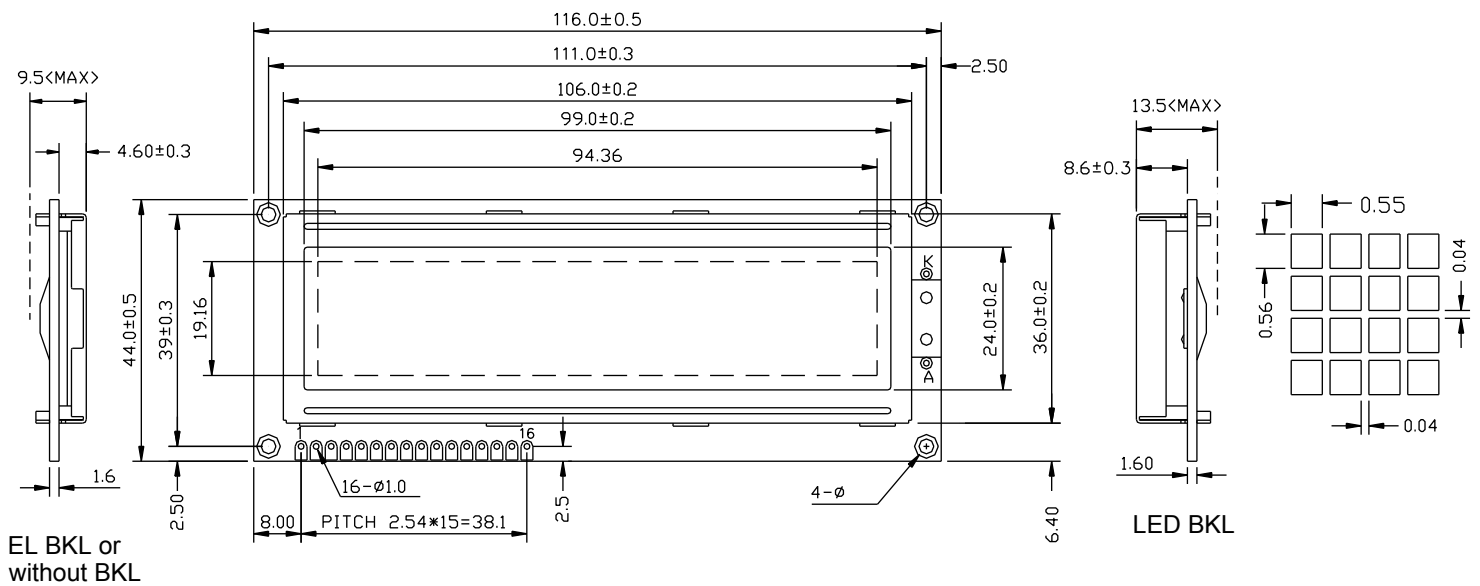
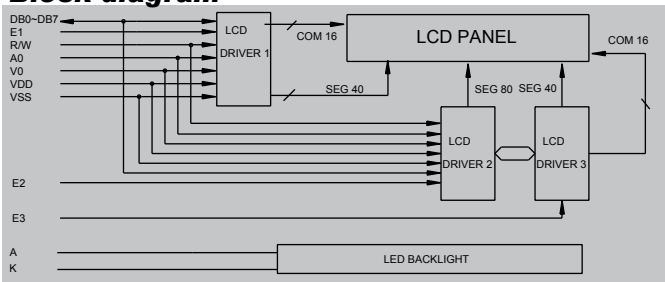


**Outline Dimension**



EL BKL or without BKL

**Block diagram**



**Feature**

1. Display format: 160x32 dots matrix graphic
2. STN and FSTN
3. Easy interface with 8-bit MPU
4. Low power consumption
5. LED , EL or without backlight
6. Viewing angle: 6:00 o'clock or 12:00 o'clock
7. Driving method: 1/32 duty, 1/6 bias
8. LCD controller: AX6120D0A

**Interface pin connections**

PIN NO	Symbol	Function
1	AO □	H/L Register select signal
2	E2 □	Enable signal for chip2
3	E1 □	Enable signal for chip1
4	R/W	H/L Read/Write signal
5	VDD □	Power supply for logic(+5V)
6	VSS	Power supply for logic(+5V)
7 to 14	DB0 to DB7	H/L Data bus for 8 bit mode
15	VEE	Negative voltage output
16	E3	Enable signal for chip3
	A	Power supply (+4.05V)
	K	Power supply (+0V)

**Mechanical Data**

Item	Standard	Unit
Module dimension	116.0x44.0	mm
Viewing area	99.0x24.0	mm
Dot size	0.55x0.56	mm
Dot pitch	0.59x0.60	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+0.3	

**Electronical characteristics**

Item	Symbol	Condition	Standard			Unit	
			Min	Typ	Max		
Input voltage	VDD	-----	4.7	5.0	5.5	V	
		+3.3V	-----	-----	-----		
Supply current	IDD	VDD=5V	-----	1.5	3.0	mA	
		Recommended LCD riling voltage for normal temp version module	-20°C	-----	7.0		-----
			0 °C		6.7		
			25°C	6.4	6.5		6.7
			50°C		6.3		
70°C	-----	6.0	-----				
LED forward voltage	VF	25°C	-----	4.0	4.3	V	
LED forward current	IF	25°C	-----	240	-----	mA	
EL power supply current	I <sub>EL</sub>	V <sub>EL</sub> =110V AC 400Hz	-----	-----	-----	mA	