Data Modul Inc. - 120 Commerce Drive - Hauppauge New York 11788
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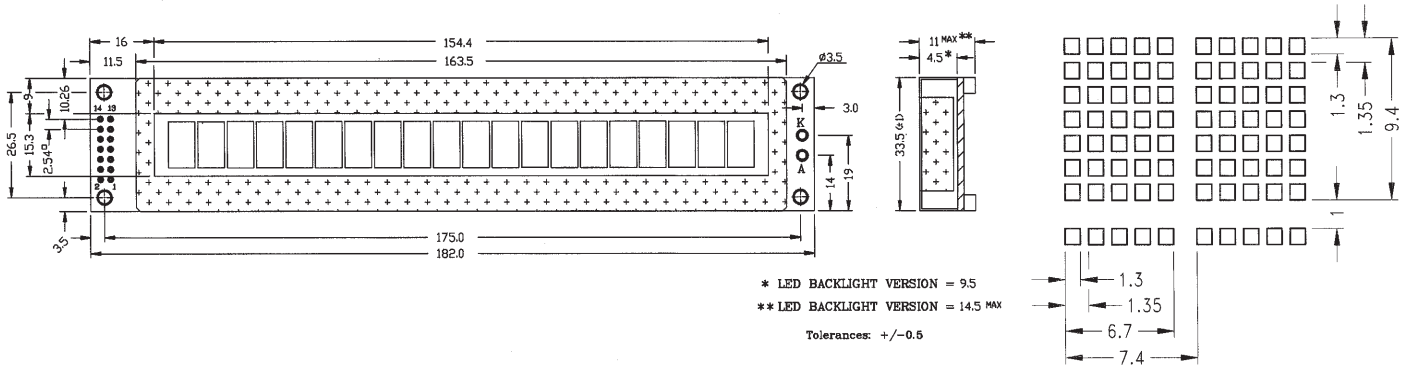
BT 12009

1 Line x 20 Characters



Dimensions [mm] **Dot Size**

Character LCD Modules

MECHANICAL DATA

Parameter	Width x Height x Depth	Unit
Outline Dimensions	182 x 33.5 x 10 (with LED: 14)	mm
Effective viewing area	154 x 15.3	mm
Dot Size	1.30 x 1.30	mm
Dot Pitch	1.35 x 1.35	mm
Character Matrix	5 x 7	dots
Character Size	6.7 x 9.4	mm
Character Pitch	7.4	mm
Weight	Approximate 80 (with LED: 90)	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: Ta = 25°C, V_{DD} = 5.0$\pm$ 0.25 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}	---	1.5	---	mA
Supply Current (LCD Driver)	I_0	---	0.5	---	mA
Duty Ratio	---	---	1 / 8	---	---

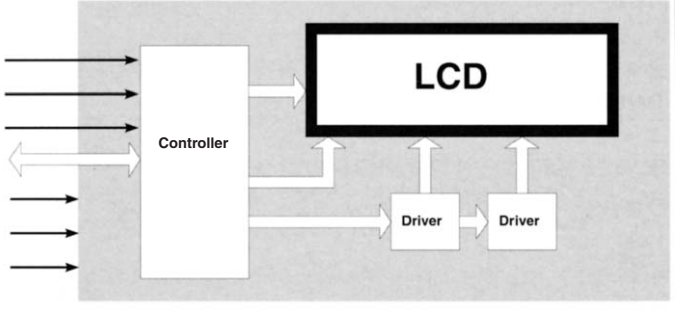
LED BACKLIGHT (STANDARD COLOR GREEN)

Parameter	Symbol	Min.	Typ	Max.	Unit
Supply Voltage	V_F	3.8	4.0	4.2	V
Supply Current	I_F[at 25°C]	---	340	510	mA
Lamp Style	---	---	04	---	---
LED Segments	---	---	34	---	pcs

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 / $\overline{W}$	Read / Write LOW = MPU to LCM, HIGH = LCM to MPU
6	E	Enable R / $\overline{W}$ = LOW: Data are taking over at falling edge of E R / $\overline{W}$ = 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
A	$+V_{LED}$	Anode of LED Unit
K	$-V_{LED}$	Cathode of LED Unit

ADDITIONAL INFORMATION

- Display Connector Type - without LED: 2 x 7 pin
- Display Connector Type - with LED: See Drawing
- Controller Type - SPLC 780 (1) or compatible

BLOCK DIAGRAM