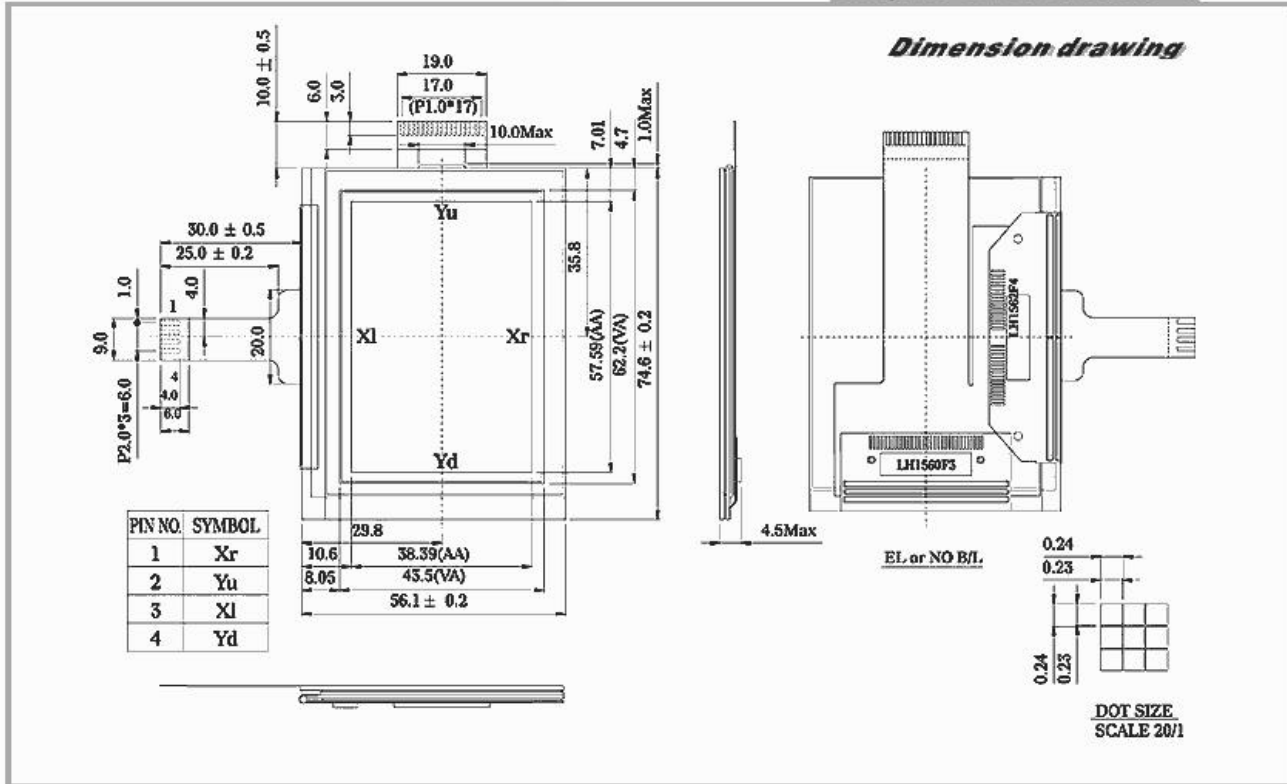


Graphic 240x160dots



### Feature

1. 240x160 dots FSTN
2. 4-bit data bus
3. +5V power supply
4. 1/160 duty cycle
5. Touch panel option

### Mechanical Data

Item	Standard Value	Unit
Module Dimension	74.6x56.1	mm
Viewing Area	62.2x43.5	mm
Dot Size	0.22x0.22	mm
Dot Pitch	0.24x0.24	mm

Pin NO.	Symbol	Function
1	V5	Bias voltage for non-select
2	V2	Bias voltage for non-select
3	VEE	Power supply for LCD
4	VDD	Power supply for logic
5	FR	Frame start signal
6	VGND	Ground
7	LOAD	Data latch pulse
8	VSS	Logic GND
9	DF	Switch signal input for LC drive waveform
10	DOFF	H:display DN,L:display OFF
11	CP	Data shift pulse
12	V4	Bias voltage for non-select
13	V3	Bias voltage for non-select
14	D3	Data bus 3
15	D2	Data bus 2
16	D1	Data bus 1
17	D0	Data bus 0
18	NC	No connection

### Absolute Maximum Rating

Item	Symbol	Standard Value			Unit
		min.	typ.	max.	
Power Supply	VDD-VSS	---	5.0	6.5	V
Input Voltage	VI	0.8V <sub>DD</sub>	---	VDD	V

Note : VSS=0 Volt, VDD=5.0 Volt.

### Electrical Characteristics

Item	Symbol	Condition	Standard Value			Unit
			min.	typ.	max.	
Input Voltage	VDD	L level	0.8V <sub>DD</sub>	V <sub>DD</sub>	---	V
	VIO	H level	V <sub>SS</sub>	0.2V <sub>DD</sub>	---	V
Supply Current	IDD	VDD=5V	---	---	---	mA
Recommended LC Driving Voltage for Normal Temp. Version module	VDD-V0	0°C	19.4	20.5	21.6	V
		25°C	18.9	19.0	20.1	
		50°C	16.9	18.0	19.1	
Power consumption	---	VDD=5V VSS=19.5V	---	0.12	---	mA
EL	---	V <sub>a</sub> =110VAC;400Hz	---	---	5.0	mA