

Graphic VFD Module

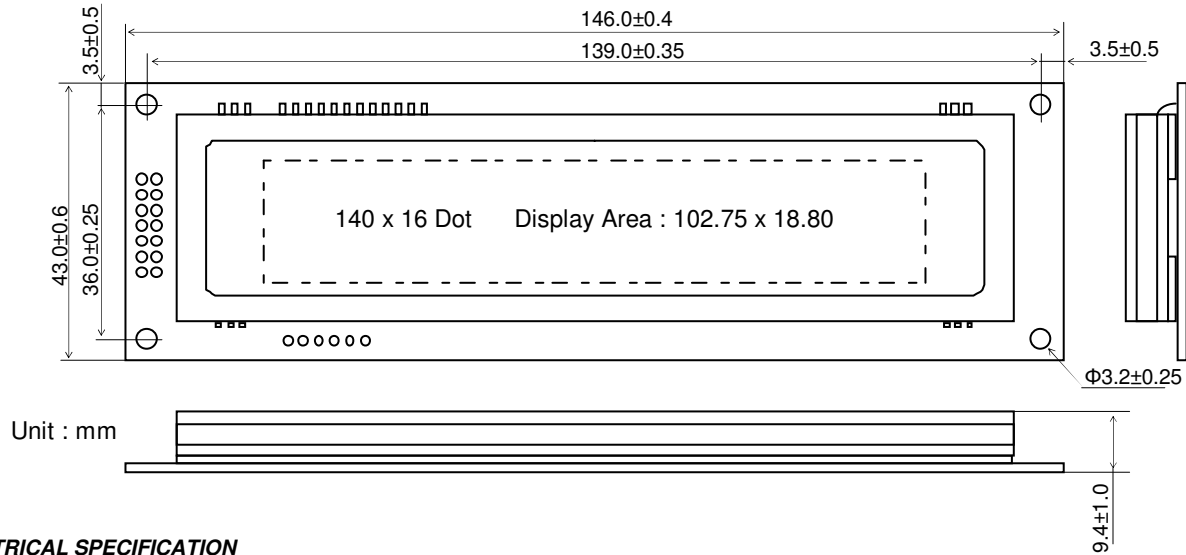
GU140X16J-7000

Ref: MC-007 Dec.12, 06

- Character Graphic, Transformerless display
- Size compatible with LCD Module (U-Version)
- Single 5V power supply
- High Brightness Blue Green display
- Operating temp -40°C to +85°C
- Proportional and scalable fonts
- Screen saver & window definition function
- 8 level brightness control function
- 8 bit Parallel, RS232C serial Interface

The module includes the Vacuum Fluorescent Display glass, driver and micro-controller lcs with refresh RAM, character generator and interface logic. This module have 8 bit parallel & RS232C serial interface. The module can simultaneously display graphic pattern and / or characters on screen.

Sample software available



ELECTRICAL SPECIFICATION

Parameter	Symbol	Value
Power Supply Voltage	VCC	5.0VDC Typ.
Power Supply Current	ICC	500mADC Typ.
Logic Hi Input (Parallel)	VIH	0.8VCC min. VCC max.
Logic Low Input (Parallel)	VIL	0VDC min. 0.2VDC max.
Logic HI output (Parallel)	VOH	3.5VDC min. 3.8VCC Max.
Logic Low output (Parallel)	VOL	0VDC min. 0.6VDC max.
Logic Hi Input (RS232)	VIH	3.0VDC min. +15VDC max.
Logic Low Input (RS232)	VIL	-15VDC min. 0.5VDC max.
Logic Hi output (RS232)	VOH	4.0VDC min. VCC max.
Logic Low output (RS232)	VOL	0VDC min. 0.5VDC max.

OPTICAL and ENVIRONMENTAL SPECIFICATIONS

Parameter	Value
PCB Size (X x Y mm)	146.00 x 43.00
Display Area (X x Y mm)	102.75 x 18.80
Dot size / Pitch (X x Y mm)	0.59 x 1.03 / 0.74 x 1.19
Luminance	1,000 cd/m ² Typ.
Color of Illumination	Blue Green (Filter for more colors)
Operating Temperature	-40°C to +85°C
Operating Humidity	20 to 80 % RH (non condensing)

SOFTWARE COMMANDS - Popular codes, more included

Command	Code
Write Character to Display	20H~FFH
Cursor Set	1FH 24H xL xH yL yH
Initialize Display	1BH 40H
Specify International Font	1BH 52H n
Vertical / Horizontal Scroll Mode	1FH 02H / 1FH 03H
Screen Saver	1FH 28H 61H 40H p
Display Blink	1FH 28H 61H 11H p t1 t2 c
Bit Image Display Group	1FH 28H 66H 11H xL xH
Font Magnified Display	1FH 28H 67H 40H x y
Brightness Level Setting	1FH 58H n

COMMON FONT

	2 x H	3 x H	4 x H	5 x H	6 x H	7 x H
x0H	0	1	2	3	4	5
x1H	!	@	#	\$	%	&
x2H	^	_	~	~	~	~
x3H	~	~	~	~	~	~
x4H	~	~	~	~	~	~
x5H	~	~	~	~	~	~
x6H	~	~	~	~	~	~
x7H	~	~	~	~	~	~
x8H	~	~	~	~	~	~
x9H	~	~	~	~	~	~
xAH	~	~	~	~	~	~
xBH	~	~	~	~	~	~
xCH	~	~	~	~	~	~
xDH	~	~	~	~	~	~
xEH	~	~	~	~	~	~
xFH	~	~	~	~	~	~

INTERNATIONAL FONTS

	8 x H	9 x H	A x H	B x H	C x H	D x H	E x H	F x H
x0H	0	1	2	3	4	5	6	7
x1H	!	@	#	\$	%	&	'	(
x2H)	*	+	,	-	.	/	:
x3H	;	<	=	>	?	@	A	B
x4H	C	D	E	F	G	H	I	J
x5H	K	L	M	N	O	P	Q	R
x6H	S	T	U	V	W	X	Y	Z
x7H	[\]	^	_	~	~	~
x8H	~	~	~	~	~	~	~	~
x9H	~	~	~	~	~	~	~	~
xAH	~	~	~	~	~	~	~	~
xBH	~	~	~	~	~	~	~	~
xCH	~	~	~	~	~	~	~	~
xDH	~	~	~	~	~	~	~	~
xEH	~	~	~	~	~	~	~	~
xFH	~	~	~	~	~	~	~	~

RS232C Serial Interface - CN2

Pin	Asyn. Sig
1	VCC
2	SIN
3	GND
4	SBUSY
5	NC
6	/RESET

Parallel interface- CN1

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

Please inquire for full specification.

** Subject to change without notice **