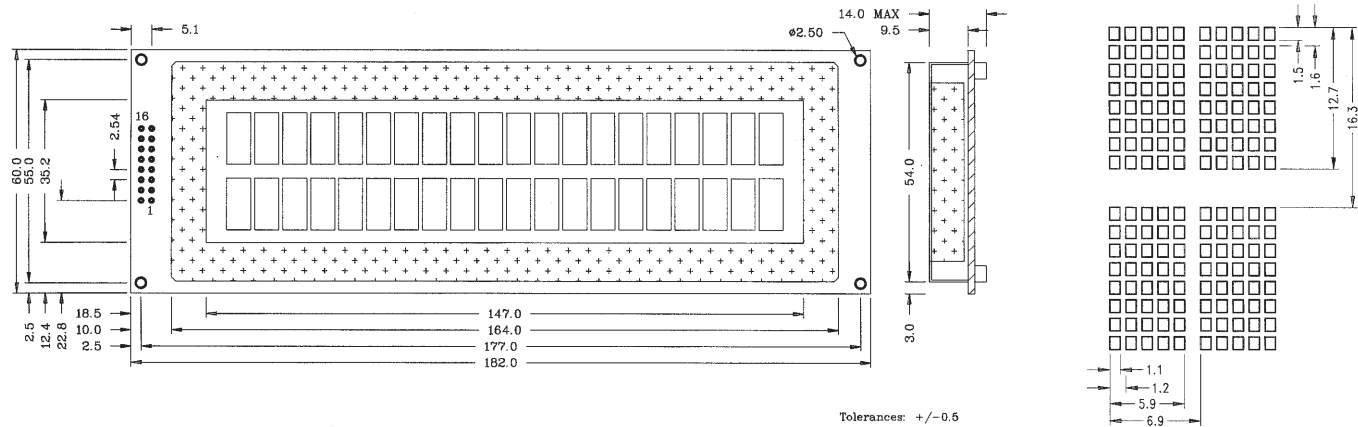


BT 22012

2 Lines x 20 Characters

Data Modul Inc. - 120 Commerce Drive - Hauppauge New York 11788
Tel. 631-951-0800 - Fax 631-9512121 - www.datamodul.com

Character
LCD Modules



Dimensions [mm]

Dot Size

MECHANICAL DATA

Parameter	Width x Height x Depth	Unit
Outline Dimensions	182 x 60 x 11 (with LED: 14)	mm
Effective viewing area	147 x 35.2	mm
Dot Size	1.1 x 1.5	mm
Dot Pitch	1.2 x 1.6	mm
Character Matrix	5 x 7	dots
Character Size	5.9 x 12.7	mm
Character Pitch	6.9 x 16.2	mm
Weight	Approximate 145 (with LED: 160)	g

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Min.	Max.	Unit
Supply Voltage (Logic)	$V_{DD} (V_{DD}-V_{SS})$	0	7.0	V
Supply Voltage (LCD Driver)	$V_{EE} (V_{DD}-V_0)$	0	13.5	V
Input Voltage	V_I	V_{SS}	V_{DD}	V
Operating Temperature	T_{OP}	See Page 11		°C
Storage Temperature	T_{ST}	See Page 11		°C

ELECTRICAL CHARACTERISTICS

Condition: $T_a = 25^\circ\text{C}$, $V_{DD} = 5.0 \pm 0.25 \text{ V}$

Parameter	Symbol	Min.	Typ	Max.	Unit
Input Voltage HIGH	V_{INH}	2.2	---	---	V
Input Voltage LOW	V_{INL}	---	---	0.6	V
Output Voltage HIGH	V_{OH}	2.4	---	---	V
Output Voltage LOW	V_{OL}	---	---	0.4	V
Supply Current (Logic)	I_{DD}	3.8	---	---	mA
Supply Current (LCD Driver)	I_0	3.4	---	---	mA
Duty Ratio	---	---	1 / 16	---	---

LED BACKLIGHT (STANDARD COLOR GREEN)

Parameter	Symbol	Min.	Typ	Max.	Unit
Supply Voltage	V_F	3.8	4.0	4.2	V
Supply Current	I_F [at 25°C]	---	225	300	mA
Lamp Style	---	---	03	---	---

PIN TABLE

Pin	Symbol	Signal Description
1	V_{SS}	GND (0 V)
2	V_{DD}	Power Supply (5 V)
3	V_0	Supply Voltage (LCD Driver)
4	RS	Register Select -LOW = Instruction, High = Data
5	R / $\bar{W}$	Read / Write LOW = MPU to LCM, HIGH = LCM to MPU
6	E	Enable R / $\bar{W}$ = LOW: Data are taking over at falling edge of E R / $\bar{W}$ = HIGH: Data can be read at E = 1
7 to 14	DB ₀ to DB ₇	Data Bus - Software selectable 4 or 8 Bit Mode
15	+V _{LED}	Anode of LED Unit
16	-V _{LED}	Cathode of LED Unit

ADDITIONAL INFORMATION

- ◆ Display Connector Type: 2 x 7 pin
- ◆ Controller Type - SPLC 780 (1) or compatible

BLOCK DIAGRAM

