

Feature

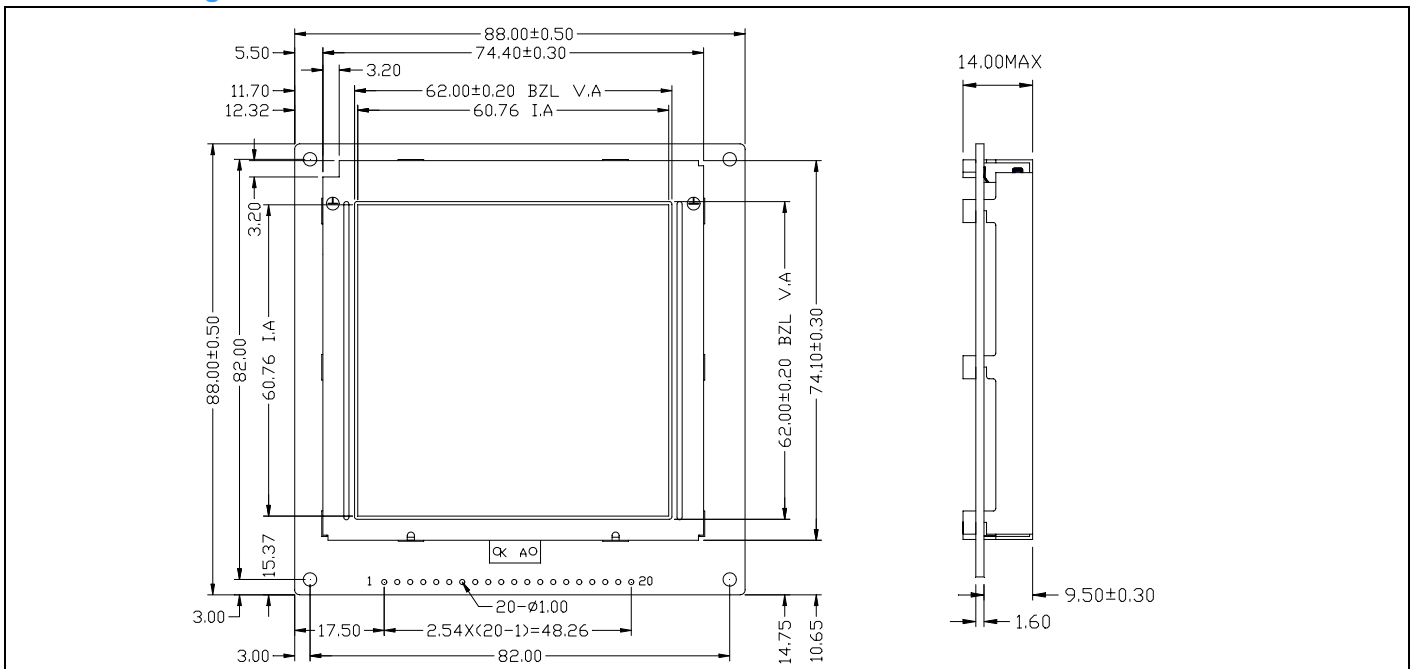
1. Dot Format (160 x 160)
2. 8-Bit parallel bus interface
3. Built-in LCD controller (SED1335) Options
4. Wide operating temperature range (Option)
5. High contrast ratio
6. LED or EL Backlight (Option)
7. Built-in negative voltage circuit (Option)

