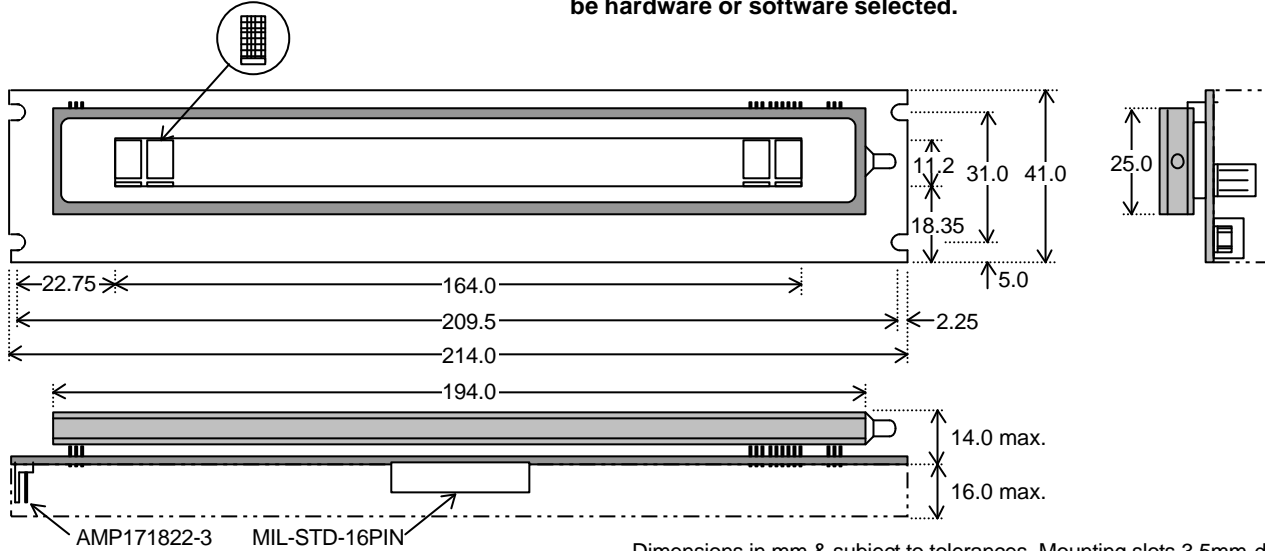


5X7 Dot Character VFD Module

CU209-TW200A

- ❑ 1 Lines of 20 Characters 9mm High
- ❑ High Speed Parallel/Serial Interface
- ❑ Wide Operating Temp -40°C to +85°C
- ❑ Single 5V Supply
- ❑ High Brightness Blue Green Display
- ❑ ASCII, Katakana & Extended Character Font
- ❑ 16 User Definable Characters

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. The asynchronous serial interface accepts baud rates up to 19,200 with or without parity (Default – 19200 BPS, Even Parity, International Font). Two character font tables can be hardware or software selected.



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

ELECTRICAL SPECIFICATION

Parameter	Symbol	Value	Condition
Power Supply Voltage	V _{CC}	5.0VDC +/- 5%	G _{ND} =0V
Power Supply Current	I _{CC}	TBA	V _{CC} =5V
Logic High Input	V _{IH}	0.8 x V _{CC} min.	V _{CC} =5V
Logic Low Input	V _{IL}	0.3 x V _{CC} max.	V _{CC} =5V
Logic High Output	V _{OH}	V _{CC} -1.5VDC min.	I _{OH} = -1.6mA
Logic Low Output	V _{OL}	1.5VDC max.	I _{OH} = 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 I_{CC} current is 10mA maximum while in power down mode.

OPTICAL and ENVIRONMENTAL SPECIFICATIONS

Parameter	Value
Character Size/Pitch (XxY mm)	6.3 x 9.1/8.3
Dot Size/Pitch (XxY mm)	0.98 x 1.0/1.33 x 1.35
Luminance	685 cd/m ² (200 fL) min.
Colour of Illumination	Blue-Green (Filter for more colours)
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C
Operating Humidity (non condensing)	20 to 80% RH @ 25°C

SOFTWARE COMMANDS

Instruction	D0-D7	Instruction	D0-D7
Back Space	08H	Cursor is invisible	16H
Horizontal Tab	09H	Cursor is blinking underline	17H
Line Feed	0AH	International Font	18H
Form Feed	0CH	Katakana Font	19H
Carriage Return	0DH	Euro Currency Mark	1AH
Clear Display	0EH	Escape	1BH
Cancel	0FH	>> Send User Font	+43H
Auto Carriage Return Mode	11H	>> Position cursor	+48H
Over-Write Mode	12H	>> Software Reset	+49H
Horizontal Scroll Mode	13H	>> Luminance	+4CH
Cursor on underline	14H	>> Flickerless Write	+53H
Cursor is blinking character	15H	>> Cursor Blink Speed	+54H

TIMING PARAMETERS (min)

Data Set Up To Write	100ns
Write Pulse Width	160ns
Hold After Write	10ns

Subject to change without notice.
Detailed specification on request.
IUK Doc Ref:03679 Iss.1 14 Nov 01

CHARACTER FONTS

		International Font										Additional Katakana													
		00	10	20	30	40	50	60	70	80	90	A0	B0	C0	D0	E0	F0	80	90	A0	B0	C0	D0	E0	F0
00																									
01																									
02																									
03																									
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08																									
09																									
0A																									
0B																									
0C																									
0D																									
0E																									
0F																									

PCB JUMPERS (O)PEN (L)INK

Baud	J2	J1	J0
19200	O	O	O
9600	O	O	L
4800	O	L	O
2400	O	L	L
1200	L	O	O
Parity	J4	J3	
EVEN	O	O	
ODD	O	L	
NONE	L	L/O	
Font	J4	JA	
International		L	
Katakana		O	

3 PIN POWER CONNECTOR

Pin	Sig
1	V _{CC} (5V)
2	SIN/TEST
3	G _{ND} (0V)

IDC DATA CONNECTOR

Pin	Sig	Pin	Sig
1	D7	9	/WR
2	D6	10	/CS
3	D5	11	SIN/TEST
4	D4	12	BUSY
5	D3	13	G _{ND} (0V)
6	D2	14	G _{ND} (0V)
7	D1	15	V _{CC} (5V)
8	D0	16	V _{CC} (5V)

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