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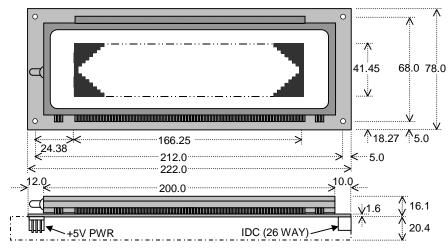
## **Dot Graphic VFD Module**

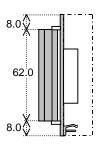
### GU256x64-372

- 256 x 64 Dot Graphic
- Operating Temp -0°C to +50°C
- Single 5V Supply.
- High Brightness Blue Green Display
- 8 bit High Speed Parallel Interface
- ASCII + Extended Character Font
- Twin Graphic/Character RAM
- **4 Level Brightness Control Function**

The module includes the Vacuum Fluorescent Display glass, driver and control ASIC, with refresh RAM, character generator and interface logic.

The high speed 8 bit parallel interface is 5V CMOS compatible suitable for connection to a host CPU bus. Brightness control and power down functions are provided. A full data sheet is available.





Dimensions in mm & subject to tolerances. Mounting holes 3.5mm dia.

#### **ELECTRICAL SPECIFICATION**

Parameter	Symbol	Value	Condition
Power Supply Voltage	Vcc	5.0VDC +/- 5%	GND=0V
Power Supply Current	Icc	2.0ADC typ.	Vcc=5V
Logic High Input	ViH	2.2VDC min.	Vcc=5V
Logic Low Input	VIL	0.8VDC max.	Vcc=5V
Logic High Output	Voн	Vcc-0.8VDC min.	Iон = -40uA
Logic Low Output	Vol	0.5VDC max.	IoL =1.6mA

The power on rise time should be less than 100ms. The inrush current at power on can be 2 x lcc.

OPTICAL and ENVIRONMENTAL SPECIFICATIONS							
Parameter	Value						
Display Area (XxY mm)	166.25 x 41.45						
Dot Size/Pitch (XxY mm)	0.5 x 0.5/0.65						
Luminance	515 cd/m <sup>2</sup> (150 fL) Typ.						
Colour of Illumination	Blue-Green (Filter for colours)						
Operating Temperature	0°C to +50°C						
Storage Temperature	-20°C to +70°C						
Operating Humidity (non condensing)	20 to 80% PH @ 25°C						

#### **SOFTWARE COMMANDS**

Instruction	D0-D4			
Screen On/Off Control	00H-03H			
Auto Increment Cursor	04H-05H			
Character/Graphic Screen 2	06H-07H			
Data Write/Data Read	08H-09H			
Set Screen 1/2 RAM Address	0AH-0DH			
Set Cursor Address	0EH-0FH			
Screen1/2 Merge Control	10H-12H			
Screen Luminance Control	18H-1BH			

#### INTERFACING

Function	/CS	/WR	/RD	C/D	/BL
Command Write	0	0→1	1	1	1
Data Setting	0	0→1	1	0	
Display Data Read	0	1	0	0	
Display Blanking	-	-	-	-	0

As no BUSY signal is available between the processor and module, accessing time between data is required to be greater than 2µs.

#### **IDC DATA CONNECTOR**

IDC DATA CONNECTOR								
Pin	Sig	Pin	Sig					
1	D7	2	GND					
3	D6	4	GND					
5	D5	6	GND					
7	D4	8	GND					
9	D3	10	GND					
11	D2	12	GND					
13	D1	14	GND					
15	D0	16	GND					
17	WR	18	GND					
19	C/D	20	GND					
21	RD	22	GND					
23	CS	24	GND					
25	FRP	26	BL					

#### CHARACTER FONT

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#### **POWE** Pi

ER CON	INECTOR	TIMING PARAMETERS (min)				
in	Sig	Write Pulse Width	100ns			
1	Vcc (5V)	Hold after Write	20ns			
2	NC	FRP Cycle Time	10.4ms			

FRP Pulse Width

#### **SCREEN COMBINATIONS**

GND

The display memory (RAM) has the capacity of producing two display screens for graphic, plus graphic and ASCII characters. This enables up 4 different display combinations, via software commands.

#### CONTACT

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