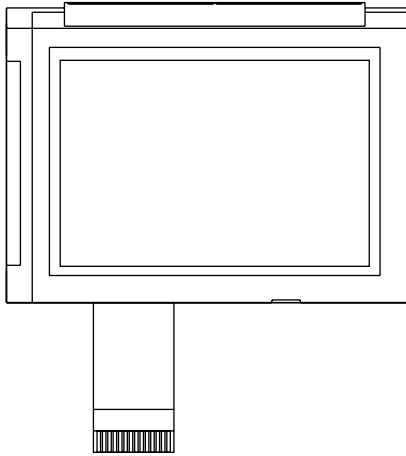


240 x 160 Graphic LCD



FEATURES

- Type: Graphic
- Display format: 240 x 160 dots
- Built-in controller: None
- Duty cycle: 1/160
- + 5 V power supply
- Compliant to RoHS directive 2002/95/EC


RoHS
COMPLIANT

MECHANICAL DATA		
ITEM	STANDARD VALUE	UNIT
Module Dimension	75.85 x 56.7 x 5.4	mm
Viewing Area	66.0 x 47.5	
Dot Size	0.22 x 0.22	
Dot Pitch	0.24 x 0.24	
Mounting Hole	N/a	
Character Size	N/a	

ABSOLUTE MAXIMUM RATINGS					
ITEM	SYMBOL	STANDARD VALUE			UNIT
		MIN.	TYP.	MAX.	
Power Supply	V_{DD} to V_{SS}	2.5	5.0	5.5	V
Input Voltage	V_I	0	-	V_{DD}	

Note

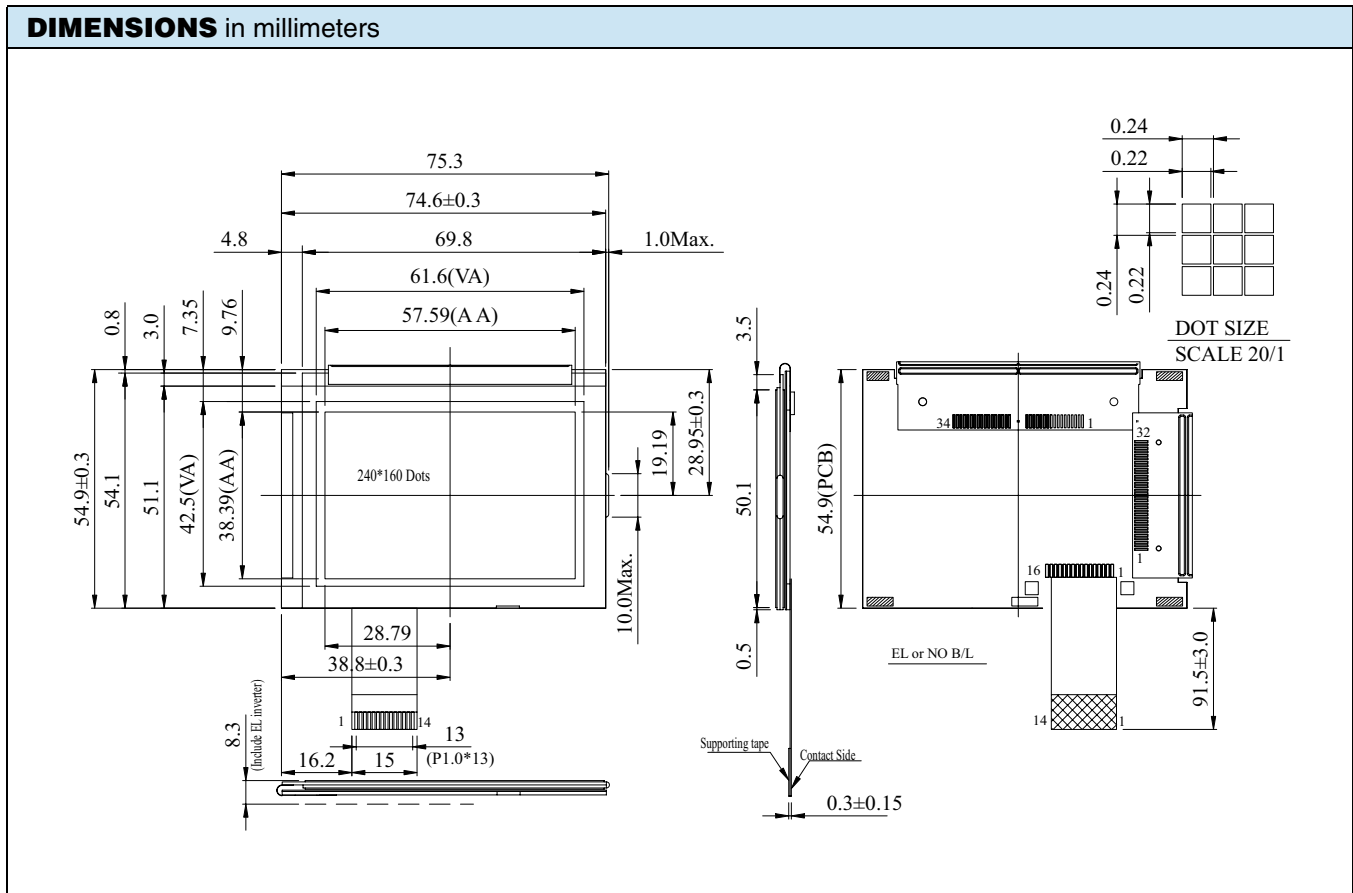
- $V_{SS} = 0$ V, $V_{DD} = 5.0$ V

ELECTRICAL CHARACTERISTICS						
ITEM	SYMBOL	CONDITION	STANDARD VALUE			UNIT
			MIN.	TYP.	MAX.	
Input Voltage	V_{DD}	-	2.5	-	5.5	V
Supply Current	I_{DD}	-	-	-	2.0	mA
Recommended LC Driving Voltage for Normal Temperature Version Module	V_{DD} to V_0	- 20 °C	-	-	21.5	V
		0 °C	-	-	-	
		25 °C	-	19.5	-	
		50 °C	-	-	-	
		70 °C	17.5	-	-	
LED Forward Voltage	V_F	25 °C	3.4	3.5	3.6	V
LED Forward Current	I_F	25 °C	64.0	80.0	120.0	mA
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	

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

INTERFACE PIN FUNCTION		
PIN NO.	SYMBOL	FUNCTION
1	CL2	Data shift pulse
2	CL1	Data latch pulse
3	FLM	Scan start-up signal
4	M/NC	Frame reverse signal (alternate signal)
5	DB0	Data bus line
6	DB1	Data bus line
7	DB2	Data bus line
8	DB3	Data bus line
9	V _{EE}	Power supply for LCD
10	V _{DD}	Power supply for logic
11	V _{SS}	Ground
12	BLE	EL control signal
13	V _{ELG}	Ground for EL
14	V _{EL}	Power supply for EL
15	V _{EE}	Negative voltage output
16	DISP	Display off





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