

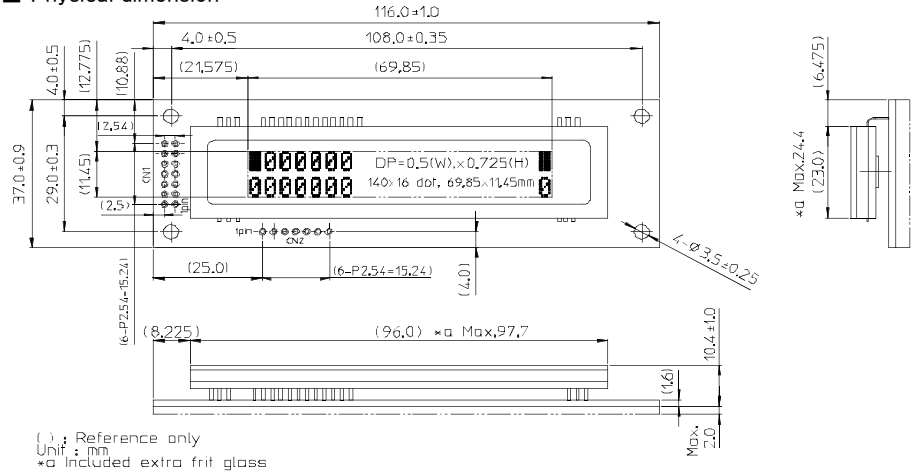
# GU140X16G-7000B

## SIMPLIFIED DATASHEET

### Features

VFD module with same size and shape as LCD module. LED backlight models are also available, for additional display effect.

### Physical dimension



### Specifications

#### Electrical Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Power supply voltage	VCC	4.75	5.00	5.25	VDC	-

#### Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
'L' Logic Input Current						
D0-D7,/WR,/RD	IIL1	-	-	-0.15	mA	VIN=0V
/RESET	IIL2	-	-	-0.6	mA	VIN=0V
'H' Logic Input Current						
D0-D7,/WR,/RD,/RESET	IIH	-	-	1.0	μADC	VIN=5V
Logic Input Voltage	VIH	0.8VCC	-	VCC	VDC	-
D0-D7,/WR,/RD,/RESET	VIL	0	-	0.2VCC	VDC	-
Logic Output Voltage	VOH	3.8	-	VCC	VDC	IOH=-1.5mA
D7(Busy flag), PBUSY	VOL	0	-	0.6	VDC	IOL=1.6mA
Logic input resistance						
SIN	RIN	3	-	-	KΩ	-
Logic Input Voltage	VIH	3.0	-	+15	VDC	-
SIN	VIL	-15	-	0.5	VDC	-
Logic Output Voltage	VOH	4.0	-	VCC	VDC	RL=3KΩ
SBUSY	VOL	0	-	0.5	VDC	RL=3KΩ
Power Supply Current 1	ICC-1	-	240	300	mADC	All dots ON
Power Supply Current 2	ICC-2	-	200	250	mADC	All dots OFF
Power Supply Current 3	ICC-3	-	12	15	mADC	Display power OFF
Power Consumption		-	1.2	1.5	W	All dots ON

#### Optical Specifications

Parameter	
Luminance	350 cd/m <sup>2</sup> Min. (700 cd/m <sup>2</sup> Typ.)
Color of illumination	Green (Blue-Green)

#### Environmental Specifications

Parameter	
Operating Temperature	-40 ~ +85 degrees celsius
Storage Temperature	-60 ~ +85 degrees (Under 168 hours)/-40 ~ +85 degrees (Or more)
Operating Humidity	20 ~ 80% R.H. (non-condensing)
Storage Humidity	20 ~ 80% R.H. (non-condensing)
Vibration (non-operating)	10-55-10Hz, all amplitude 1mm, 30 minutes, X-Y-Z
Shock (non-operating)	392m/s <sup>2</sup> (40G) 9ms X-Y-Z, 3 times each direction

#### Physical Specifications

Parameter	
Number of Dots	2,240 (140 x 16)
Display Area	69.85 mm x 11.45 mm
Dot Size (X x Y)	0.350 mm x 0.575 mm
Dot Pitch (X x Y)	0.500 mm x 0.725 mm
Weight	About 40 g

#### Interface

Parallel(CMOS), Asynchronous Serial (RS232)

#### Pin Assignment (Parallel)

Pin No.	Signal	Pin No.	Signal
1	GND	2	VCC
3	NC	4	RS
5	/WR	6	/RD
7	D0	8	D1
9	D2	10	D3
11	D4	12	D5
13	D6	14	D7(PBUSY)

#### (Asynchronous Serial)

Pin No.	Signal	Baud Rate Setting
1	VCC	9600bps
2	SIN	19200bps
3	GND	38400bps*
4	SBUSY	115200bps
5	NC	(*:Default setting)
6	/RESET	
7	NC	

#### Selectable Font

Parameter	*ANK(Alphabet, Numeric, Kana)
Character font type	5 x 7 ANK, International
Character width	Fixed/Proportional character format 1&2
Character numbers	20 x 2 by 5 x 7 dot ASCII 23 x 2 by 5 x 7 dot Proportional

#### Functions

Parameter	
Control command	
Scroll display action	
Proportional Font function	
User-Windows function	
AND/OR/XOR Mixture display	
Reverse display	
Dot unit real-time bit image display	
Download character function	
Font Magnification function	
etc.	

