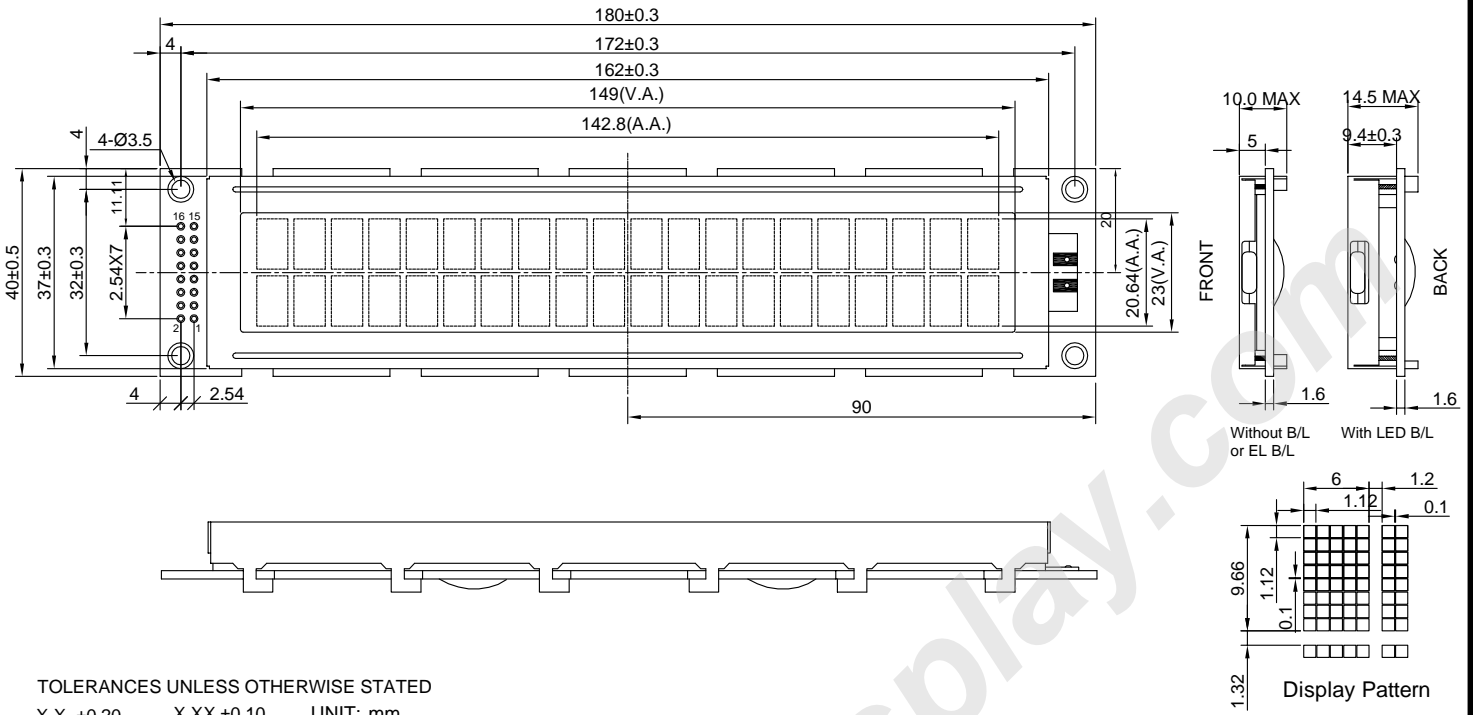


## Dimension Drawing



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

## Feature:

- 2-line x20 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	180.0 x 40.0	mm
Viewing area	162.0 x 23.0	mm
Mounting hole	172.0 x 32.0	mm
Character size	6.00 x 9.66	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	
LED forward current	IF	25°C	Array	----	300	----	mA
			Edge	----	30	40	
EL power supply	I <sub>EL</sub>	V <sub>EL</sub> =110V AC 400Hz	----	----	5.0	mA	

## Display Character Address Code:

Display position	1	2	3	4	5	6	7	8	9	10	--	--	--	--	19	20
DDRAM address	00	01	02	--	--	--	--	--	--	--	--	--	--	--	12H	13H
DDRAM address	40	41	42	--	--	--	--	--	--	--	--	--	--	--	52H	53H