Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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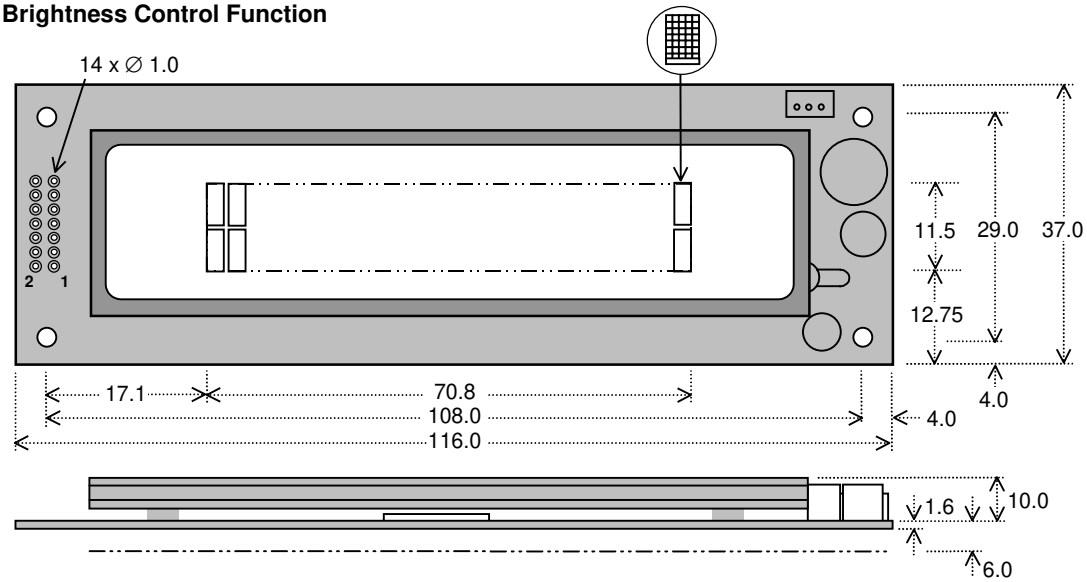
5X7 Dot Character VFD Module CU20025ECPB-W1J

- **2 X 20 Characters 5mm High**
- **LCD Compatible Design**
- **Wide Operating Temp -40ºC to +85ºC**
- **Single 5V Supply with Power Save Mode**
- **High Brightness Blue Green Display**
- **Selectable 4/8 bit M68/i80 Interface**
- **ASCII + Extended Character Font**
- **8 User Definable Character RAM**
- **4 Level Brightness Control Function**

The module includes the Vacuum Fluorescent Display glass, driver and micro-controller ICs with refresh RAM, character generator and interface logic.
The high speed 8 bit parallel interface is 5V CMOS compatible suitable for connection to a host CPU bus which can be set to M68 or i80 series interface by a solder link on the module. Brightness control and power down functions are provided. A full data sheet is available.



Dimensions in mm & subject to tolerances. Mounting holes 3.5mm dia.

ELECTRICAL SPECIFICATION

Parameter	Symbol	Value	Condition
Power Supply Voltage	V_{CC}	5.0VDC +/- 5%	GND=0V
Power Supply Current	I_{CC}	130mADC typ.	V_{CC}=5V
Logic High Input	V_{IH}	2.0VDC min.	V_{CC}=5V
Logic Low Input	V_{IL}	0.8VDC max.	V_{CC}=5V
Logic High Output	V_{OH}	Vcc-0.4VDC min.	I_{OH} = -1.6mA
Logic Low Output	V_{OL}	0.4VDC max.	I_{OL} =1.6mA

The power on rise time should be less than 50ms.The inrush current at power on can be 2 x I_{CC}.
The Icc current is 10mA maximum while in power down mode.

OPTICAL and ENVIRONMENTAL SPECIFICATIONS

Parameter	Value
Character Size/Pitch (XxY mm)	2.4 x 4.7/3.6 x 6.1
Dot Size/Pitch (XxY mm)	0.4 x 0.5/0.5 x 0.7
Luminance	700 cd/m^2 (204 fL) Typ.
Colour of Illumination	Blue-Green (Filter for more colours)
Operating Temperature	-40°C to +85°C
Storage Temperature	-50°C to +85°C
Operating Humidity (non condensing)	20 to 80% RH @ 25°C

SOFTWARE COMMANDS

Instruction	R/W	RS	D0-D7
Clear Display	L	L	01H
Cursor Return Home	L	L	02H-03H
Entry Mode Set	L	L	04H-07H
Display ON/OFF	L	L	08H-0FH
Cursor/Display Shift	L	L	10H-1FH
Function Set	L	L	20H-3FH
Brightness Set	L	H	00H-03H
Set CG RAM Addr.	L	L	40H-7FH
Set DD RAM Addr.	L	L	80H-E7H
Read BUSY/Addr.	H	L	00H-FFH
Write Data to RAM	L	H	00H-FFH
Read Data from RAM	H	H	00H-FFH

PIN CONNECTIONS

Pin	Sig	Pin	Sig
1	GND	2	V_{CC}
3	(FNC)	4	RS
5	R/$\overline{W}$ #	6	E #
7	D0	8	D1
9	D2	10	D3
11	D4	12	D5
13	D6	14	D7

TIMING PARAMETERS (min)

(E)nable Cycle Time	1000ns
(E)nable Pulse Width	450ns
Hold after (E)nable	10ns

CHARACTER FONT

JUMPER LINKS

 # Interface M68/i80
When jumper link JP2 is soldered, these inputs change to i80 series CPU control lines.
Pin 5= /WR Pin 6 = /RD

Pin 3 (Fnc) Input
This is normally open circuit. If pads JP1.1 and JP1.2 are linked. Pin 3 = /Reset.

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