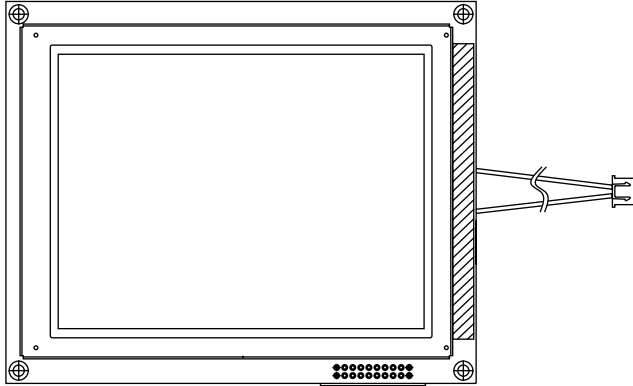


320 x 240 Graphic LCD



FEATURES

- Type: Graphic
- Display format: 320 x 240 dots
- Built-in controller: Epson S1D13700
- Duty cycle: 1/240
- Built-in N.V.
- Touch screen option
- Temperature compensation option
- Compliant to RoHS directive 2002/95/EC


RoHS
COMPLIANT

MECHANICAL DATA		
ITEM	STANDARD VALUE	UNIT
Module Dimension	148.02 x 120.24	mm
Viewing Area	120.14 x 92.14	
Dot Size	0.34 x 0.34	
Dot Pitch	0.36 x 0.36	
Mounting Hole	139.98 x 112.2	
Character Size	N/a	

ABSOLUTE MAXIMUM RATINGS					
ITEM	SYMBOL	STANDARD VALUE			UNIT
		MIN.	TYP.	MAX.	
Power Supply	V_{DD} to V_{SS}	4.5	5.0	5.5	V
Input Voltage	V_I	0	-	V_{DD}	

