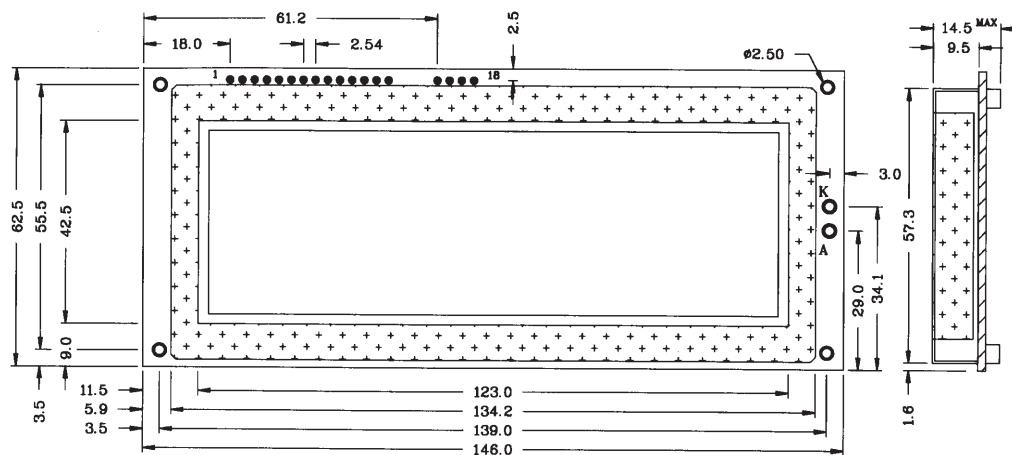


BT 120032

120 x 32 DOTS

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



Dimensions [mm]

Tolerances: ± 0.5

DESCRIPTION

The BT 120032 is a supertwist dot matrix LCD module with graphic capability. The module consists of a newly developed STN type LCD with high contrast and wide viewing angle and CMOS LCD driver and controller. Since the control LSI has built-in display data RAM no external controller is necessary.

MECHANICAL DATA

Parameter	Width x Height x Depth	Unit
Outline Dimensions	146 x 62.5 x 11 (with LED: 14.5)	mm
Effective viewing area	118.74 x 38.34	mm
Dot Size	0.93 x 1.14	mm
Dot Pitch	0.99 x 1.20	mm
Dot Matrix	120 x 32	dots
Weight	Approximate 102 (LED: 130)	g

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Min.	Max.	Unit
Supply Voltage (Logic)	$V_{DD} (V_{DD}-V_{SS})$	0	6.5	V
Input Voltage	V_I	V_{SS}	V_{DD}	V
Operating Temperature	T_{OP}	See Page 11		$^{\circ}C$
Storage Temperature	T_{ST}	See Page 11		$^{\circ}C$

ELECTRICAL CHARACTERISTICS

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

Parameter	Symbol	Min.	Typ	Max.	Unit
Input Voltage HIGH	V_{INH}	2.2	---	---	V
Input Voltage LOW	V_{INL}	---	---	0.8	V
Output Voltage HIGH	V_{OH}	2.4	----	----	V
Output Voltage LOW	V_{OL}	----	----	0.4	V
Supply Current (Logic)	I_{DD}	----	30	---	mA
Duty Ratio	---	---	1 / 32	---	---

LED BACKLIGHT (STANDARD COLOR GREEN)

Parameter	Symbol	Min.	Typ	Max.	Unit
Supply Voltage	V_F	3.8	4.0	4.2	V
Supply Current	$I_F [at 25^{\circ}C]$	---	540	810	mA
Lamp Style	---	---	04	---	---
LED Segments	---	---	54	---	pcs

FEATURES

- ◆ Single 5V power supply
- ◆ Built-in display data RAM (8kB)
- ◆ Mechanically compatible to BT 42008 display
- ◆ Built-in Controller SED 1330 (1)
- ◆ High contrast and wide viewing angle
- ◆ Low power consumption
- ◆ Light weight / compact dimensions
- ◆ Driver SED 1180F (2), SED 1190F (1)
- ◆ Temperature compensable (only AV-Type)

DISPLAY CONNECTOR

Pin	Symbol	Signal Description
1	V_{SS}	GND (0V)
2	V_{DD}	Power Supply (5V)
3	V_0	Contrast Voltage Regulation
4	RS	Register Select R / W = LOW: RS = LOW: Data write RS = High: Command write R / W = HIGH: RS = LOW: Status flag read RS = HIGH: Data read
5	R / $\bar{W}$	Read / Write - LOW = MPU to LCD, High = LCD 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
15	$\bar{CS}$	Chip Select (Active LOW)
16	$\bar{RES}$	Reset (Active LOW)
17	V_{EE}	Negative Voltage Output
18	NC	Not Connected
A	$+V_{LED}$	Anode of LED Unit
K	$-V_{LED}$	Cathode of LED Unit

BLOCK DIAGRAM

