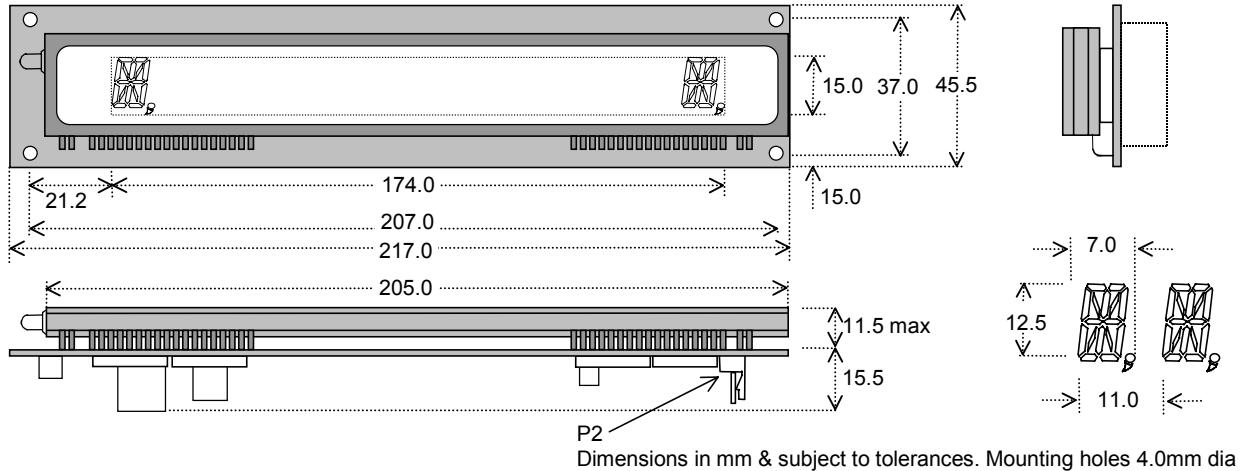


# Vacuum Fluorescent Display Module

# AU1613-K2SS

- ❑ 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 MSC1937 VFD controller, refresh memory and a character generator. 12V Supply Option Available (-V12CS).



## 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 <sup>2</sup> (200 fL)
Colour of Illumination	Blue-Green (505nm)
Operating Temperature	-10°C to +55°C
Storage Temperature	-20°C to +70°C
Operating Humidity	20 to 80% RH (non condensing)

## SOFTWARE COMMANDS

Instruction	Hex
Character Write	00-3F
Cursor Position AF=1...AF=16	A0-AF
Duty Cycle Register	E0-FF
Digit Counter Control	C0
Test Mode	80-9F

## CONNECTER P2

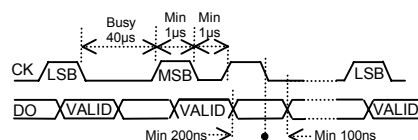
Pin	Function
1	+5V
2	CLK
3	NC
4	D0
5	RESET
6	0V (GND)

## EXAMPLE INITIALISATION

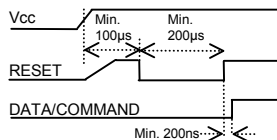
Function	Data
Set Duty Cycle (Display On)	FFH
Set Buffer Pointer	AFH
Set Digit Counter (16)	COH
Send Data (00→3FH)	X+X..

At power on reset the duty cycle is set to 00H (Display Off). Use the reset input prior to every message for good synchronization.

## 8 BIT SYNCHRONOUS TIMING



## POWER ON RESET



## 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

## RST1 JUMPER LINKS

1 & 2	Reset Low
2 & 3	Reset High

## RST2 JUMPER LINKS

1 & 2	Data Line Reset
2 & 3	Power On Reset
2 & 4	Clock Line Reset
OPEN	Ext Pin Reset

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