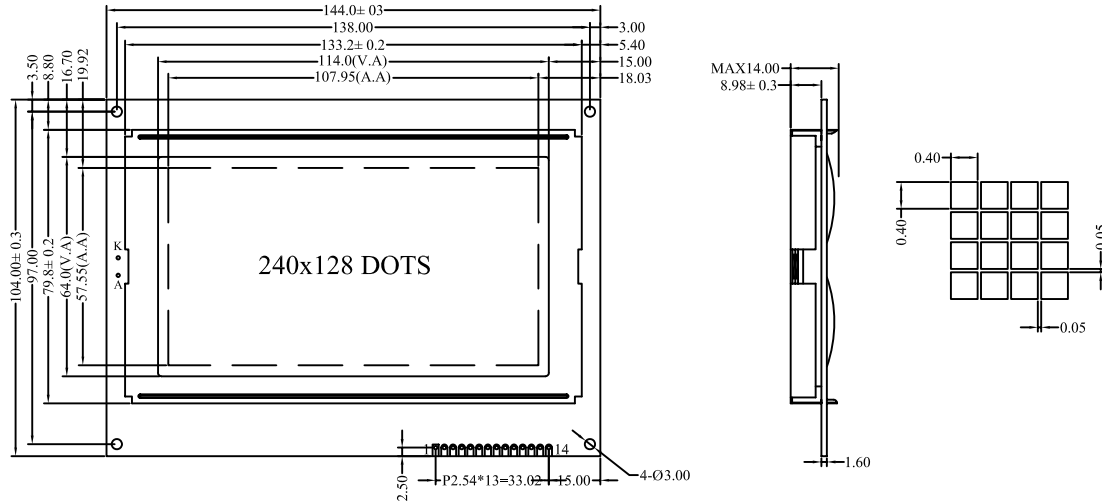


1. DIMENSION OUTLINE



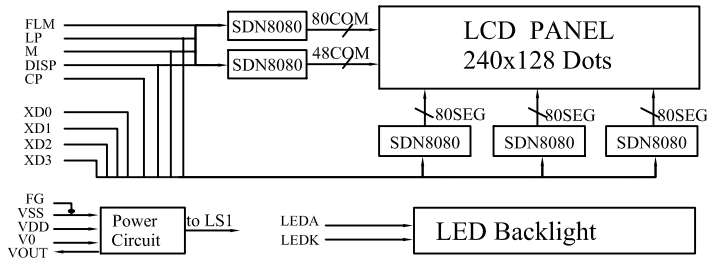
2. MECHANICAL SPECIFICATIONS

ITEM	SPECIFICATIONS	ITEM	REMARK
Module Size(L×W×H)	144.0×104.0×14.0	mm	Reference Dimensional Outline
View Area(W×H)	114.0×64.0	mm	
Effective V/Area	107.95×57.55	mm	
Number of Characters	240×128	-	
Dot Pitch(W×H)	0.45×0.45	mm	
Dot Size(W×H)	0.40×0.40	mm	
Weight (Reflective/Led)	-	g	

3. ABSOLUTE MAXIMUM RATINGS

ITEM	SYMBOL	CONDITION	STANDARD	
			MIN	MAX
Logic Voltage	V <sub>DD</sub>	Ta=25°C	-0.3V	7V
LCD Voltage	V <sub>LCD</sub>		-0.3V	25V
Input Voltage	V <sub>I</sub>		-0.3V	V <sub>DD</sub> +0.3V
Operation Temperature	T <sub>OP</sub>	—	-20°C	70°C
Storage Temperature	T <sub>ST</sub>	—	-30°C	80°C

4. BLOCK DIAGRAM MECHANICAL



5. LED BACKLIGHT SPECIFICATIONS

ITEM	SYMBOL	TYPE	MAX	UNIT
Ta=25°C				
Forward Voltage	V <sub>f</sub>	4.05	4.25	V
Forward Current	I <sub>f</sub>	720	—	mA
Emission Wave Length	λ <sub>P</sub>	568	—	nm
Forward Voltage	V <sub>f</sub>	4.05	4.25	V
Forward Current	I <sub>f</sub>	720	—	mA
Emission Wave Length	λ <sub>P</sub>	568	—	nm

6. INTERFACE PIN CONNECTIONS

ITEM	SYMBOL	LEVEL	FUNCTIONS
1	XD0	H/L	Data Bus
2	XD1	H/L	
3	XD2	H/L	
4	XD3	H/L	
5	DISP	H/L	Display ON/OFF
6	FLM	H/L	Scan Start Line
7	M	H/L	Frame Signal
8	LP	H/L	Data Latch Clock
9	CP	H/L	Data Shift Clock
10	VDD	+5V	Power Supply For Logic
11	VSS	0V	Power Ground
12	VEE	-15V	Output Voltage For LCD Driving
13	V0	-13V	Contrast Adjust
14	FG	0V	Frame Ground

7. ELECTRICAL CHARACTERISTICS

ITEM	SYMBOL	MIN	TYPE	MAX	UNIT
Ta=25°C					
Logic Power	V <sub>DD</sub>	4.5	5	5.5	V
Input High Voltage	V <sub>IH</sub>	V <sub>DD</sub> -2.2	—	V <sub>DD</sub>	V
Input Low Voltage	V <sub>IL</sub>	0	—	0.8	V
Output High Voltage	V <sub>OH</sub>	V <sub>DD</sub> -0.3	—	V <sub>DD</sub>	V
Output Low Voltage	V <sub>OL</sub>	0	—	0.3	V
Logic Current	I <sub>DD</sub>	—	15	25	mA
Operation Voltage For LCD	V <sub>DD</sub> -V <sub>0</sub>	—	18	—	V