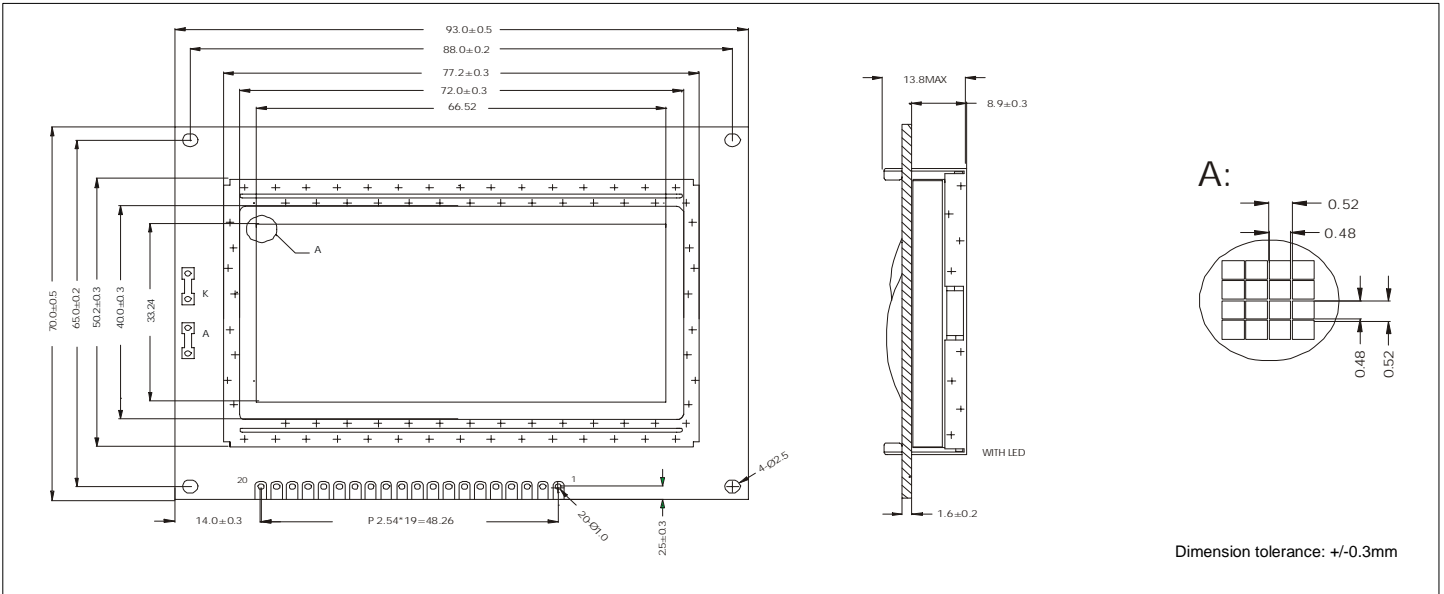


# HDM64GS12\_-R

## Dimensional Drawing

128 X 64 Dots Graphic



### Features

- Backlight..... LED, NONE
- Options..... Gray or Yellow STN, Black & White FSTN
- Normal/Extended Temperature
- Bottom / Top Viewing
- Built-in Controller..... Samsung KS108B
- Built-in DC-DC converter

### Physical Data

- Module Size (LED Backlight)..... 93.0W x 70.0H x 13.8T mm
- Viewing Area Size..... 70.7W x 38.8H mm
- Dot Pitch..... 0.52W x 0.52H mm
- Dot Size..... 0.48W x 0.48H mm
- Weight..... 69g

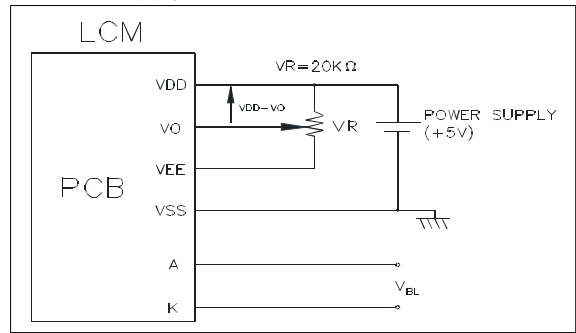
### Absolute Maximum Ratings

PARAMETER	SYMBOL	MIN	MAX	UNIT
Supply Voltage	$V_{DD}-V_{SS}$	0	7.0	V
Input Voltage	$V_{IN}$	-	7.0	V
Operating Temperature	$T_{OP}$	0	50	°C
Storage Temperature	$T_{STG}$	-20	70	°C
LED Peak Forward Current	$I_p$		720	mA

### Electrical Characteristics (VDD=5.0±0.5V 25°C)

PARAMETER	SYM	CONDITION	MIN	TYP	MAX	UNIT
Input High Voltage	$V_{IH}$	-	.7 $V_{DD}$	-	$V_{DD}$	V
Input Low Voltage	$V_{IL}$	-	-	-	.3 $V_{DD}$	V
Power Supply Voltage	$V_{DD}-V_L$	$V_{DD}=5.0V$	9.2	9.7	10.2	V
Power Supply Current	$I_{DD}$	$V_{DD}=5.0V$	-	2.3	-	mA
LED Forward Voltage	$V_F$	$I_F=230mA$	3.9	4.1	4.3	mV
LED Forward Current	$I_F$	$V_F=4.1V$	-	250	540	mA
Brightness	L	-	184	230	-	cd/m <sup>2</sup>
DRIVE METHOD	1/64 Duty					

### Power Supply



### Pin Connections

PIN NO.	SYMBOL	FUNCTION	
1	$V_{SS}$	0V	Ground
2	$V_{DD}$	5V	Power supply for logic
3	$V_L$	-	Operating voltage for LC
4	D/I	H/L	1=Data, 0=Instruction
5	R/W	H/L	1=Data read, 0=Data write
6	E	H/H->L	Enable
7	DB0	H/L	Data bus
8	DB1	H/L	
9	DB2	H/L	
10	DB3	H/L	
11	DB4	H/L	
12	DB5	H/L	
13	DB6	H/L	
14	DB7	H/L	
15	CS1	H	Left Half Chip Select
16	CS2	H	Right Half Chip Select
17	RS	L	Reset
18	$V_{EE}$	Output	#
19	A	-	LED Anode
20	K	-	LED Cathode

# Has built-in inverter for negative power supply