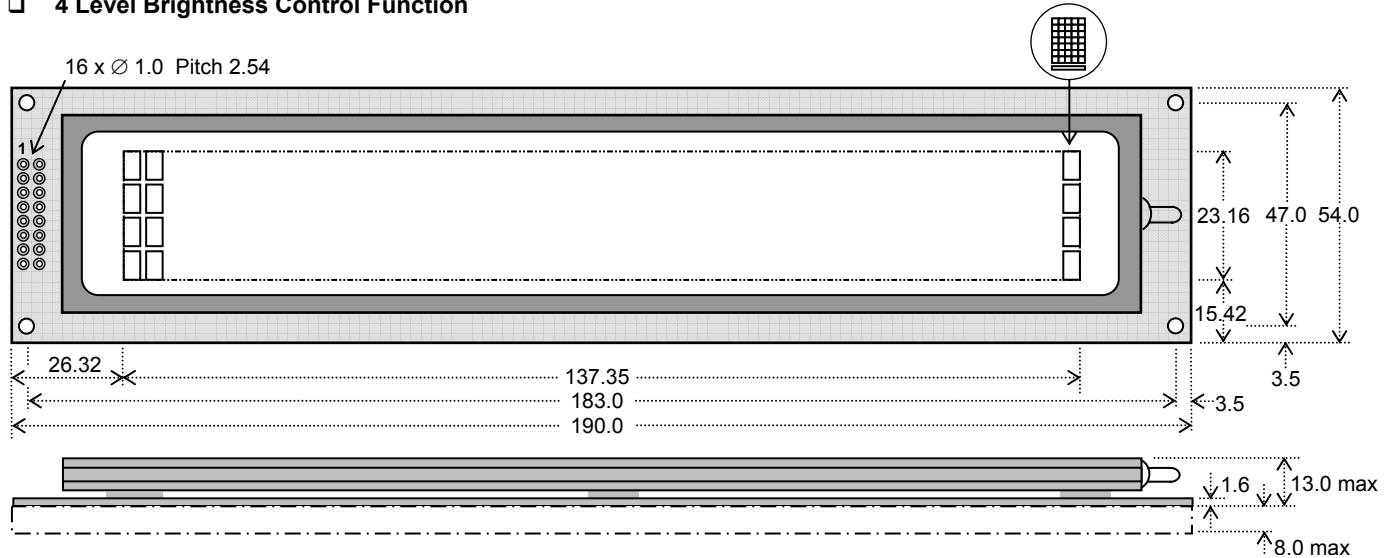


5X7 Dot Character VFD Module

CU40045-UW1J

- ❑ 4 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 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. 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}	520mADC typ.	V _{CC} =5V
Logic High Input	V _{IH}	V _{SS} +2.0VDC min.	V _{CC} =5V
Logic Low Input	V _{IL}	V _{SS} +0.8VDC max.	V _{CC} =5V
Logic High Output	V _{OH}	V _{CC} -0.8VDC min.	I _{OH} = -4.0mA
Logic Low Output	V _{OL}	0.6VDC 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)	2.07 x 4.89/3.47 x 6.09
Dot Size/Pitch (XxY mm)	0.29 x 0.48/0.44 x 0.63
Luminance	1000 cd/m ² Typ.
Colour of Illumination	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	D7	2	D6
3	D5	4	D4
5	D3	6	D2
7	D1	8	D0
9	E1	10	R/W
11	RS	12	NC
13	GND	14	V _{CC}
15	E2	16	NC

TIMING PARAMETERS (min)

(E)nable Cycle Time	500ns
(E)nable Pulse Width	230ns
Hold after (E)nable	10ns

CHARACTER FONT

Hex	00	10	20	30	40	50	60	70	80	90	A0	B0	C0	D0	E0	F0
00	|	0	1	2	3	4	5	6	7	8	9	-	0	1	2	3
01	|	!	"	#	\$	%	&	'	(	)	*	+	,	.	:	;
02	|	"	2	B	R	b	r	Δ	E	r	ι	υ	×	β	θ	
03	|	#	3	C	S	c	s	Δ	R	ι	υ	×	β	θ		
04	|	\$	4	D	T	d	t	Δ	#	\	/	ι	υ	×	β	θ
05	|	%	5	E	U	e	u	Δ	E	o	.	+	7	1	5	0
06	|	&	6	F	V	f	v	Δ	+	7	h	ι	υ	×	β	θ
07	|	'	7	G	W	g	w	Δ	o	7	7	7	7	7	7	7
08	|	(	8	H	X	h	x	Δ	ι	υ	×	β	θ	ι	υ	×
09	|	)	9	I	Y	i	y	Δ	φ	φ	7	ι	υ	×	β	θ
0A	|	*	:	J	Z	j	z	Δ	ι	υ	×	β	θ	ι	υ	×
0B	|	+	:	K	k	Δ	ι	υ	×	β	θ	ι	υ	×	β	θ
0C	|	,	<	L	l	Δ	ι	υ	×	β	θ	ι	υ	×	β	θ
0D	|	-	=	M	m	Δ	ι	υ	×	β	θ	ι	υ	×	β	θ
0E	|	.	>	N	n	Δ	ι	υ	×	β	θ	ι	υ	×	β	θ
0F	|	Δ	/	?	0	Δ	ι	υ	×	β	θ	ι	υ	×	β	θ

JUMPER LINKS

If pads JP2.2 and JP2.3 are linked for no longer than 10us module will be reset. If pads JP2.1 and JP2.2 are linked Pin 12 of CN1 = /Reset.

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