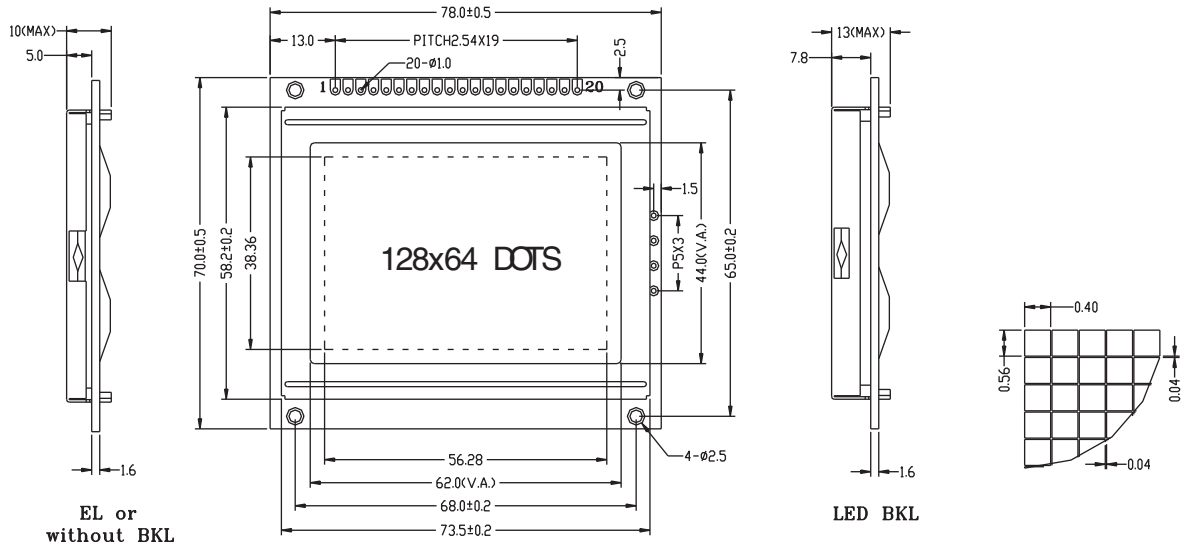
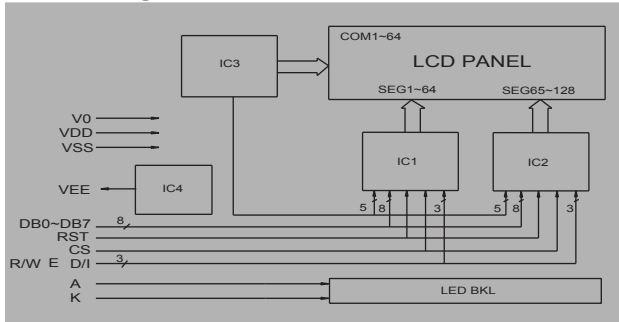


Outline Dimension



Block diagram



Feature

1. 128X64 dots graphic LCD module
2. Built-in controller (KS0108B)
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	/CSA	Chip select for IC1
2	/CSB	Chip select for IC2
3	VSS □	GND
4	VDD □	+5V
5	V0 □	Constrast adjustment
6	D/I	H/L Register select signal
7	R/W	H/L Read/Write signal
8	E	H/L Enable signal
9 to 16	DB0 to DB7	H/L Data bus line
17	RST	Reset signal
18	VEE	Negative voltage output
19	A	Power supply for BKL(4.2V)
20	K	Power supply for BKL(GND)

Absolute Maximum Rating

Item	Symbol	Standard			Unit
		Min	Typ	Max	
Power supply	VDD-VSS	-0.3	-----	5.5	V
Input voltage	VI	-0.3	-----	VDD	

Electronical characteristics

Item	Symbol	Condition	Standard			Unit
			Min	Typ	Max	
Input voltage	VDD	+5V	4.7	5.0	5.5	V
Supply current	I <sub>DD</sub>	VDD=5V	-----	8	-----	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	-----	
		70°C	-----	-----	-----	
LED forward voltage	V <sub>F</sub>	25°C	-----	4.2	4.5	V
LED forward current	I <sub>F</sub>	25°C	-----	360	-----	mA
EL power supply current	I <sub>EL</sub>	V <sub>EL</sub> =110V AC 400Hz	-----	-----	-----	mA