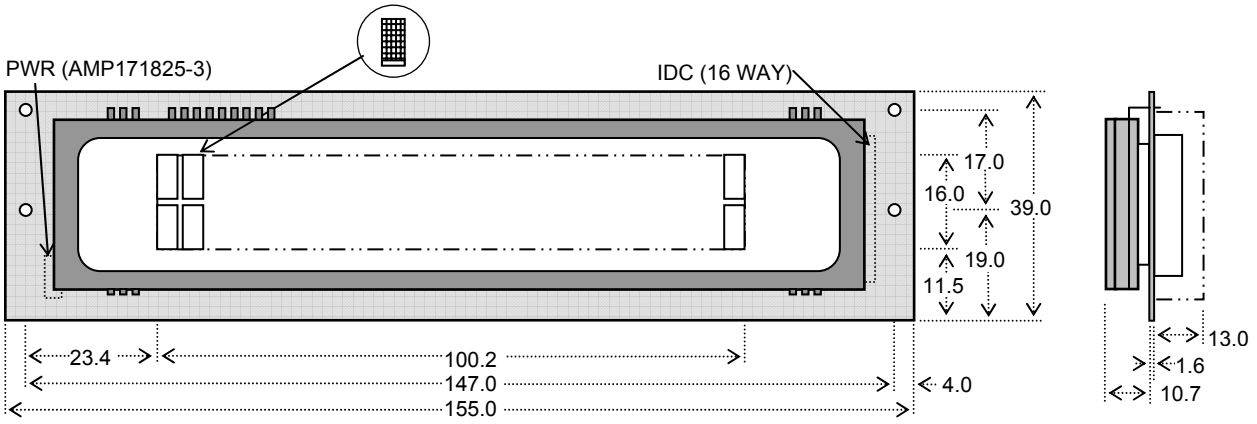
5X7 Dot Character VFD Module CU20026-TW200A

- **2 Lines 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	V_{CC}	5.0VDC +/- 5%	GND=0V
Power Supply Current	I_{CC}	290mADC typ.	Vcc=5V
Logic High Input	V_{IH}	2.0VDC min.	Vcc=5V
Logic Low Input	V_{IL}	0.8VDC max.	Vcc=5V
Logic High Output	V_{OH}	4.4VDC min.	I_{OH} = -2.0mA
Logic Low Output	V_{OL}	0.5VDC max.	I_{OL} =2.0mA

The power on rise time should be less than 100ms.The inrush current at power on can be 2 x I_{CC}.

OPTICAL and ENVIRONMENTAL SPECIFICATIONS

Parameter	Value
Character Size/Pitch (XxY mm)	3.3 x 5.05/5.1 x 9.95
Dot Size/Pitch (XxY mm)	0.5 x 0.55/0.7 x 0.75
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

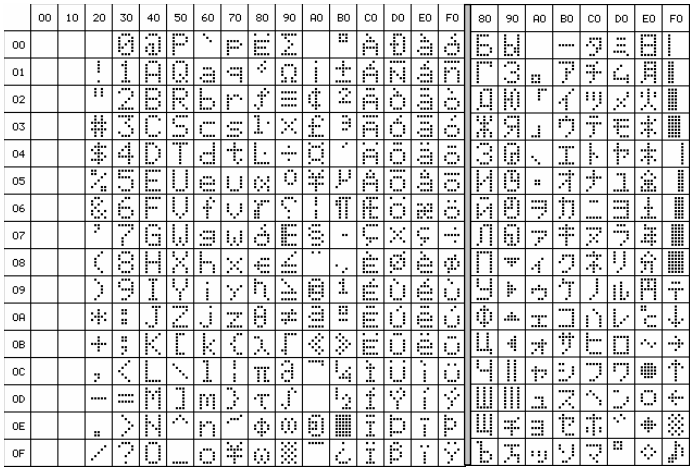
Instruction	D0-D7	Instruction	D0-D7
Back Space	08H	Blinking Cursor	17H
Horizontal Tab	09H	International Font	18H
Line Feed	0AH	Katakana Font	19H
Form Feed	0CH	Escape	1BH
Carriage Return	0DH	➢ Send User Font	+43H
Clear Display	0EH	➢ Position cursor	+48H
Increment Write Mode	11H	➢ Software Reset	+49H
Vertical Scroll Mode	12H	➢ Luminance	+4CH
Horizontal Scroll Mode	13H	➢ Flickerless Write	+53H
Underline Cursor On	14H	➢ Cursor Blink Speed	+54H
5x7 Block Cursor On	15H	Character Data	20H+
Cursor Off	16H	User Character Data	00H+

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: 4404 Iss:1 12Aug03

CHARACTER FONTS International Font / Additional Katakana Font



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	JA
International	L
Katakana	O

3 PIN POWER CONNECTOR

Pin	Sig
1	V_{CC} (5V)
2	S_{IN}/T_{EST}
3	GND (0V)

IDC DATA CONNECTOR

Pin	Sig	Pin	Sig
1	D7	9	/WR
2	D6	10	/CS
3	D5	11	S_{IN}/T_{EST}
4	D4	12	BUSY
5	D3	13	GND (0V)
6	D2	14	GND (0V)
7	D1	15	V_{CC} (5V)
8	D0	16	V_{CC} (5V)

CONTACT

Noritake Sales Office Tel Nos
Nagoya Japan: +81 (0)52-561-9867
Canada: +1-416-291-2946
Chicago USA: +1-847-439-9020
Munchen (D): +49 (0)89-3214-290
Itron UK: +44 (0)1493 601144
Rest Europe: +49 (0)61-0520-9220
www.noritake-itron.com