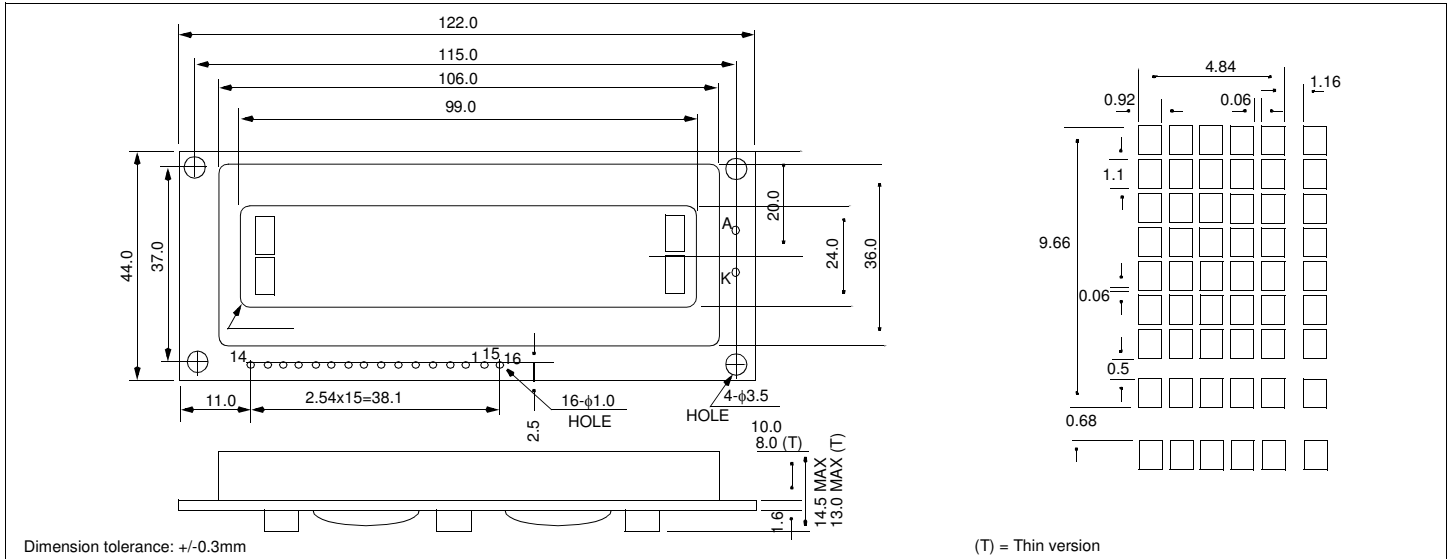


# HDM16216L-7

## Dimensional Drawing

16 Character x 2 Lines, Large Character, LED Backlight



### Features

Character Format ..... 5x7 Dots with Cursor  
 Backlight.....White or Yellow LED  
 Options.....Gray STN/Yellow STN, FSTN  
 12 o'Clock/6 o'Clock View  
 Normal/Extended Temperature  
 Normal/Negative Displays

### Physical Data

Module Size ..... 122.0W x 44.0H x 14.5T mm  
 Thin Version..... 122.0W x 44.0H x 13.0T mm  
 Viewing Area Size..... 99.0W x 24.0H mm  
 Weight......54g

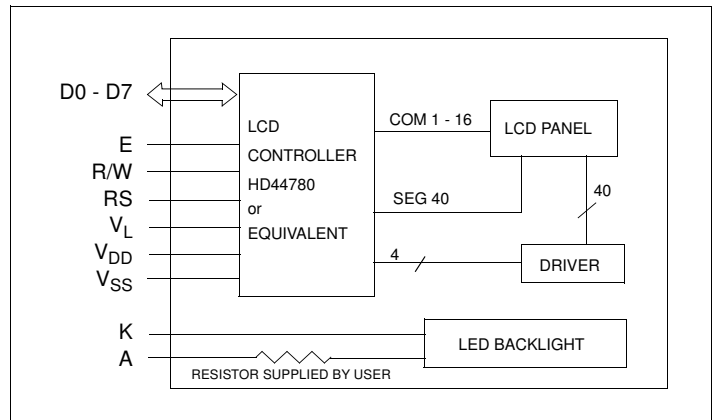
### Absolute Maximum Ratings

PARAMETER	SYMBOL	MIN	MAX	UNIT
SUPPLY VOLTAGE	$V_{DD}-V_{SS}$	0	7.0	V
SUPPLY VOLTAGE FOR LCD	$V_{DD}-V_L$	0	13.5	V
OPERATING TEMPERATURE	$T_{OP}$	0	50	°C
STORAGE TEMPERATURE	$T_{STG}$	-20	70	°C
LED FORWARD CURRENT (White)	$I_F$	-	30	mA
(Yellow)		-	200	
LED REVERSE VOLTAGE (White)	$V_R$	-	5	V
(Yellow)		-	8	
LED POWER CONSUMPTION (White)	$P_D$	-	50	mW
(Yellow)		-	900	

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

PARAMETER	SYM	CONDITION	MIN	TYP	MAX	UNIT
POWER SUPPLY CURRENT	$I_{DD}$	$V_{DD}=5.0V$	-	0.8	2.0	mA
POWER SUPPLY FOR LCD	$V_{DD}-V_L$	$T_A=25°C$	4.2	4.7	5.2	V
LED FORWARD $V_{tg}$ (White)	$V_F$	$I_F=20mA$	3.2	3.4	3.7	V
(Yellow)		$I_F=120mA$	3.9	4.1	4.5	
BRIGHTNESS (White LED)	L	$I_F=20mA$	48	65	-	cd/m <sup>2</sup>
(Yellow LED)		$I_F=120mA$	30	50	-	
DRIVE METHOD	1/16 Duty					

### Block Diagram



### Pin Connections

PIN NO.	SYMBOL	LEVEL	FUNCTION
1	$V_{SS}$	-	Power supply
2	$V_{DD}$	-	
3	$V_L$	-	
4	RS	H/L	H: Data input L: Instruction data input
5	R/W	H/L	H: Data read L: Data write
6	E	H,H>L	Enable signal
7	D0	H/L	Data bus
8	D1	H/L	
9	D2	H/L	
10	D3	H/L	
11	D4	H/L	
12	D5	H/L	
13	D6	H/L	
14	D7	H/L	
15	A	-	Anode for LED backlight
16	K	-	Cathode for LED backlight