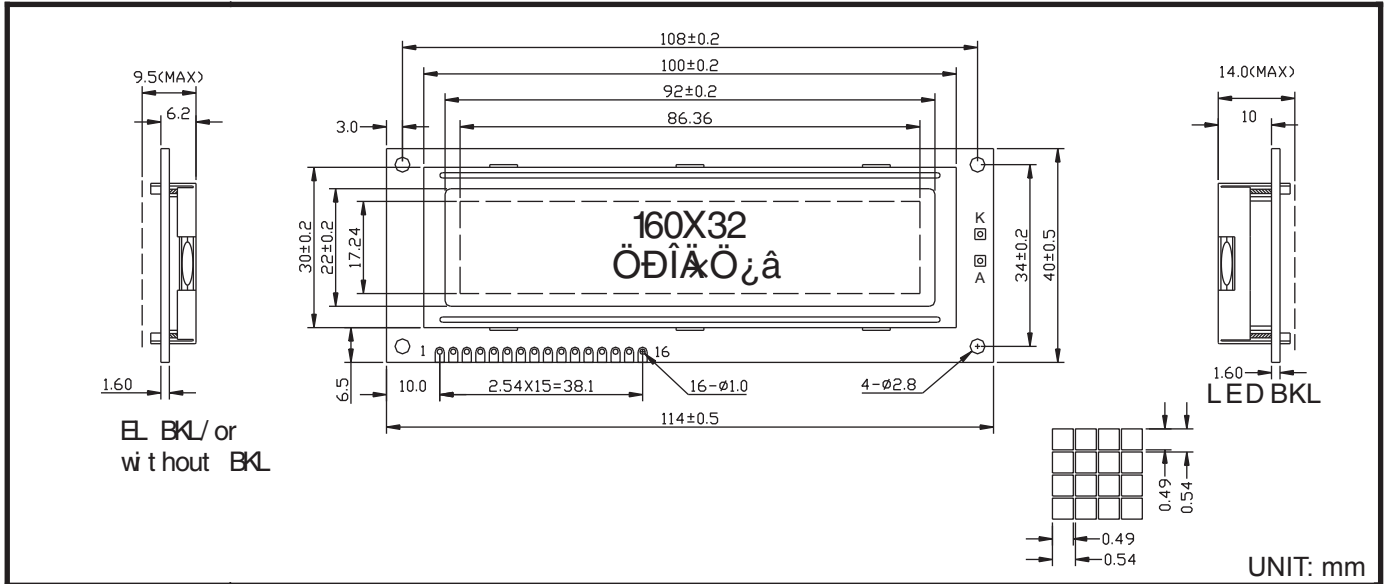
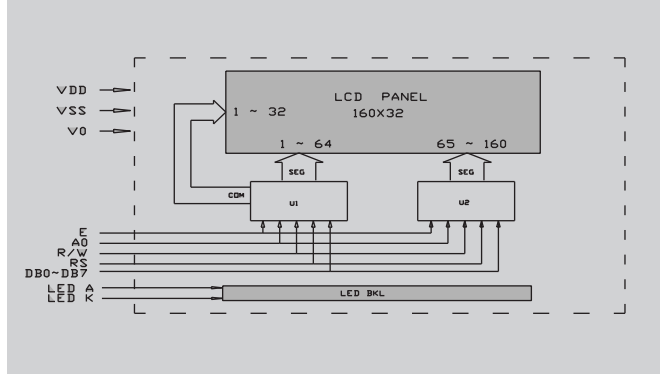


**OUTLINE DIMENSION**



**BLOCK DIAGRAM**



**FEATURE**

- 1. 160X32 dots graphic LCD module
- 2. Built-in controller (ST7920 )
- 3. +5V power supply
- 4. STN; 1/32 duty LED BKL

**MECHANICAL DATA**

Item	Standard	Unit
Module dimension	114.0X40.0	mm
Viewing area	92.0X22.0	mm
Dot size	0.49X0.49	mm
Dot pitch	0.54X0.54	mm

**BLOCK DIAGRAM**

Pin NO	Symbol	Function
1	VSS	Power supply : 0V
2	VDD	Power supply : +5.0V
3	V0	Power supply for LCD driver
4	RS	Select registers during bus mode L: Instruction register (for write) Busy flag; address counter (for read) H: Data register (for write and read); Acts as chip-select (for write and read)
5	R/W	Select read or write during bus mode. H: Read L: Write. Inputs serial data during serial mode.
6	E	Starts data read / write bus during mode. Inputs serial clock during serial mode.
7 to 10	DB0 toDB3	4-bit or 8-bit bus mode.
11 to 14	DB4 toDB7	
15	LED+	Power supply for BKL +4.2V
16	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	

**ELECTRONICAL CHARACTERISTICS**

Item	Symbol	condition	Standard			Unit
			Min	Typ	Max	
Input voltage	VDD	----	4.5	5.0	5.5	V
Supply current	IDD	VDD=5V	----	1.2	----	mA
Recommended LCD driving voltage version module	VDD-V0	-20°C	----	----	----	V
		0°C	----	5.5	----	
		25°C	----	6.5	----	
		50°C	----	7.0	----	
70°C	----	----	----			
LED forward voltage	VF	25°C	----	4.2	4.5	V
LED forward current	IF	VF=4.2V	----	180	----	mA
EL power supply	IEL	VEL= V	----	----	----	mA