

Standard Character LCD Module

PSM204A

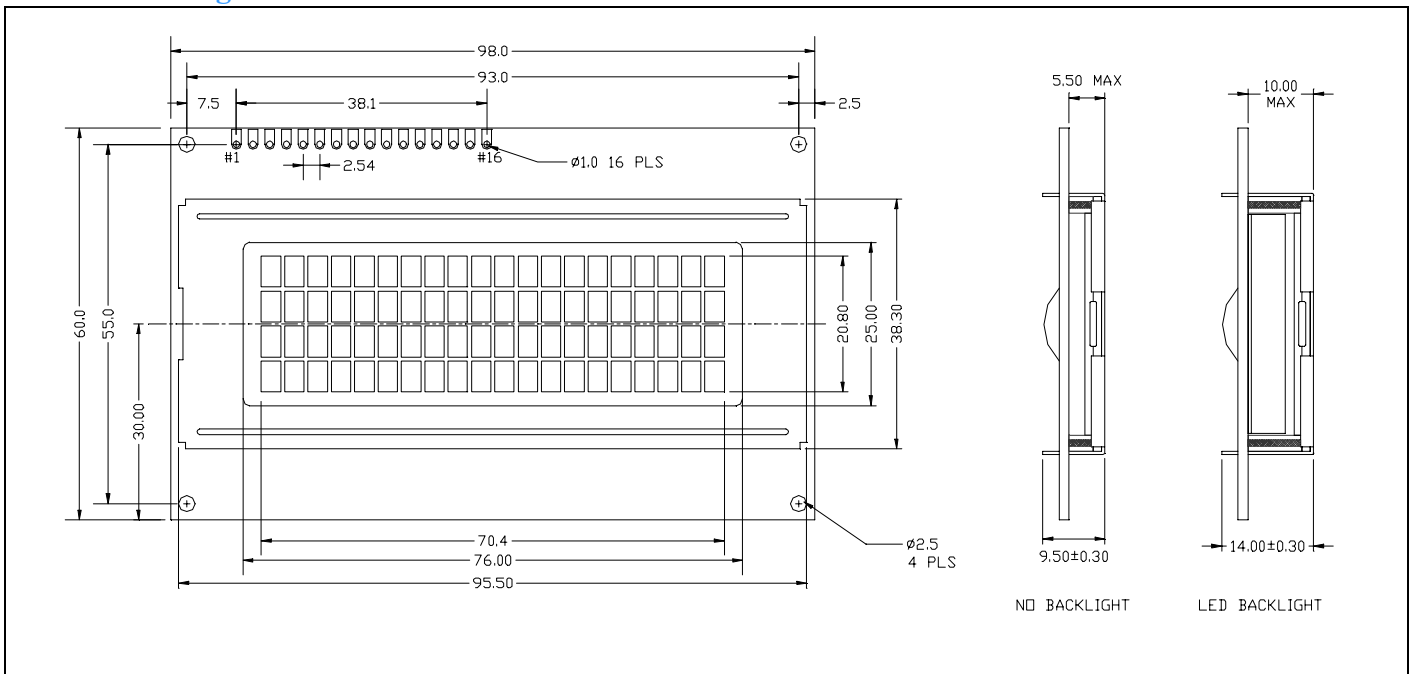
Feature

1. Display Format (20 x 4)
2. 8-Bit parallel bus interface
3. Built-in LCD controller
4. Wide operating temperature range (Option)
5. High contrast ratio and wide viewing angle
6. LED or EL Backlight (Option)

