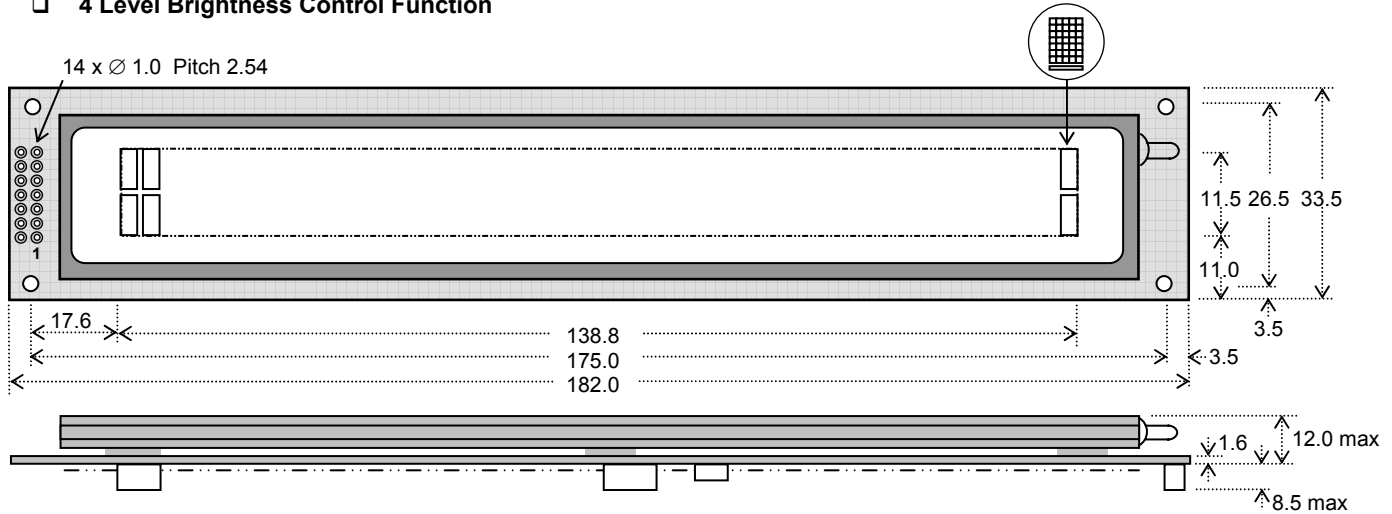


5X7 Dot Character VFD Module

CU40025-UW6J

- ❑ 2 X 40 Characters 5mm High
- ❑ LCD Compatible Design
- ❑ Wide Operating Temp -40°C to +85°C
- ❑ 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 save functions are provided. Please call for a full data sheet.



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}	300mADC typ.	V _{CC} =5V
Logic High Input	V _{IH1}	V _{SS} +2.0VDC min.	V _{CC} =5V
Logic Low Input	V _{IL1}	V _{SS} +0.8VDC max	V _{CC} =5V
Logic High Output	V _{OH}	V _{CC} -0.4VDC min.	I _{OH} = -4.0mA
Logic Low Output	V _{OL}	V _{SS} +0.4VDC max	I _{OL} =4.0mA

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

OPTICAL and ENVIRONMENTAL SPECIFICATIONS

Parameter	Value
Character Size/Pitch (XxY mm)	2.3 x 4.7/3.5 x 6.1
Dot Size/Pitch (XxY mm)	0.38 x 0.5/0.48 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/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	500ns
(E)nable Pulse Width	230ns
Hold after (E)nable	10ns

CHARACTER FONT

H _E X	00	10	20	30	40	50	60	70	80	90	A0	B0	C0	D0	E0	F0
00	|	|	0	0	P	\	P	A	F	|	-	9	E	0	P	
01	|	|	1	A	0	a	a	A	a	a	a	7	7	4	3	9
02	|	|	"	2	B	R	b	r	Δ	E	r	Y	Y	X	E	0
03	|	|	#	3	C	S	c	s	Δ	R	U	7	7	E	E	0
04	|	|	\$	4	D	T	t	a	a	#	\	I	I	T	H	0
05	|	|	%	5	E	U	e	u	E	0	.	7	7	1	5	0
06	|	|	&	6	F	V	f	v	0	+	7	7	2	3	P	Σ
07	|	|	'	7	G	U	g	u	0	0	7	7	7	7	9	π
08	|	|	(	8	H	X	h	x	0	!	4	7	7	U	r	X
09	|	|	)	9	I	Y	i	y	0	¢	7	7	U	U	"	Y
0A	|	|	z	*	:	J	Z	j	z	0	4	7	7	U	U	7
0B	|	|	+	:	K	K	(	0	Δ	7	7	E	0	°	7	
0C	|	|	,	<	L	Y	l	Y	\	2	7	7	7	7	0	7
0D	|	|	-	=	M	I	n	>	#	4	7	7	U	U	U	U
0E	|	|	.	>	N	^	n	^	^	†	7	7	U	U	U	U
0F	|	|	~	/	?	0	_	0	+	Δ	7	7	U	U	U	U

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 JP4.1 and JP4.2 are linked. Pin 3 = /Reset.

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