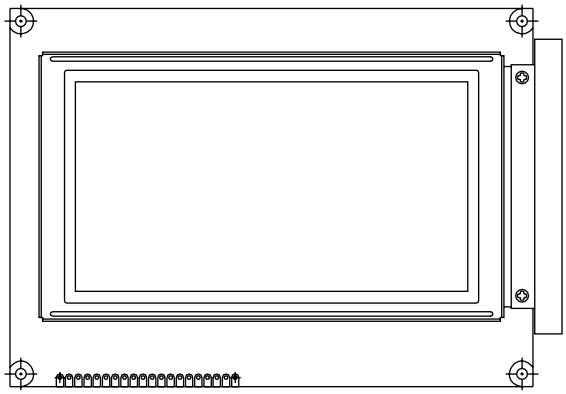
240 x 128 Graphic LCD



FEATURES

- Type: Graphic
- Display format: 240 x 128 dots
- Built-in controller: Toshiba T6963C
- Duty cycle: 1/128
- Built-in N.V.
- Temperature compensation optional
- Compliant to RoHS directive 2002/95/EC

Pb-free
RoHS COMPLIANT

MECHANICAL DATA

ITEM	STANDARD VALUE	UNIT
Module Dimension	144.0 x 104.0	mm
Viewing Area	114.0 x 64.0	
Dot Size	0.40 x 0.40	
Dot Pitch	0.45 x 0.45	
Mounting Hole	138.0 x 99.0	
Character Size	N/a	

ABSOLUTE MAXIMUM RATINGS

ITEM	SYMBOL	STANDARD VALUE			UNIT
		MIN.	TYP.	MAX.	
Power Supply	V_{DD} to V_{SS}	4.75	5.0	5.25	V
Input Voltage	V_I	- 0.3	-	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}	L level	0.7 V_{DD}	-	V_{DD}	V
	V_{IO}	H level	-	-	0.3 V_{DD}	
Supply Current	I_{DD}	V_{DD} = + 5 V	0	55	60	mA
Recommended LC Driving Voltage for Normal Temperature Version Module	V_{DD} to V_0	- 20 °C	-	-	-	V
		0 °C	20.3	21.4	22.5	
		25 °C	18.0	19.1	20.2	
		50 °C	17.8	18.9	20.0	
		70 °C	-	-	-	
LED Forward Voltage	V_F	25 °C	-	4.2	-	V
LED Forward Current	I_F	25 °C	-	900	1800	mA
CCFL Forward Voltage	V_F	25 °C	-	250	590	V_{RMS}
CCFL Forward Current	I_F	25 °C	-	-	5.5	mA_{RMS}
EL Power Supply Current	I_{EL}	V_{EL} = 110 V_{AC}, 400 Hz	-	-	5.0	mA

OPTIONS

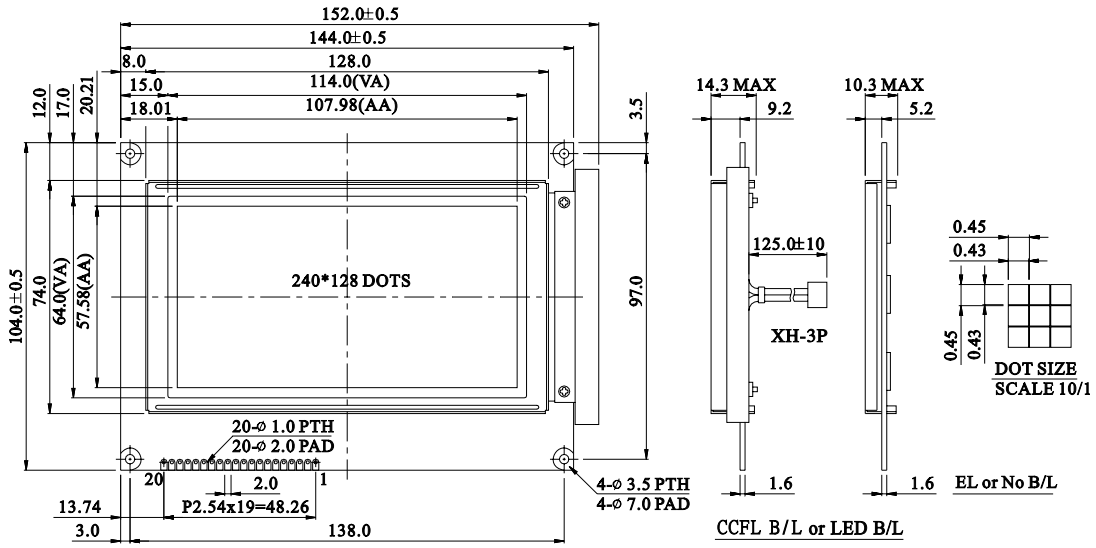
PROCESS COLOR						BACKLIGHT			
TN	STN Gray	STN Yellow	STN Blue	FSTN B&W	STN Color	None	LED	EL	CCFL
	x	x	x	x		x	x	x	x

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

INTERFACE PIN FUNCTION

PIN NO.	SYMBOL	FUNCTION
1	V_{SS}	Power supply (Ground)
2	V_{DD}	Power supply (+ 5 V)
3	V_0	Power supply for LCD driving
4	C/D	Command/data read/write
5	$\overline{RD}$	Data read
6	$\overline{WR}$	Data write
7	DB0	Data bus line
8	DB1	Data bus line
9	DB2	Data bus line
10	DB3	Data bus line
11	DB4	Data bus line
12	DB5	Data bus line
13	DB6	Data bus line
14	DB7	Data bus line
15	$\overline{CE}$	Chip enable
16	$\overline{RESET}$	Reset signal
17	V_{EE}	Negative voltage output
18	MD2	Control signal
19	FS1	Font selection
20	NC	No connection

DIMENSIONS in millimeters



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