Note

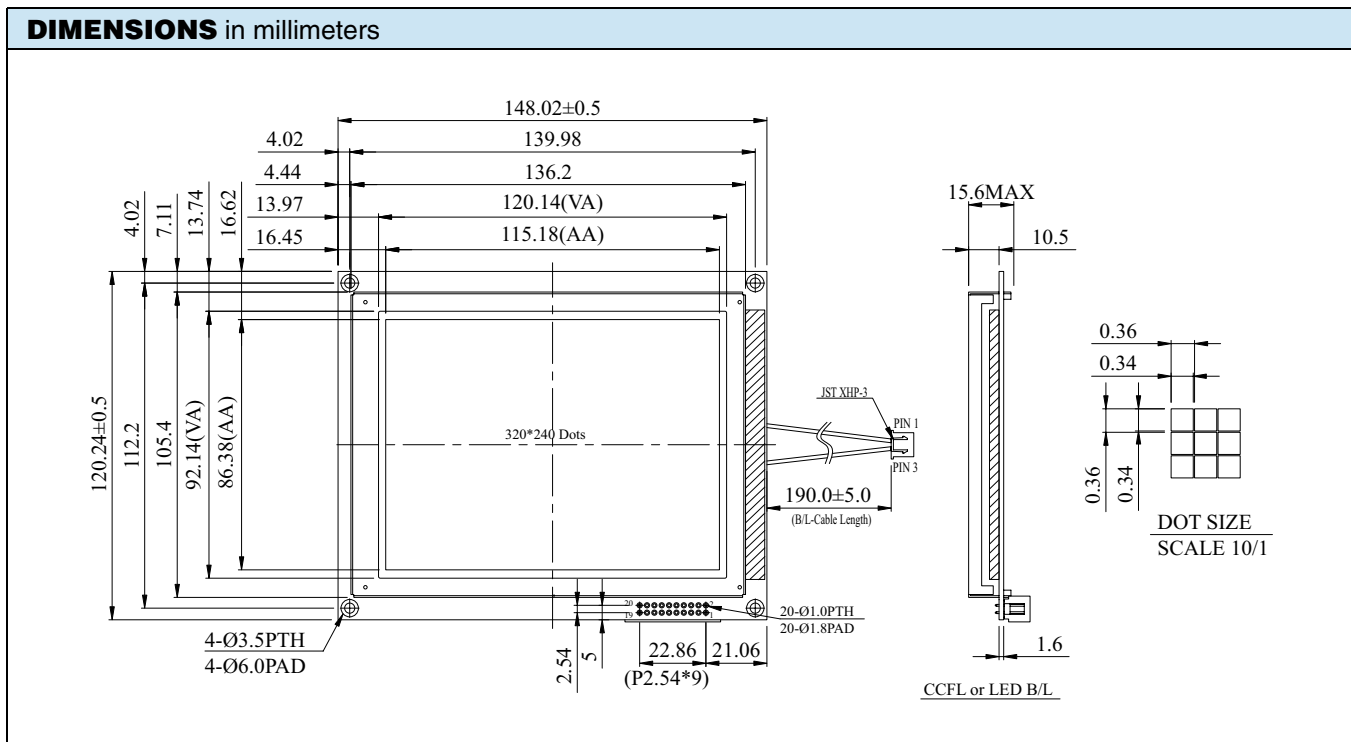
- $V_{SS} = 0$ V, $V_{DD} = 5.0$ V

ELECTRICAL CHARACTERISTICS						
ITEM	SYMBOL	CONDITION	STANDARD VALUE			UNIT
			MIN.	TYP.	MAX.	
Input Voltage	V_{DD}	-	4.75	5.0	5.25	V
Supply Current	I_{DD}	$V_{DD} = +5.0$ V	65.0	75.0	85.0	mA
Recommended LC Driving Voltage for Normal Temperature Version Module	V_0 to V_{SS}	-20 °C	-	-	24.4	V
		25 °C	-	23.8	-	
		70 °C	23.4	-	-	
CCFL Starting Voltage	V_{FLS}	25 °C	-	600	-	V_{RMS}
CCFL Driving Voltage	V_{FLD}	25 °C	-	270	-	V_{RMS}
CCFL Driving Current	I_{FLD}	$V_{FQ} = 450 V_{RMS}, 30$ kHz	4.8	5.3	5.5	mA_{RMS}
LED Forward Voltage	V_F	25 °C	3.4	3.5	3.6	V
LED Forward Current	I_F	25 °C	140	160	200	mA
EL Power Supply Current	I_{EF}	$V_{EL} = 110 V_{AC}, 400$ Hz	-	-	5.0	mA

OPTIONS									
PROCESS COLOR						BACKLIGHT			
TN	STN Gray	STN Yellow	STN Blue	FSTN B&W	STN Color	None	LED	EL	CCFL
	x	x	x	x		x	x	x	x

For detailed information, please see the "Product Numbering System" document.

INTERFACE PIN FUNCTION			
PIN NO.	SYMBOL	PIN NO.	FUNCTION
1	V _{SS}		Ground
2	V _{DD}		Power supply for logic
3	V ₀		Driving voltage for LCD
4	\overline{RD}		8080 family: Read signal/6800 family: Enable clock
5	\overline{WR}		8080 family: Write signal/6800 family: R/W signal
6	A ₀		RD = L, WR = H; AO = L: Data read; AO = H: Status read RD = H, WR = L; AO = L: Data write; AO = H: Command write
7	DB0		Date bus line
8	DB1		Date bus line
9	DB2		Date bus line
10	DB3		Date bus line
11	DB4		Date bus line
12	DB5		Date bus line
13	DB6		Date bus line
14	DB7		Date bus line
15	\overline{CS}		Chip select, active L
16	\overline{RES}		Controller reset signal, active L
17	V _{EE}		Negative voltage output
18	F _{GND}		Frame ground
19	DISPOFF		Display off
20	WAIT		Check busy





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