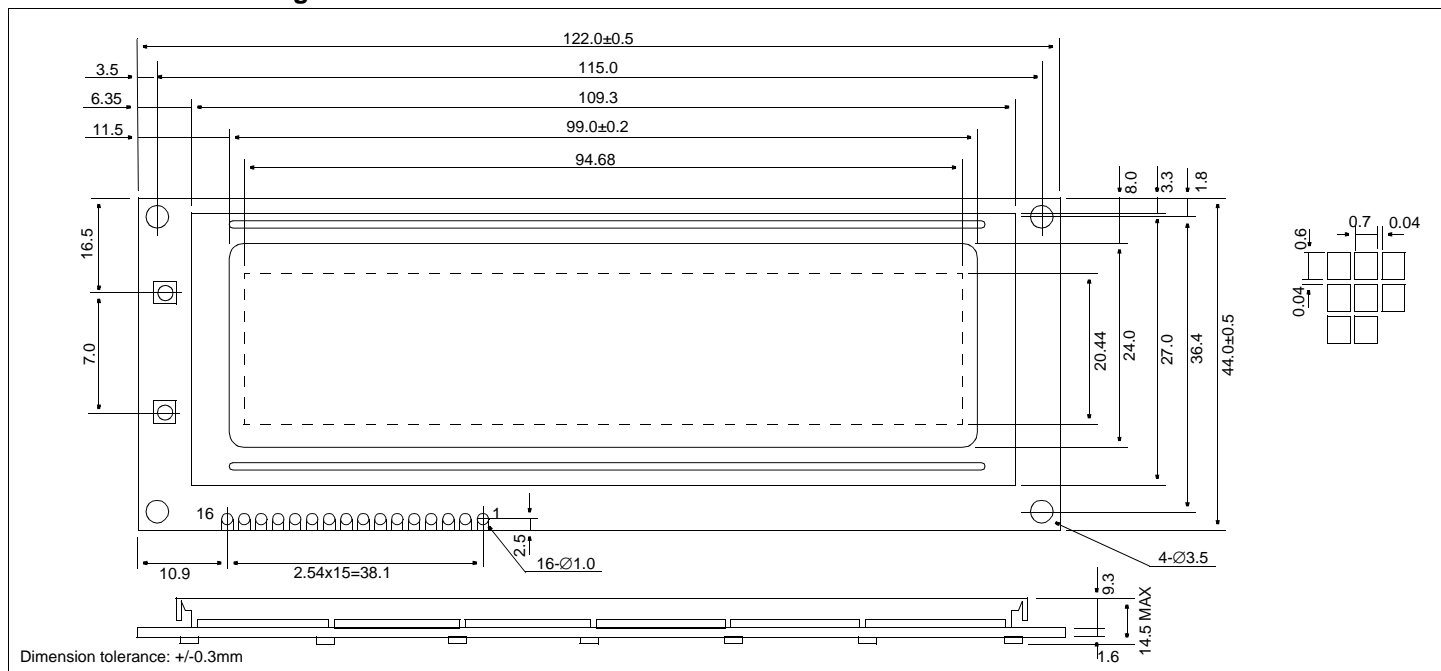


# HDM32GS12L-4

## Dimensional Drawing

128 X 32 Dots Graphic, LED Back Light

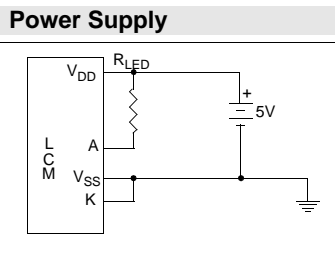


- Features**
- Backlight.....LED
  - Options.....Yellow STN
  - Extended Temperature
  - Top Viewing
  - Built-in Controller.....Sanyo LC7981

**Absolute Maximum Ratings**

PARAMETER	SYMBOL	MIN	MAX	UNIT
SUPPLY VOLTAGE	$V_{DD}-V_{SS}$	-0.3	6.5	V
INPUT VOLTAGE	$V_{DD}-V_6$	0	28.0	V
OPERATING TEMPERATURE	$T_{OP}$	-20	70	°C
STORAGE TEMPERATURE	$T_{STG}$	-30	80	°C

- Physical Data**
- Module Size.....122.0W x 44.0H x 14.5T mm
  - Viewing Area Size.....99.0W x 24.0H mm
  - Dot Pitch.....0.74W x 0.64H mm
  - Dot Size.....0.70W x 0.60H mm
  - Weight.....78g



**Pin Connections**

PIN NO.	SYMBOL	LEVEL	FUNCTION
1	LED <sub>A</sub>	-	Anode for LED Backlight
2	LED <sub>C</sub>	-	Cathode for LED Backlight
3	V <sub>SS</sub>	0V	Ground
4	V <sub>DD</sub>	5V	Power supply for logic
5	N/C		No Connection
6	RS	H/L	Register Select
7	R/W	H/L	H=Read/L=Write
8	E	H,H→L	Enable signal
9	DB0	H/L	Data bus
10	DB1	H/L	
11	DB2	H/L	
12	DB3	H/L	
13	DB4	H/L	
14	DB5	H/L	
15	DB6	H/L	
16	DB7	H/L	

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

PARAMETER	SYM	CONDITION	MIN	TYP	MAX	UNIT
OPERATING VOLTAGE	V <sub>DD</sub>	-	4.75	5.0	5.25	V
POWER FOR LCD	V <sub>DD</sub> -V <sub>L</sub>	V <sub>DD</sub> =5V	4.5	5.7	6.5	V
INPUT HIGH VOLTAGE	V <sub>IH</sub>	-	.8V <sub>DD</sub>	-	V <sub>DD</sub>	V
INPUT LOW VOLTAGE	V <sub>IL</sub>	-	GND	-	.2V <sub>DD</sub>	V
POWER SUPPLY CURRENT	I <sub>DD</sub>	V <sub>DD</sub> =5.0V	-	-	-	mA
POWER SUPPLY CURRENT	I <sub>LCD</sub>	V <sub>EE</sub> = -5.0V	-	-	5.0	mA
LED SUPPLY CURRENT	I <sub>LED</sub>	-	-	-	-	mA

This is a +5v only module which has a built in inverter for the LCD voltage.