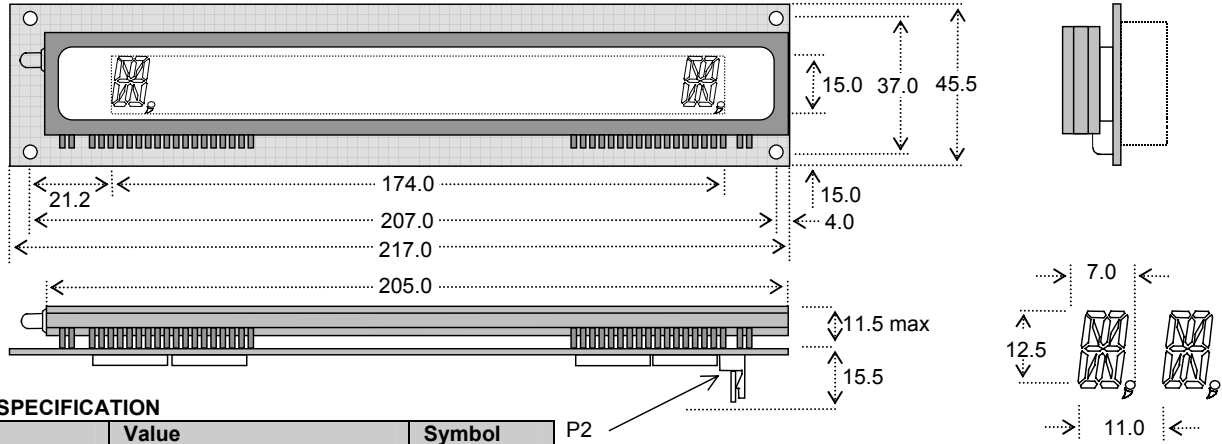


Vacuum Fluorescent Display Module

VAF1613-2SSB

- ❑ 1 Line x 16 Characters
- ❑ 13mm High 16 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 VFD controller, refresh memory and a character generator.



ELECTRICAL SPECIFICATION

| Parameter | Value | Symbol |
|----------------------|------------------------|--------|
| Power Supply Voltage | 5VDC +/- 5% | VCC |
| Power Supply Current | Typ. 600 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) | 7.0mm x 12.5mm |
| Character Pitch | 11.0mm |
| Luminance | Min 700 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 (non condensing) |

SOFTWARE COMMANDS

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

EXAMPLE INITIALISATION

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

CONNECTOR P2

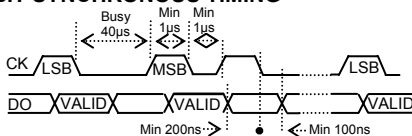
| Pin | Function |
|-----|----------|
| 1 | +5V |
| 2 | CLK |
| 3 | NC |
| 4 | D0 |
| 5 | RESET |
| 6 | 0V (GND) |

At power on reset Display On/Off is set as LK1 link
LK1 open - Display Off
LK1 closed - Display On

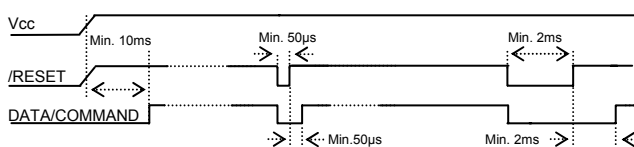
Note: For test mode connect P1 Pin5 to Pin 11

Use the reset input prior to every message for good synchronization.

8 BIT SYNCHRONOUS TIMING



POWER ON RESET SHORT RESET LONG RESET



A Short reset sets the display on/off as LK1 and positions the buffer pointer at the left most character. A Long Reset causes the controller to re-initialise.

P2

Dimensions in mm & subject to tolerances. Mounting holes 4.0mm 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 |

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

CONTACT

| | |
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Subject to change without notice.
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