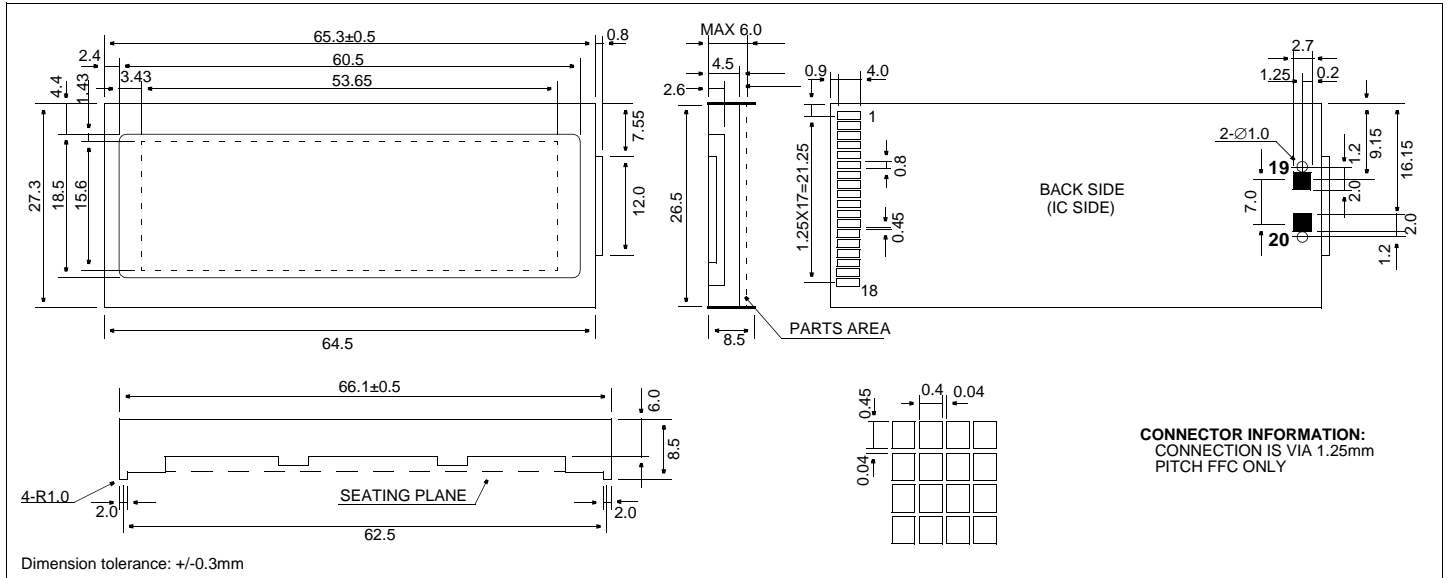


# HDM32GS12Y-3

## Dimensional Drawing

122 X 32 Dots Graphic, Small Size



### Features

Backlight.....EL Optional  
Options.....Gray STN / Yellow STN  
Normal/Extended Temperature  
Bottom / Top Viewing  
Built-in Controller.....SED1520DAA

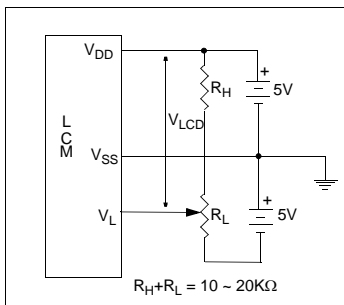
### Physical Data

Module Size.....66.1W x 27.3H x 8.5 mm  
Viewing Area Size.....60.5W x 18.5H mm  
Dot Pitch.....0.44W x 0.49H mm  
Dot Size.....0.40W x 0.45H mm  
Weight.....17g

### Electrical Characteristics (VDD=5.0±0.25V 25°C)

PARAMETER	SYM	CONDITION	MIN	TYP	MAX	UNIT
INPUT HIGH VOLTAGE	V <sub>IH</sub>	-	0.8 V <sub>DD</sub>	-	-	V
INPUT LOW VOLTAGE	V <sub>IL</sub>	-	-	-	0.2 V <sub>DD</sub>	V
POWER SUPPLY FOR LCD	V <sub>DD</sub> -V <sub>L</sub>	T <sub>A</sub> =25°C		5.4		V
POWER SUPPLY CURRENT	I <sub>DD</sub>	V <sub>DD</sub> =5.0V	-	0.4	.06	mA
POWER CURRENT FOR EL	I <sub>EL</sub>	V <sub>BL</sub> =110VAC 400Hz		2.1	3.5	mA
DRIVE METHOD			1/32 DUTY			

### Power Supply



### Pin Connections

PIN NO.	SYMBOL	FUNCTION	
1	A $\emptyset$	H/L	L=Instruction, H=Data
2	CS2	L	Chip select
3	CS1	L	Chip select
4	CL	H/L	External clock (2kHz)
5	RD(E)	-	RD (80 series), E (68 series)
6	WR (R/W)	-	WR (80 series), R/W (68 series)
7	V <sub>SS</sub>	0V	Ground
8	DB0	H/L	Data bus
9	DB1	H/L	
10	DB2	H/L	
11	DB3	H/L	
12	DB4	H/L	
13	DB5	H/L	
14	DB6	H/L	
15	DB7	H/L	
16	V <sub>DD</sub>	5V	Power supply for logic
17	RES	H/L	L=80 series, H=68 series
18	V <sub>L</sub>	-	Operating voltage for LC
19	V <sub>EL</sub>	-	Power supply for EL backlight
20	V <sub>EL</sub>	-	

### Absolute Maximum Ratings

PARAMETER	SYMBOL	MIN	MAX	UNIT
SUPPLY VOLTAGE	V <sub>DD</sub> -V <sub>SS</sub>	0	6.3	V
INPUT VOLTAGE	V <sub>IN</sub>	-	6.3	V
OPERATING TEMPERATURE	T <sub>OP</sub>	0	50	°C
STORAGE TEMPERATURE	T <sub>STG</sub>	-20	70	°C