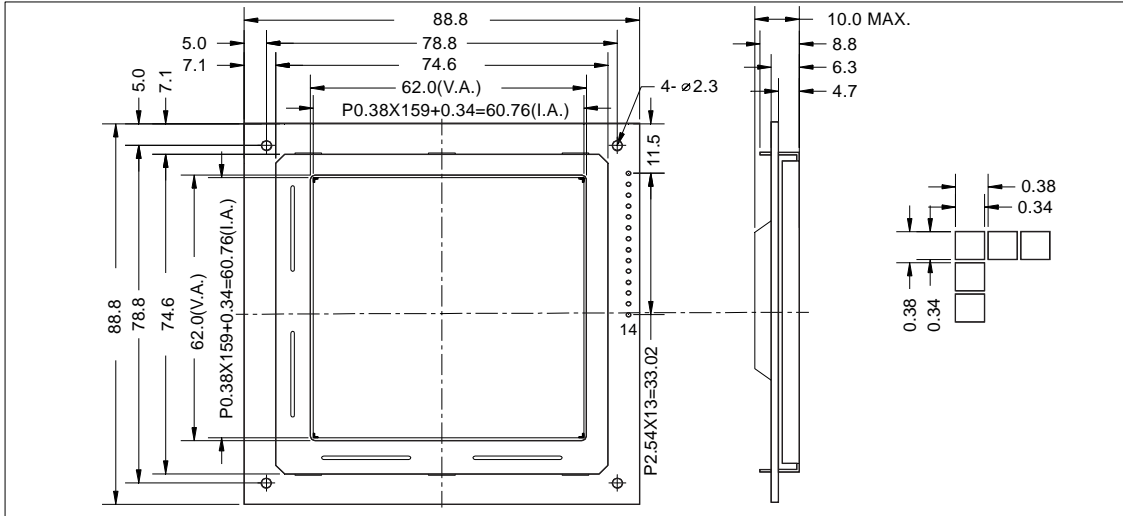


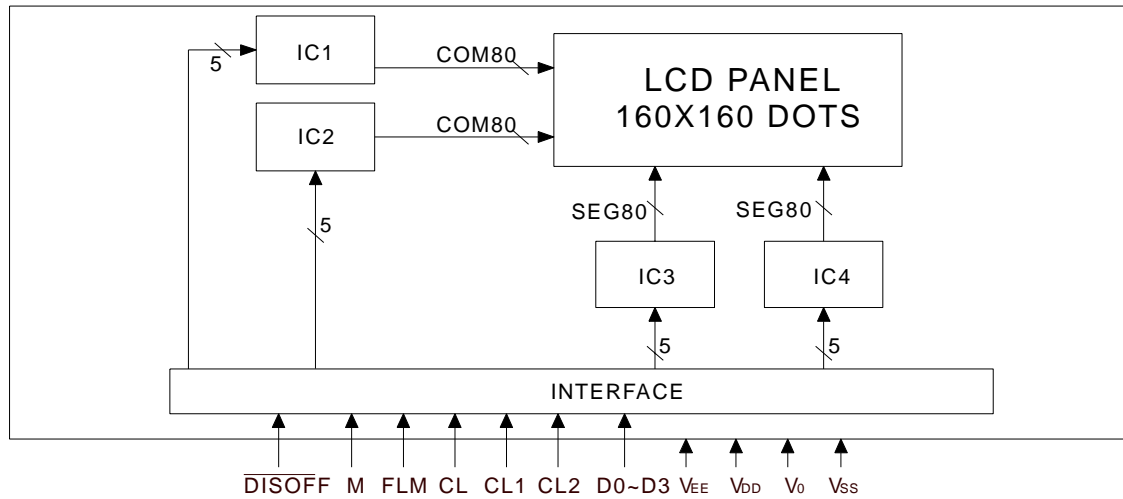
1.0 Features

- * Display Mode: Reflective/Transflective/Transmissive and Positive Type STN
- * Input Data: 8-Bits Parallel Data Input from a MPU
- * Assembly: SMT
- * Backlight: Optional

2.0 External Dimensions



3.0 Block Diagram



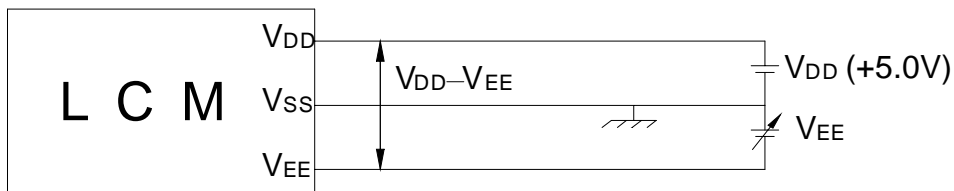
4.0 Maximum Rating

Item	Symbol	Test Condition	Standard Value		Unit
			Min.	Max.	
Supply Voltage for Logic	V _{DD} -V _{SS}	Ta=25 °C	0	7.0	V
Supply Voltage for LCD	V _{DD} -V _{EE}		0	35.0	V
Input Voltage	V _I		0	V _{DD}	V
Operating Temperature	T _{opr}	—	0	+50	°C
Storage Temperature	T _{stg}	—	-10	+60	°C

5.0 Electro-Optical Characteristics

Item	Symbol	Conditions	Standard Value			Unit
			Min.	Typ.	Max.	
Power Supply for Logic	Logic	V _{DD}	4.75	5.0	5.25	V
	LCD Drive	V _{DD-V_{EE}}	—	25.0	—	
Frame Frequency	f FLM	V _{DD} =5.0V	70	75	80	Hz
Current Consumption	I _{DD}	V _{DD} =5.0V, V _{DD-V₀} =25.0 f FLM=75Hz	—	—	10.0	mA
LCD Driving Voltage(Recommended)	V _{DD-V₀}	T _a =25°C; Ø, θ =0°	15.5	16.0	16.5	V
Response Time(Rising)	T _r	T _a =25°C; Ø, θ =0°	—	250	300	ms
Response Time(Decay)	T _d		—	300	350	ms
Viewing Angle	Ø2-Ø1	K≥2	5	—	45	DEG.
Contrast Ratio	K	Ø=0°, θ =0°	2.0	3.0	—	—

6.0 Power Supply for LCM



V_{DD} - V_{EE}: LCD Driving Voltage

7.0 I/O Connection

Pin No	Symbol	Level	Function
1	V _{SS}	0V	Ground
2	M	H/L	Control signal for AC driving
3	FLM	H	Indicates the beginning of each display cycle
4	\	—	No connection
5	CL1	H/L	Control signal for latching data
6	CL2	H/L	Control signal for latching data
7	D0	H/L	Data bit 0
8	D1	H/L	Data bit 1
9	D2	H/L	Data bit 2
10	D3	H/L	Data bit 3
11	\	—	No connection
12	V _{DD}	5V	Power supply for logic and LCD
13	V _{EE}	—	Power supply for LCD(-)
14	DISPOFF	L	Control signal for selecting "display off"