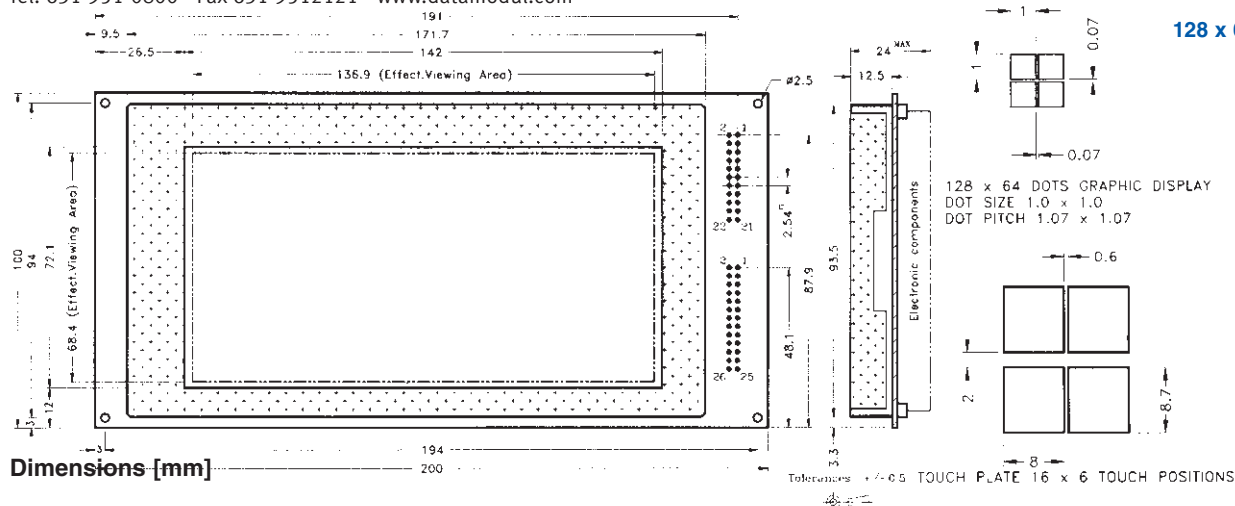




DESCRIPTION

The BT 128064 is a supertwist dot matrix LCD module with graphics capability. The module consists of a newly developed 240 degree twist STN type LCD with high contrast, wide viewing angle, CMOS LCD driver, and controller. The control LSI SED 1330 has various graphics and text capabilities and is directly connectable to the MPU bus.

MECHANICAL DATA

Parameter	Width x Height x Depth	Unit
Outline Dimensions	200 x 100 x 24	mm
Effective viewing area	136.89 x 68.41	mm
Dot Size	1.0 x 1.0	mm
Dot Pitch	1.07 x 1.07	mm
Dot Matrix	128 x 64	dots
Weight	Approximate 246 (LED: 285)	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		°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}	---	---	0.8	V
Output Voltage HIGH	V_{OH}	2.4	---	---	V
Output Voltage LOW	V_{OL}	---	---	0.4	V
Supply Current (Logic)	I_{DD}	---	35	---	mA
Duty Ratio	---	---	1 / 64	---	---

LED BACKLIGHT (STANDARD COLOR GREEN)

Parameter	Symbol	Min.	Typ	Max.	Unit
Supply Voltage	V_F	3.8	4.0	4.1	V
Supply Current	I_F [at 25°C]	---	300	450	mA
Lamp Style	---	---	04	---	---
LED Segments	---	---	162	---	pcs

FEATURES

- ◆ Single 5V power supply
- ◆ Large dots for high contrast and wide viewing angle
- ◆ LED and EL backlight available
- ◆ Built-in Controller SED 1335 (1)
- ◆ Text and graphic screen can be combined
- ◆ Driver SED 1189F (2), SED 1190F (1)
- ◆ Interface selectable by jumper

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 / W = LOW: Data are taking over at falling edge of E R / 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	+ V_{LED}	Anode of LED Unit
19	- V_{LED}	Cathode of LED Unit
20	EL	Electroluminescent Lamp
21	EL	Electroluminescent Lamp
22	NL	No Connection

BLOCK DIAGRAM