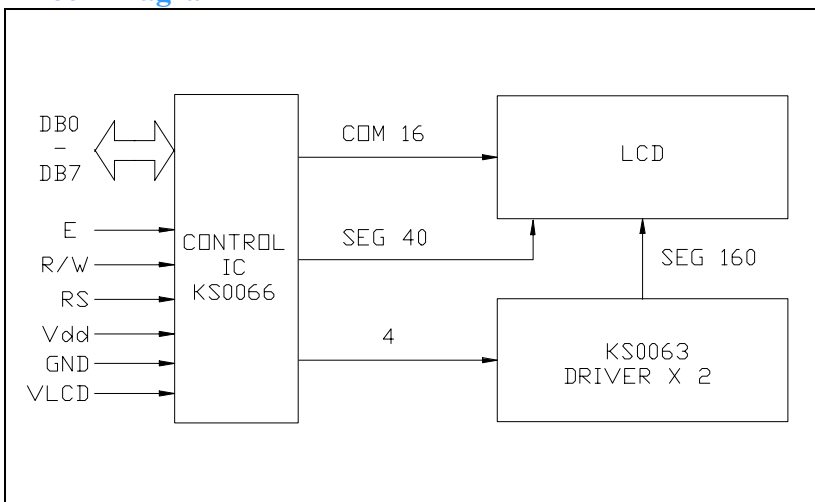


Mechanical Figure

Unit: mm

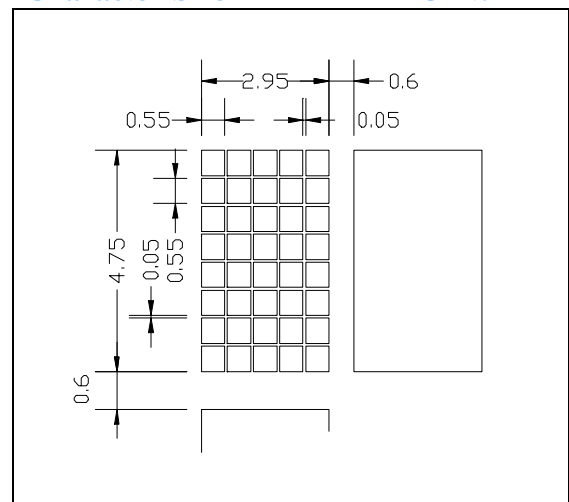


Block Diagram



Character Size

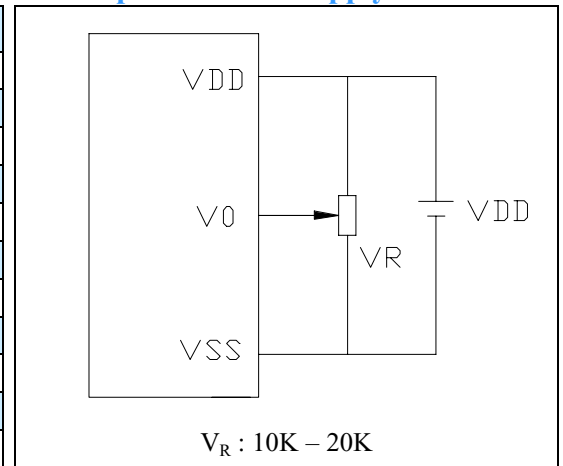
Unit: mm



Specification

Example of Power Supply

ITEM	Standard Value	Unit
Display Format	20 Character x 4 Lines	-
Module Dimension	98.0 (W)x 60.0 (H)x 9.5/14.0 (T)	mm
Viewing Area	75.0 (W)x25.0 (H)	mm
Dot Size	0.55 (W)x0.55 (H)	mm
Display Fonts	5 x 7 Pixels	-
Character Size	2.95 (W)x4.75 (H)	mm
Character Pitch	3.55 (W)x5.35 (H)	mm
LCD Type	STN	
Driver Method	1/16 Duty , 1/ 5 Bias	
Viewing Direction	6 or 12 O'clock	
Controller IC	KS0066 (Equivalent)	



Absolute Maximum Ratings

ITEM	Symbol	MIN.	TYP.	MAX.	Unit
Operating Temperature	T_{op}	-10	-	+60	°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	-	7.5	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	$V_{DD}-V_{EE} (V_{OP})$		3.5	4.2	7.5	V
Input High Voltage			$0.8 V_{DD}$	-	V_{DD}	V
Input Low Voltage			0	-	$0.2 V_{DD}$	V
Output High Voltage		$I_{OH}=-0.5\text{mA}$	$0.8 V_{DD}$	-	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	$V_{SS}(GND)$	0V	Power Supply (GND)	-	0	-	
2	V_{dd}	+5V	Power Supply (+5V)	4.5	5.0	5.5	V
3	$V_{lcd}(V_5)$	-	Contrast Adjust Voltage	-	-	-	V
4	RS	H/L	Register Select Signal,				
5	R/W	H/L	Data Read/Write				
6	E	H/L	Enable Signal				
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	LED+	-	Power Supply For LED Backlight	3.85	4.05	4.25	V
16	LED-	-		-	0	-	V