

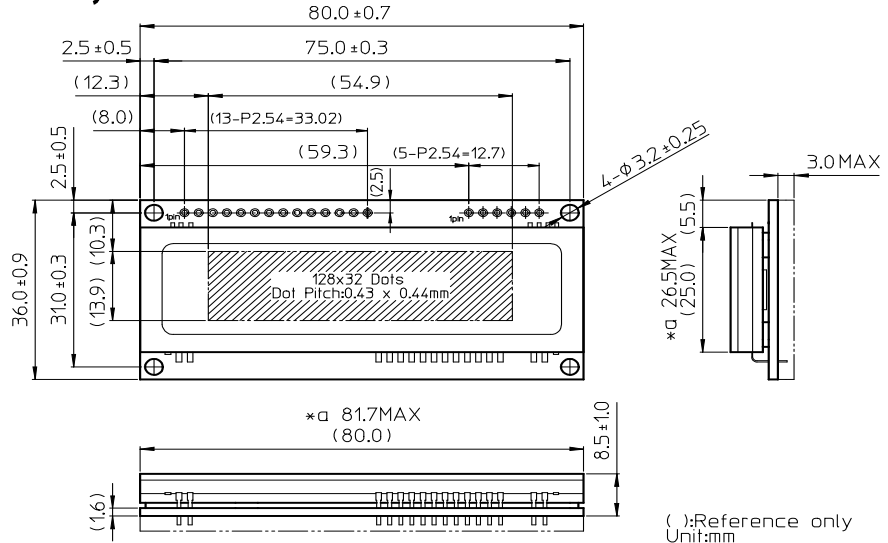
# GU128X32D-7950

## SIMPLIFIED DATASHEET

### Features

Compact size VFD module that can display 4 lines of information. Perfect for where a lot of information is to be shown, but without taking up too much space. Further, the external PCB size is similar to 2x16LCD and GU112x16G, etc. 128x32 dots in a more compact package.

### Physical dimension



( ) : Reference only  
Unit: mm  
\*a Including extra frit glass

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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	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	I <sub>OH</sub> =-1.5mA
D7(Busy flag), PBUSY	VOL	0	-	0.6	VDC	I <sub>OL</sub> =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	-	290	380	mADC	All dots ON
Power Supply Current 2	ICC-2	-	240	320	mADC	All dots OFF
Power Supply Current 3	ICC-3	-	22	40	mADC	Display power OFF
Power Consumption		-	1.45	1.9	W	All dots ON

#### Optical Specifications

Parameter	Value
Number of Dots	4,096 (128 x 32)
Character numbers	18 x 4 / Max 21 x 4 by 5 x 7 dot ANK 8 x 2 by 16 x 16 dot 2-byte character
Display Area	54.89mm x 13.93 mm
Dot Size (X x Y)	0.28mm x 0.29 mm
Dot Pitch (X x Y)	0.43 mm x 0.44 mm
Luminance	350 cd/m <sup>2</sup> Min. (800 cd/m <sup>2</sup> Typ.)
Color of illumination	Green (Blue-Green)

#### Environmental Specifications

Parameter	Value
Operating Temperature	-40 ~ +85 degrees celsius
Storage Temperature	-40 ~ +85 degrees celsius
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

#### Character display

Parameter	Value
Number of Dots	128 x 32 dots
Character font type	5 x 7 ANK, International font 8 x 16 ANK, International font 16 x 16 2-byte character
Character width	Fixed/Proportional character format 1&2
Attribution	Character magnify, Reverse
Weight	About 34 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	DO	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	

#### Functions

Parameter	Value
Control command	
Scroll display action	
Proportional Font function	
User-Windows function	
AND/OR/XOR Mixture display	
Reverse display	
Bit image display	
FROM bit image definition	
Character download function	
etc.	



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