Picture Information



Mechanical Figure

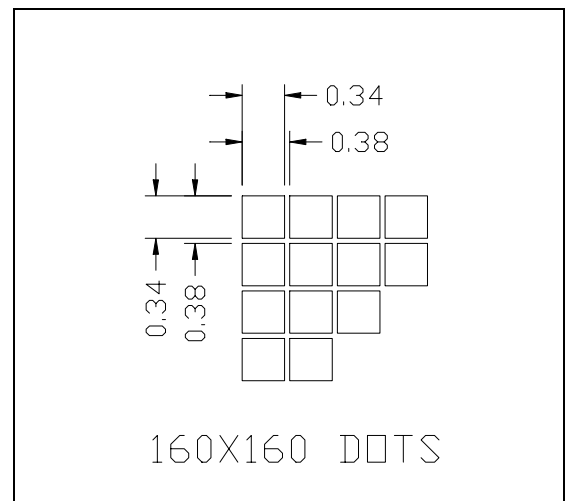
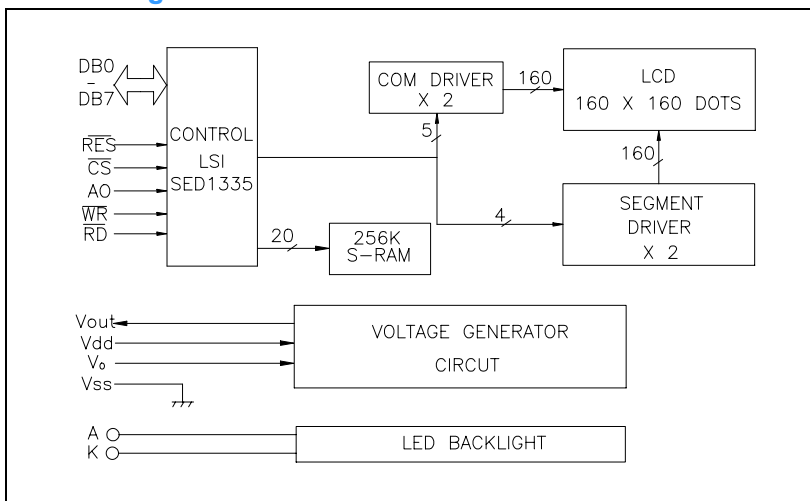
Unit: mm



Block Diagram

Dots Size

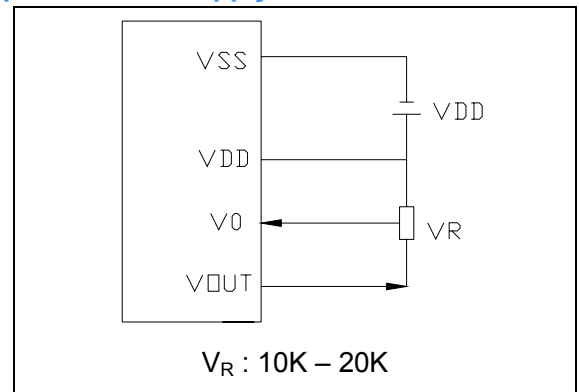
Unit: mm



Specification

Example of Power Supply

ITEM	Standard Value	Unit
Number of dots	160x160 Dots	-
Module Dimension	88.0(W)x88.0(H)x14.0(T)	mm
Viewing Area	62.0 (W)x 62.0 (H)	mm
Dot Size	0.34 (W)x 0.34 (H)	mm
Dot Pitch	0.38 (W)x 0.38 (H)	mm
LCD Type	STN	
Driver Method	1/160 Duty , 1/ 13.6 Bias	
Viewing Direction	6 O'clock	
Controller IC	SED1335 (Equivalent)	



Absolute Maximum Ratings

ITEM	Symbol	MIN.	TYP.	MAX.	Unit
Operating Temperature	T_{op}	0	-	+50	°C
Storage Temperature	T_{ST}	-10	-	+60	°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	-	20.0	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	$V_{DD}-V_{EE}$		16.0	18.0	20.0	V
Input High Voltage			$0.8 V_{DD}$	-	V_{DD}	V
Input Low Voltage			0	-	$0.2 V_{DD}$	V
Output High Voltage		$I_{OH}=-0.5mA$	$0.8 V_{DD}$	-	V_{DD}	V
Output Low Voltage			0	-	$0.2 V_{DD}$	V

Pin Assignment

Pin Assignment				Value			
Pin	Symbol	Level	Function	MIN.	TYP.	MAX.	Unit
1	V_{SS}	0V	Power Supply (GND)	0			
2	V_{dd}	+5V	Power Supply (+5V)	4.5	5.0	5.5	V
3	V_0	-	Contrast Adjust Voltage	-	-	-	V
4	V_{ee}	-	Negative Voltage				
5	/DISPOFF	L	Display Off				
6	A_0	H/L	Data and Instruction				
7	/WR	L	Write Signal				
8	/RD	L	Read Signal				
9	/CS	L	Chip Select Signal				
10	/RES	L	Reset Signal				
11	DB0	H/L	Data Bus				
12	DB1	H/L					
13	DB2	H/L					
14	DB3	H/L					
15	DB4	H/L					
16	DB5	H/L					
17	DB6	H/L					
18	DB7	H/L					
19	A	-	Power Supply For LED Backlight(+)	4.0	4.2	4.4	V
20	K	-	Power Supply For LED Backlight(-)	-	0	-	V