

1 X 20 DOT MATRIX (5 X 7), VACUUM FLUORESCENT DISPLAY

The VL-0120-53 is a vacuum fluorescent display with 9-mm high characters arranged in a 5 x 7 dot matrix format. The Vacuum Fluorescent display module is equipped with drivers, refresh memory, character generator, microcomputer, scanning circuit, and interface to the host system. All the operations necessary for the display are conducted within the module, once data is inputted into the modules, thereby maintaining the display automatically. Also rewriting of the display data is easily available.

The VL-0120-53 microcomputer performs scanning of the grid of the Vacuum Fluorescent tube, while at the same time, picks up the character patterns to be displayed at in their respective character position.

FEATURES

Format: 1 line of 20 characters	Font: English, General European
Character Height: 9mm	Color: Blue Green
Character Spacing: 8.3mm, C to C	Luminance: 100 fL min
Character Design: 5 x 7 dot matrix	Viewing Angle: 150°
Character Set: 96 Character ASCII	Life: 100,000+ hours

SPECIFICATIONS***Absolute Maximum Ratings***

PARAMETER	SYM	MIN	MAX	UNITS
Supply Voltage	V _{CC}	-	+5.25	Volts
High Level Input Voltage	V _{IH}	-	V _{CC}	Volts
Low Level Input Voltage	V _{IL}	-	0.8	Volts
Vibration (Sine) (10 -55 Hz)		-	2	G
Shock Non-Operating			20	G

Recommended Operating Conditions

PARAMETER	SYM	MIN	TYP	MAX	UNITS
Supply Voltage	V _{CC}	4.75	5.0	5.25	VDC
Supply Current	I _{CC}	-	0.6	0.7	A
High Level Output Current (V _{OH} = 2.4VDC)	I _{OH}	-	-	-400	μA
Low Level Output Current (V _{OL} = 0.45VDC)	I _{OL}	-	-	2	mA
High Level Input Voltage	V _{IH}	2.0	-	V _{CC}	VDC
Low Level Input Voltage	V _{IL}	-0.5	-	0.8	VDC
High Level Output Voltage	V _{OH}	2.4	-	-	VDC
Low Level Output Voltage	V _{OL}	-	-	0.45	VDC

Environmental Characteristics

Operating Temperature	0 to 55 °C
Storage Temperature	-40 to +85 °C
Operating Relative Humidity	0 to 95% non-condensing

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J1 - Power Connector

Pin Number	Function
1	+5 VDC
2	N/C
3	N/C
4	Common
5	N/C
6	RESET

J2 - Data Connector

Pin Number	Function	Pin Number	Function	Pin Number	Function
1	Serial In/Self Test	10	Common	19	Data 2 ⁴
2	Common	11	Data 2 ⁰ (LBS)	20	Common
3	Device Select	12	Common	21	Data 2 ⁵
4	Common	13	Data 2 ¹	22	Common
5	Read	14	Common	23	Data 2 ⁶
6	Common	15	Data 2 ²	24	Common
7	Address Zero Bit	16	Common	25	Data 2 ⁷ (MSB)
8	Common	17	Data 2 ³	26	Common
9	Write	18	Common		

Outline and Mounting Drawing:

