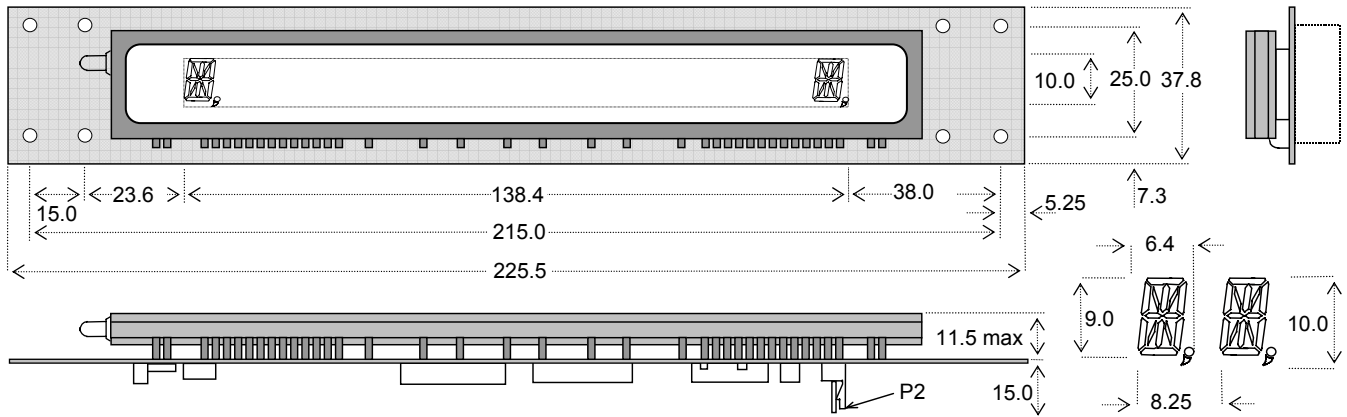


Vacuum Fluorescent Display Module VAF169-2SSB/-22SS

- 1 Line x 16 Characters
- 9mm High 14 Segment Character
- Single 5V Supply
- High Brightness Blue-Green Display
- 64 Character Font Set
- 8 Bit Sync-Serial HCMOS Buffered Interface

This single board display module consists of a 16 character VFD, a DC/DC converter, plus a MSC1937 VFD controller, refresh memory and a character generator.

VAF169-22SS has JP3 link closed, so the display is on at power-up.



ELECTRICAL SPECIFICATION

Parameter	Value	Symbol
Power Supply Voltage	5VDC +/- 5%	VCC
Power Supply Current	Typ. 300 mAdc	ICC
Logic High Input	2.4VDC min. (VCC = 5V)	VIH
Logic Low Input	1.0VDC max. (VCC = 5V)	VIL

Note:- Power-on rise time for VCC should be less than 100ms.

OPTICAL and ENVIRONMENTAL SPECIFICATION

Parameter	Value
Character Size (X x Y)	5.0mm x 9.0mm
Character Pitch	8.8mm
Luminance	Min 640 cd/m ² (200 fL)
Colour Of Illumination	Blue-Green (505nm)
Operating Temperature	-40°C to + 85°C
Storage Temperature	-50°C to + 85°C
Operating Humidity	20 to 80% RH

SOFTWARE COMMANDS

Instruction	Hex
Character Write	00-3F
Cursor Position AF=1...AE=16	A0-AF
Brightness Control	E0-FF

CONNECTOR P2

Pin	Function
1	+5V
2	CLK
3	NC
4	D0
5	RESET
6	0V (GND)

At power on reset Display On/Off is set as JP3 link JP3 open - Display Off JP3 closed - Display On

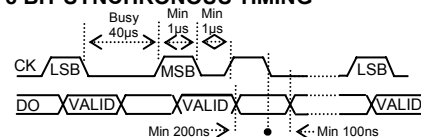
Note: For test mode connect P1 Pin 5 to Pin11

Use the reset input prior to every message for good synchronization

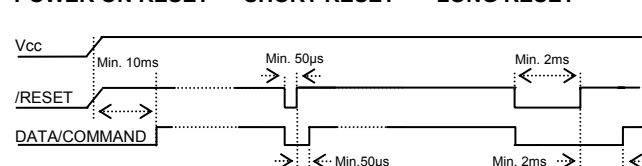
EXAMPLE INITIALISATION

Function	Data
Set Brightness (Display On)	FFH
Set Buffer Pointer	AFH
Send Data (00→3FH)	X+X..

8 BIT SYNCHRONOUS TIMING



POWER ON RESET SHORT RESET LONG RESET



A Short reset sets the display on/off as JP3 and positions the buffer pointer at the left most character. A Long Reset causes the controller to re-initialise.

Dimensions in mm & subject to tolerances. Mounting holes 4mm dia.

CHARACTER SET

00	08	10	18	20	28	30	38
01	09	11	19	21	29	31	39
02	0A	12	1A	22	2A	32	3A
03	0B	13	1B	23	2B	33	3B
04	0C	14	1C	24	2C	34	3C
05	0D	15	1D	25	2D	35	3D
06	0E	16	1E	26	2E	36	3E
07	0F	17	1F	27	2F	37	3F

CONTACT

JP1 JUMPER LINKS

1 & 2	Clock or Data reset
2 & 3	Reset Low
2 & 4	Reset High

JP2 JUMPER LINKS

1 & 2	Clock Line Reset
2 & 3	Data Line Reset

If Clock or Data reset is selected line must be held high for 250µS for short reset, 2.5mS for long reset

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