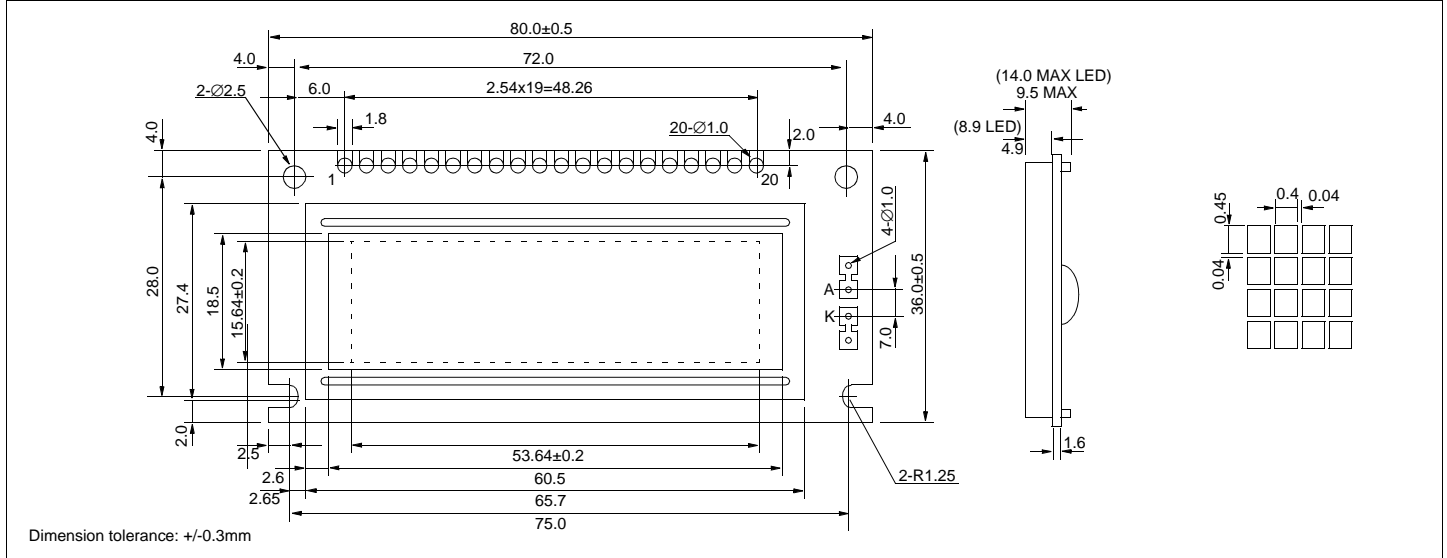


# HDM 32GS12\_-1

## Dimensional Drawing

122 X 32 Dots Graphic



### Features

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

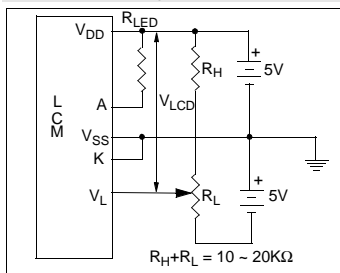
### Physical Data

- Module Size.....80.0W x 36.0H x 14.0T 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.....28g

### Absolute Maximum Ratings

PARAMETER	SYMBOL	MIN	MAX	UNIT
SUPPLY VOLTAGE	$V_{DD}-V_{SS}$	0	6.3	V
INPUT VOLTAGE	$V_{IN}$	-	6.3	V
OPERATING TEMPERATURE	$T_{OP}$	0	50	°C
STORAGE TEMPERATURE	$T_{STG}$	-20	70	°C

### Power Supply



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

PARAMETER	SYM	CONDITION	MIN	TYP	MAX	UNIT
INPUT HIGH VOLTAGE	$V_{IH}$	-	0.8 $V_{DD}$	-	-	V
INPUT LOW VOLTAGE	$V_{IL}$	-	-	-	0.2 $V_{DD}$	V
POWER SUPPLY CURRENT	$I_{DD}$	$V_{DD}=5.0V$	-	0.27	-	mA
POWER SUPPLY FOR LCD	$V_{DD}-V_L$	$T_A=25^\circ C$	3.0	-	11.0	V
LED CURRENT	$I_{LED}$	$V_{LED}=4.2V$	-	200	-	mA
DRIVE METHOD		1/32 DUTY				

### 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	$A_0$	H/L	L=Instruction, H=Data
5	CS1	L	Chip select
6	CS2	L	Chip select
7	CL		External clock (2kHz)
8	RD (E)	-	RD (80 series), E (68 series)
9	WR (R/W)	-	WR (80 series), R/W (68 series)
10	DB0	H/L	Data bus
11	DB1	H/L	
12	DB2	H/L	
13	DB3	H/L	
14	DB4	H/L	
15	DB5	H/L	
16	DB6	H/L	
17	DB7	H/L	
18	RES	H/L	L=80 series, H=68 series
19	A	-	Power supply for LED backlight
20	K	-	