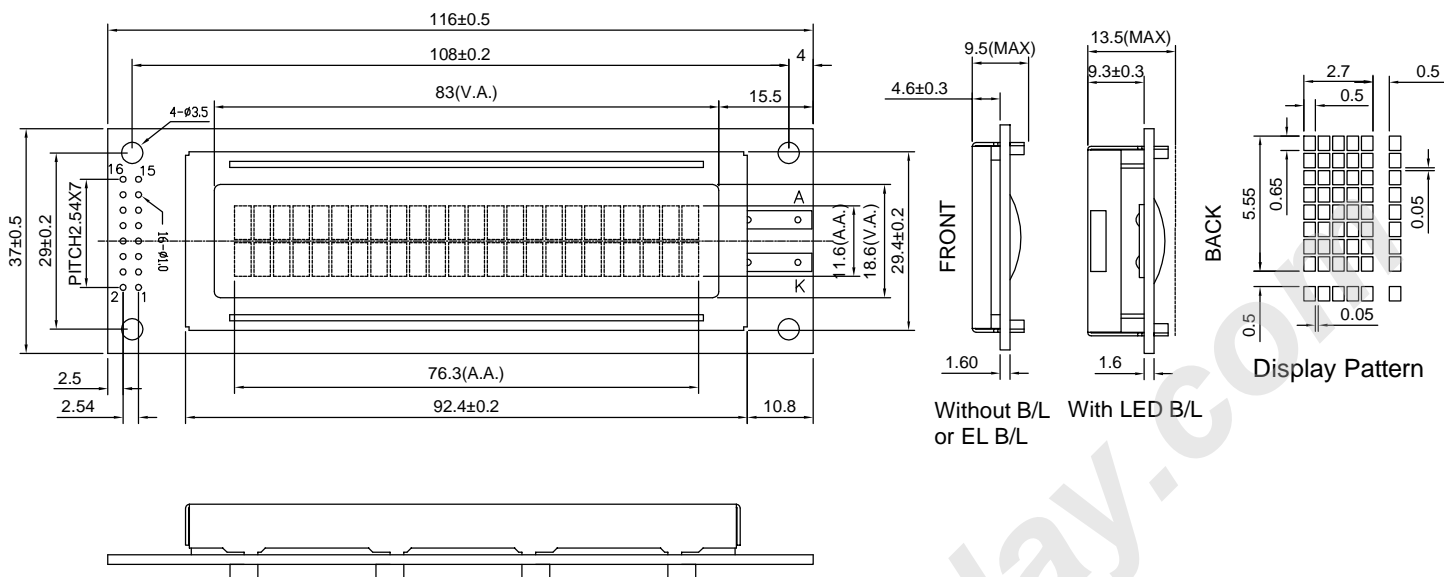


## Dimension Drawing



TOLERANCES UNLESS OTHERWISE STATED  
 X.X ±0.20    X.XX ±0.10    UNIT: mm

### Feature:

- 2-line x24 characters display; 5x8 dots with cursor
- Built-in controller(ST7066U or equivalent)
- +5V power supply(also available for +3.3V)
- 1/16 Duty cycle
- STN or FSTN Mode
- Match all kind colors of LED back light
- ROHS compliant

### Interface Pin Connections

PIN NO.	Symbol	Function
1	VSS	GND
2	VDD	+5V or +3.3V
3	V0	Contrast adjustment
4	RS	H/L Register select signal
5	R/W	H/L Read/Write signal
6	E	H/L Enable signal
7	DB0	H/L Data bus line
8	DB1	H/L Data bus line
9	DB2	H/L Data bus line
10	DB3	H/L Data bus line
11	DB4	H/L Data bus line
12	DB5	H/L Data bus line
13	DB6	H/L Data bus line
14	DB7	H/L Data bus line
15	A	Power supply for B/L(LED+)
16	K	Power supply for B/L(LED-)

### Mechanical Data

Item	Standard	Unit
Module dimension	116.0 x 37.0	mm
Viewing area	83.0 x 18.6	mm
Mounting hole	108.0 x 29.0	mm
Character size	2.70 x 5.55	mm

### 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	+5.0V	4.5	5.0	5.5	V
		+3.3V	2.7	3.3	4.5	V
Supply current	I <sub>DD</sub>	VDD=5V	----	0.2	0.5	mA
Recommended LCD driving voltage for normal temp version module	VDD-V0 (VDD=5V)	-20 °C	4.9	5.2	5.5	V
		0 °C	4.5	4.8	5.1	
		25 °C	4.1	4.5	4.8	
		50 °C	3.8	5.0	4.4	
LED forward voltage	VF	25 °C	----	4.2	4.6	V
		25 °C	Array	----	140	----
LED forward current	IF	Edge	----	30	40	
			EL power supply	I <sub>EL</sub>	V <sub>EL</sub> =110V AC 400Hz	----

### Display Character Address Code:

Display position    1 2 3 4 5 6 7 8 9 10 -- -- -- -- 23 24

DDRAM address    00 01 02 -- -- -- -- -- -- -- -- -- -- 16H 17H

DDRAM address    40 41 42 -- -- -- -- -- -- -- -- -- -- 56H 57H