

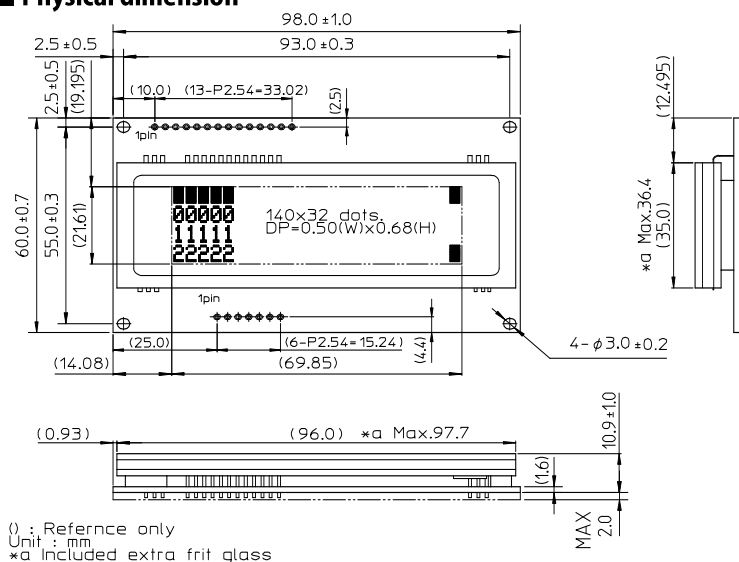
## GU140X32F-7000B

## SIMPLIFIED DATASHEET

## ■ Features

4 line simultaneous display capable wide screen VFD module.  
Same size and shape as LCD, for easy drop-in replacement. 3.3V power model and reduced-size PCB slim-type models are also available.

## ■ Physical dimension



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## 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, /RESET	IIL1	-	-	-0.15	mA	VIN=0V
	IIL2	-	-	-0.6	mA	VIN=0V
'H' Logic Input Current D0-D7, /WR, /RD, /RESET	IIH	-	-	1.0	μADC	VIN=5V
Logic Input Voltage D0-D7, /WR, /RD, /RESET	VIH	0.8VCC	-	VCC	VDC	-
	VIL	0	-	0.2VCC	VDC	-
Logic Output Voltage D7(Busy flag), PBUSY	VOH	3.8	-	VCC	VDC	IOH=-1.5mA
	VOL	0	-	0.6	VDC	IOL=1.6mA
Logic input resistance SIN	RIN	3	-	-	KΩ	-
Logic Input Voltage SIN	VIH	3.0	-	+15	VDC	-
	VIL	-15	-	0.5	VDC	-
Logic Output Voltage SBUSY	VOH	4.0	-	VCC	VDC	RL=3KΩ
	VOL	0	-	0.5	VDC	RL=3KΩ
Power Supply Current 1	ICC-1	-	400	520	mADC	All dots ON
Power Supply Current 2	ICC-2	-	330	430	mADC	All dots OFF
Power Supply Current 3	ICC-3	-	35	45	mADC	Display power OFF
Power Consumption	-	-	2.0	2.6	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	4,480 (140 x 32)
Display Area	69.85mm x 21.61 mm
Dot Size (X x Y)	0.35 mm x 0.53 mm
Dot Pitch (X x Y)	0.50 mm x 0.68 mm
Weight	About 60 g

## ■ Interface

Parallel(CMOS), Asynchronous Serial (RS232)

## ■ Pin Assignment (Parallel)

Pin No.	Signal	Pin No.	Signal
1	GND	8	D1
2	VCC	9	D2
3	NC	10	D3
4	RS	11	D4
5	/WR	12	D5
6	/RD	13	D6
7	D0	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 4 by 5 x 7 dot ASCII	
	23 x 4 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.	