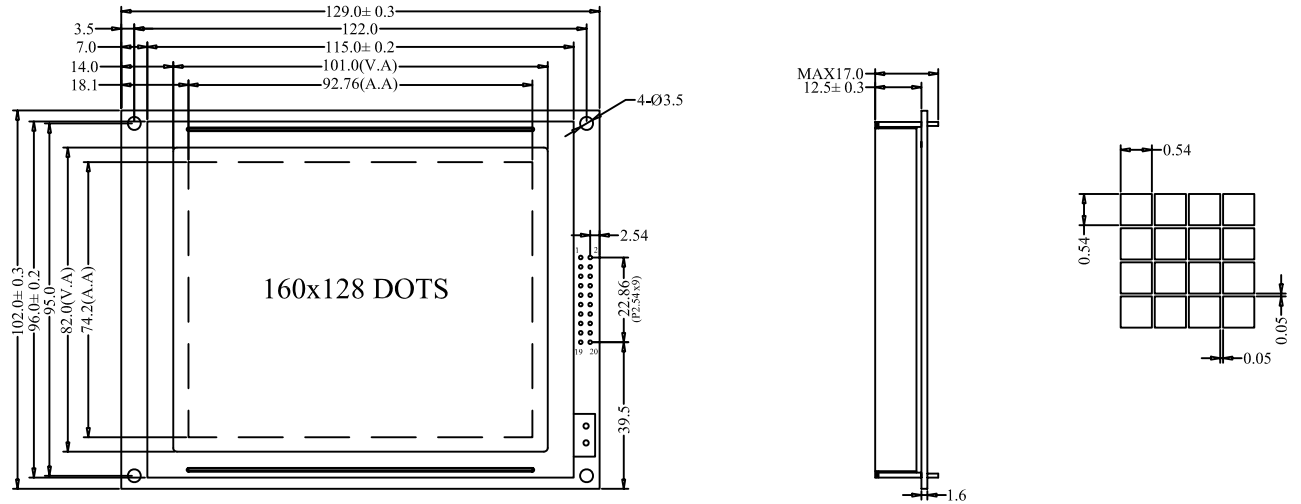


## 1. DIMENSION OUTLINE



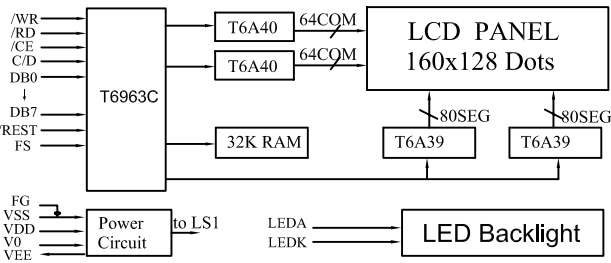
## 2. MECHANICAL SPECIFICATIONS

ITEM	SPECIFICATIONS	ITEM	REMARK
Module Size(L×W×H)	129.0×102.0×17.0	mm	Reference Dimensional Outline
View Area(W×H)	101.0×82.0	mm	
Effective V/Area	92.76×74.2	mm	
Number of Characters	160×128	-	
Dot Pitch(W×H)	0.59×0.59	mm	
Dot Size(W×H)	0.54×0.54	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>	4.1	4.2	V
Forward Current	I <sub>f</sub>	770	—	mA
Emission Wave Length	λ <sub>P</sub>	568	—	nm

## 6. INTERFACE PIN CONNECTIONS

ITEM	SYMBOL	LEVEL	FUNCTIONS
1	FG	—	Frame Ground
2	VSS	0V	Power Ground
3	VDD	+5V	Power supply for logic
4	V0	—	Contrast adjust
5	VEE	—	Supply voltage for LCD driving
6	/WR	L	Write signal
7	/RD	L	Read signal
8	/CE	L	Chip enable signal
9	C/D	H/L	H:command L:data
10	/HALT	H/L	H: Normal L:Stop Osc Clk
11	/REST	L	Reset signal
12-19	DB0-DB7	H/L	Data Bus
20	NC	—	No connection

## 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>	—	—	20	mA
Operation Voltage For LCD	V <sub>DD</sub> -V <sub>0</sub>	—	15.5	—	V