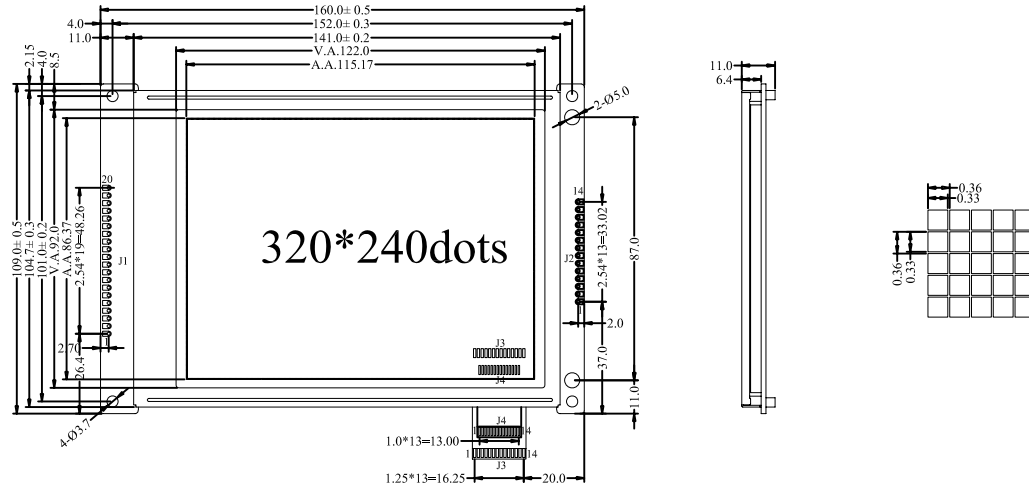


1. DIMENSION OUTLINE



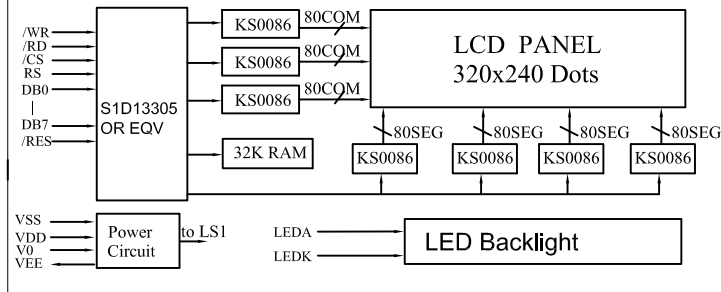
2. MECHANICAL SPECIFICATIONS

ITEM	SPECIFICATIONS	ITEM	REMARK
Module Size(L×W×H)	160.0×109.0×11.0	mm	Reference Dimensional Outline
View Area(W×H)	122.0×92.0	mm	
Effective V/Area	115.17×86.37	mm	
Number of Characters	320×240	-	
Dot Pitch(W×H)	0.36×0.36	mm	
Dot Size(W×H)	0.33×0.33	mm	

3. ABSOLUTE MAXIMUM RATINGS

ITEM	SYMBOL	CONDITION	STANDARD	
			MIN	MAX
Logic Voltage	V <sub>DD</sub>	T <sub>a</sub> =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
T <sub>a</sub> =25°C				
Forward Voltage	V <sub>f</sub>	3.0	3.1	V
Forward Current	I <sub>f</sub>	150	—	mA
Emission Wave Length	λ <sub>P</sub>	White	—	nm

7. ELECTRICAL CHARACTERISTICS

ITEM	SYMBOL	MIN	TYPE	MAX	UNIT
T <sub>a</sub> =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>	—	—	170	mA
Operation Voltage For LCD	V <sub>DD</sub> -V <sub>0</sub>	—	23	—	V

6. INTERFACE PIN CONNECTIONS

ITEM	SYMBOL	LEVEL	FUNCTIONS (internal Controller)
J1			
1	VSS	0V	Power Ground
2	VDD	+5V	Power supply for logic
3	V0	—	Contrast adjust
4	/WR	L	Write signal
5	/RD	L	Read signal
6	/CS	L	Chip enable signal
7	RS	H/L	H:command L:data
8	/REST	L	Reset signal
9-16	DB0-DB7	H/L	Data Bus
17,19	LEDA	+5V	Backlight Anode
18	VEE	—	Output voltage for LCD driving
20	LEDK	0V	Backlight Cathode

ITEM (J2-J4)	SYMBOL	LEVEL	FUNCTIONS (external Controller)
1-4	D0-D3	H/L	Display Data Bus
5	DIS.O	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	—	Output voltage for LCD driving
13	V0	—	Contrast adjust
14	FG	0V	Frame Ground