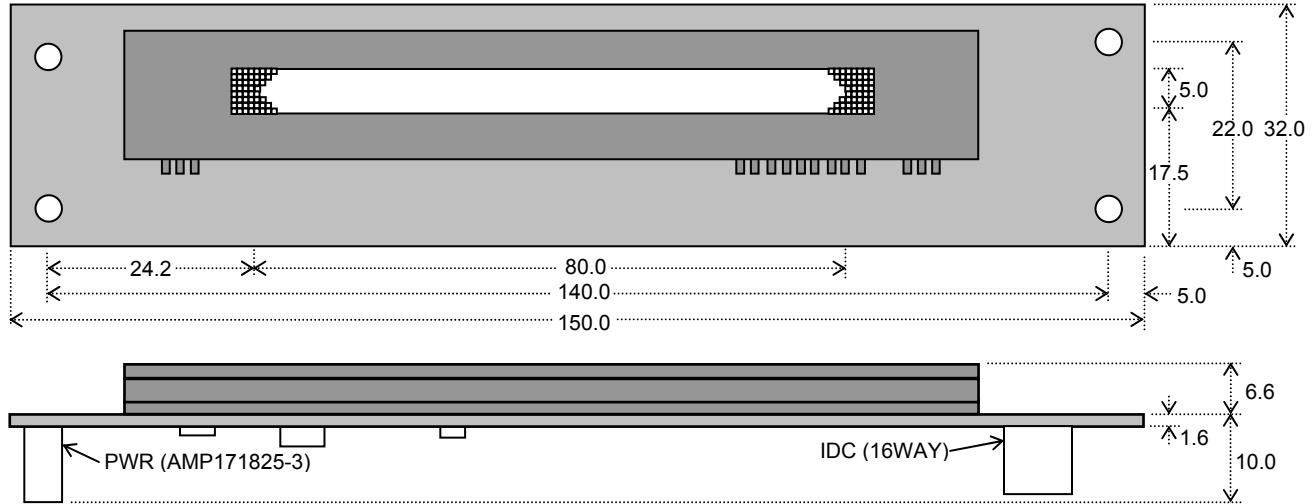


5X7 Dot Character VFD Module

CU205-KTW221A

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

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. Two character font tables can be hardware or software selected. User defined characters and many control commands are available.



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

ELECTRICAL SPECIFICATION

Parameter	Symbol	Value	Condition
Power Supply Voltage	Vcc	5.0VDC +/- 5%	GND=0V
Power Supply Current	Icc	200mADC max.	Vcc=5V
Logic High Input	VIH	2.0VDC min.	Vcc=5V
Logic Low Input	VIL	0.8VDC max.	Vcc=5V
Logic High Output	VOH	2.4VDC min.	IOH = -2.0mA
Logic Low Output	VOL	0.5VDC max.	IOL = 2.0mA

The power on rise time should be less than 50ms. The inrush current at power on can be 2 x Icc.

OPTICAL and ENVIRONMENTAL SPECIFICATIONS

Parameter	Value
Character Size/Pitch (XxY mm)	3.2 x 5.0/4.0
Dot Size/Pitch (XxY mm)	0.5 x 0.6/0.67 x 0.77
Luminance	700 cd/m ² (204 fL) Typ.
Colour of Illumination	Blue-Green (Filter for 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	International Font	18H
Horizontal Tab	09H	Katakana Font	19H
Line Feed	0AH	Escape	1BH
Form Feed	0CH	➤Send User Font	+43H
Carriage Return	0DH	➤Position cursor	+48H
Clear Display	0EH	➤Software Reset	+49H
Auto C.R Mode	11H	➤Luminance	+4CH
Overwrite Mode	12H	➤Flickerless Write	+53H
Horizontal Scroll Mode	13H	➤Cursor Blink Speed	+54H
5x7 Block Cursor On	15H	Character Data	20H+
Cursor Off	16H	User Character Data	00H+

TIMING PARAMETERS (min)

Parameter	Value	Notes
Data Set Up To Write	100ns	Subject to change without notice.
Write Pulse Width	160ns	Detailed specification on request.
Hold After Write	100ns	IUK Doc Ref:13272 Iss:2

14Feb06

CHARACTER FONTS

	International Font										Additional Katakana Font														
	00	10	20	30	40	50	60	70	80	90	A0	B0	C0	D0	E0	F0	90	90	A0	B0	C0	D0	E0	F0	
00																									
01																									
02																									
03																									
04																									
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06																									
07																									
08																									
09																									
0A																									
0B																									
0C																									
0D																									
0E																									
0F																									

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	GND (0V)
6	D2	14	GND (0V)
7	D1	15	Vcc (5V)
8	D0	16	Vcc (5V)

3 PIN POWER CONNECTOR

Pin	Sig
1	Vcc (5V)
2	SIN/TEST
3	GND (0V)

Mates with AMP171822-3

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	

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