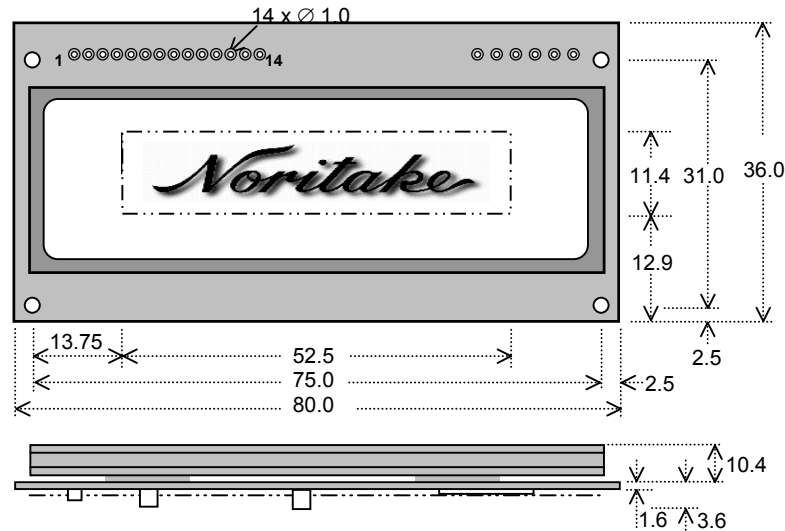


112x16 DOT GRAPHIC VFD Module

GU112X16G-7002

- ❑ Character Graphic ,Transformerless display
- ❑ Size compatible with U-Version
- ❑ Operating Temp -40°C to +85°C
- ❑ Single 5V Supply with Power Save Mode
- ❑ Smooth vertical/Horizontal scroll
- ❑ Proportional and scalable fonts
- ❑ 8 bit parallel & CMOS Serial interface
- ❑ Screen saver & window definition function
- ❑ 8 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.
This module have 8 bit parallel & CMOS syn. Or asyn. Serial Interface.
The module can simultaneously display graphic pattern and / or characters on screen.



Dimensions in mm & subject to tolerances. Mounting holes 2.5mm dia.

ELECTRICAL SPECIFICATION

Parameter	Symbol	Value	Condition
Power Supply Voltage	Vcc	5.0 VDC Max.	GND=0V
Power Supply Current	Icc	260mADC typ.	Vcc=5V
Logic High Input	V _{IH}	0.8VCC min.	Vcc=5V
Logic Low Input	V _{IL}	0.2VCC max.	Vcc=5V
Logic High Output	V _{OH}	3.5VDC min.	I _{OH} = -10.0uA
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 Icc.
The Icc current is 10mA maximum while in power down mode.

OPTICAL and ENVIRONMENTAL SPECIFICATIONS

Parameter	Value
PCB size/Display area (in mm)	80x36 / 52.5x31.45
Dot Size/Pitch (XxY mm)	0.33x0.575/ 0.47x0.725
Luminance	700 cd/m ² (204 fL) Typ.
Color of Illumination	Blue-Green (Filter for more colors)
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	Code
Character display	20H-FFH
Cursor set	1FH 24H xL xH yL yH
Display clear	0CH
Initialize display	1BH 40H
Specify International font	1BH 52H n
Vertical scroll mode	1FH 02H
Horizontal scroll mode	1FH 03H
Brightness level Setting	1FH 58H n
Scroll Display Action	1FH 28H 61H 10H wL wH cL cH s
Display Blank	1FH 28H 61H 11H p t1 t2 c
Screen Saver	1FH 28H 61H 40H p
Bit Image Display group	1FH 28H 66H 11H xL xH
Font magnified Display	1FH 28H 67H 40H x y

Parallel interface connector

Pin	Sig	Pin	Sig
1	Gnd	2	Vcc
3	NC	4	RS
5	/W	6	/RD
7	D0	8	D1
9	D2	10	D3
11	D4	12	D5
13	D6	14	D7

Serial Connector

Pin	Asyn. Sig	Syn. Sig
1	Vcc	Vcc
2	SIN	SIN
3	Gnd	Gnd
4	SBUSY	SBUSY
5	NC	SCK
6	/ RESET	/ RESET

COMMON FONT

	2	3	4	5	6	7
	x	x	x	x	x	x
x0H	00	01	02	03	04	05
x1H	06	07	08	09	0A	0B
x2H	0C	0D	0E	0F	0G	0H
x3H	0I	0J	0K	0L	0M	0N
x4H	0O	0P	0Q	0R	0S	0T
x5H	0U	0V	0W	0X	0Y	0Z
x6H	0[	0\	0]	0^	0_	0`
x7H	0a	0b	0c	0d	0e	0f
x8H	0g	0h	0i	0j	0k	0l
x9H	0m	0n	0o	0p	0q	0r
xAH	0s	0t	0u	0v	0w	0x
xBH	0y	0z	0{	0}	0~	0
xCH	0	0	0	0	0	0
xDH	0	0	0	0	0	0
xEH	0	0	0	0	0	0
xFH	0	0	0	0	0	0

CHARACTER CODE (n=0)

	8	9	A	B	C	D	E	F
	x	x	x	x	x	x	x	x
x0H	00	01	02	03	04	05	06	07
x1H	08	09	0A	0B	0C	0D	0E	0F
x2H	0G	0H	0I	0J	0K	0L	0M	0N
x3H	0O	0P	0Q	0R	0S	0T	0U	0V
x4H	0W	0X	0Y	0Z	0[	0\	0]	0^
x5H	0_	0`	0a	0b	0c	0d	0e	0f
x6H	0g	0h	0i	0j	0k	0l	0m	0n
x7H	0o	0p	0q	0r	0s	0t	0u	0v
x8H	0w	0x	0y	0z	0{	0}	0~	0
x9H	0	0	0	0	0	0	0	0
xAH	0	0	0	0	0	0	0	0
xBH	0	0	0	0	0	0	0	0
xCH	0	0	0	0	0	0	0	0
xDH	0	0	0	0	0	0	0	0
xEH	0	0	0	0	0	0	0	0
xFH	0	0	0	0	0	0	0	0

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Subject to change without notice

PLEASE INQUIRE FOR FINAL SPECIFICATION