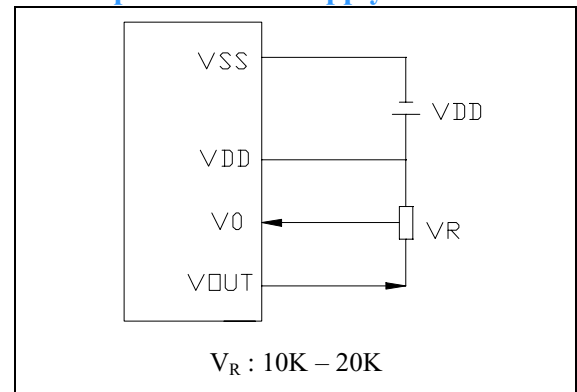
Unit: mm



## Specification

ITEM	Standard Value	Unit
Number of dots	128x64 Dots	-
Module Dimension	78.0 (W)x70.0 (H)x13.0 (T)	mm
Viewing Area	62.0 (W)x44.0 (H)	mm
Dot Size	0.39(W)x0.55 (H)	mm
Dot Pitch	0.44 (W)x0.60 (H)	mm
LCD Type	STN	
Driver Method	1/64 Duty , 1/ 9 Bias	
Viewing Direction	6 O'clock	
Controller IC	KS0108 (Equivalent)	

## Example of Power Supply



## Absolute Maximum Ratings

ITEM	Symbol	MIN.	TYP.	MAX.	Unit
Operating Temperature	$T_{op}$	-25	-	+70	C
Storage Temperature	$T_{ST}$	-30	-	+80	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	-	13.5	V

## Electrical Characteristics

ITEM	Symbol	Condition	MIN.	TYP.	MAX.	Unit
Supply Voltage For Logic	$V_{DD}-V_{SS}$	$T_a=25^\circ C$	-	5.0	5.5	V
Supply Voltage For LCD	$V_{DD}-V_{EE} (V_{OP})$		8.0	10.0	13.5	V
Input High Voltage			$0.8 V_{DD}$	-	$V_{DD}$	V
Input Low Voltage			0	-	$0.2 V_{DD}$	V
Output High Voltage		$I_{OH}=-0.5mA$	$0.8 V_{DD}$	-	$V_{DD}$	V
Output Low Voltage			0	-	$0.2 V_{DD}$	V

## Pin Assignment

Pin Assignment				Value			Unit
Pin	Symbol	Level	Function	MIN.	TYP.	MAX.	
1	/CSA	L	Chip Select IC1				
2	/CSB	L	Chip Select IC2				
3	$V_{SS}$	0V	Power Supply (GND)	-	0	-	V
4	$V_{dd}$	+5V	Power Supply (+5V)	4.5	5.0	5.5	V
5	$V_0$	-	Contrast Adjust Voltage	-	-	-	V
6	D/I	H/L	Data or Instruction				
7	R/W	H/L	Data Read/Write				
8	E	H/L	Enable Signal				
9	DB0	H/L	Data Bus				
10	DB1	H/L					
11	DB2	H/L					
12	DB3	H/L					
13	DB4	H/L					
14	DB5	H/L					
15	DB6	H/L					
16	DB7	H/L					
17	/RST	L	Reset Signal				
18	$V_{out}$	-10V	Negative Voltage Output				
19	LED+	-	Power Supply For LED Backlight	3.8	4.0	4.2	V
20	LED-	-		-	0	-	V