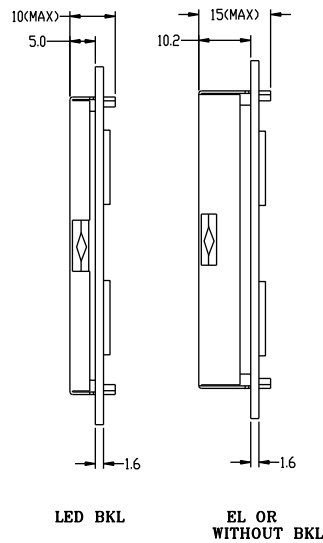
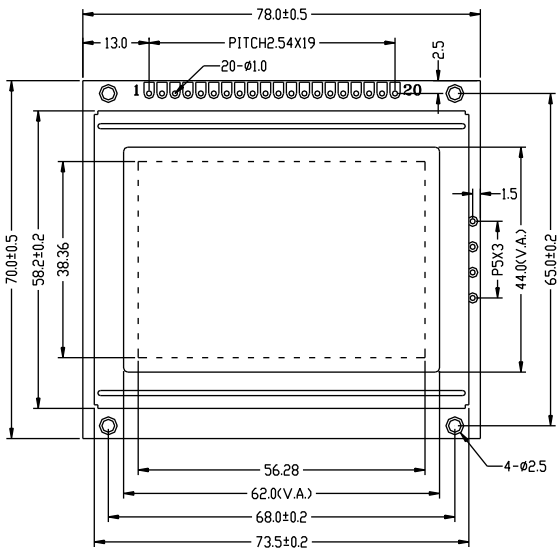
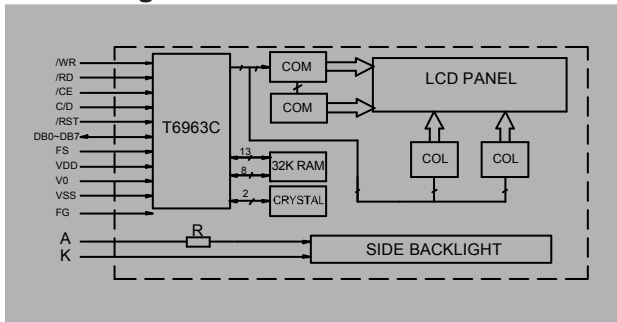




**Outline Dimension**



**Block diagram**



**Feature**

1. 128X64 dots graphic LCD module
2. Built-in controller (T6963C)
3. 5.0V power supply
4. STN; 1/64 duty; LED BKL or EL BKL

**Mechanical Data**

Item	Standard	Unit
Module dimension	78.0x70.0	mm
Viewing area	62.0x44.0	mm
Dot size	0.40x0.56	mm
Dot pitch	0.44x0.60	mm

**Interface pin connections**

PIN NO	Symbol	Function
1	FGND	Frame ground
2	VSS	Power supply
3	VDD □	
4	VO □	
5	/WR □	Write enable signal
6	/RD	Read enable signal
7	/CE	Chip enable signal
8	C/D	H:Instruction,L:Data
9	/RST	Reset signal
10-17	DB0-DB7	H/L Data bus for 4 bit or 8 bit mode
18	FS	Font selection
19	LED+	+4.2V for BKL
20	LED-	Power supply for BKL (0V)

**Absolute Maximum Rating**

Item	Symbol	Standard			Unit
		Min	Typ	Max	
Power supply	VDD-VSS	-0.3	-----	7.0	V
Input voltage	VI	-0.3	-----	VDD+0.3	

**Electronical characteristics**

Item	Symbol	Condition	Standard			Unit
			Min	Typ	Max	
Input voltage	VDD	-----	4.5	5.0	5.5	V
		-----	-----	-----	-----	V
Supply current	I <sub>DD</sub>	VDD=5V	-----	4.5	6.5	mA
Recommended LCD driving voltage for normal temp version module	VDD-V0	-20°C	-----	-----	-----	V
		0 °C	-----	9.8	-----	
		25°C	-----	9.5	-----	
		50°C	-----	9.3	-----	
LED forward voltage	VF	25°C	-----	4.2	4.6	V
LED forward current	IF	VF=4.2V	-----	240	-----	mA
EL power supply current	I <sub>EL</sub>	V <sub>EL</sub> =110V AC 400Hz	-----	-----	-----	mA

**THICKNESS**

VERSION	T1	T1	UNIT
EL&NO BACKLIGHT	5.0	10.0	mm
LED BACKLIGHT	10.2	15.0	