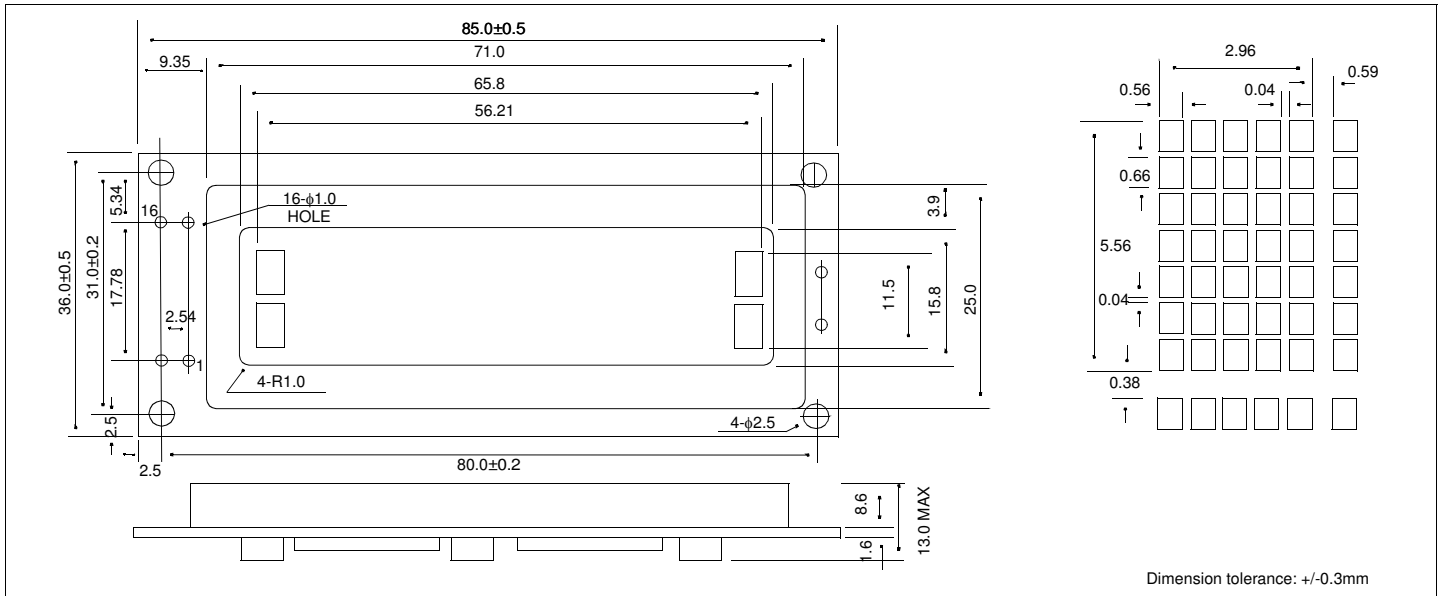


# HDM16216L-2

## Dimensional Drawing

16 Character x 2 Lines LED Backlight, 2 Row Connector



### Features

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

### Physical Data

Module Size.....85.0W x 36.0H x 13.0T mm  
 Viewing Area Size.....65.8W x 15.8H mm  
 Weight.....35g

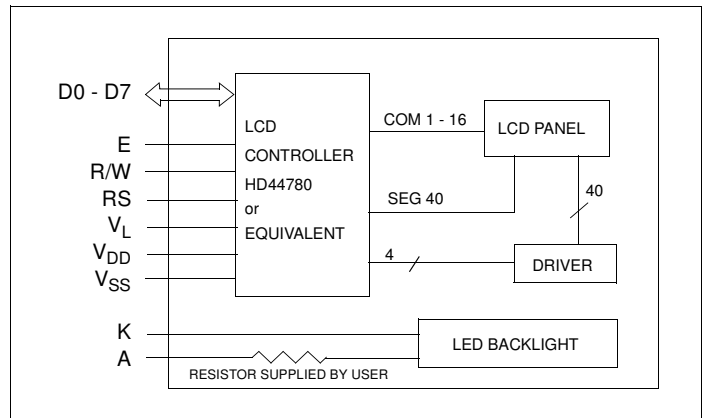
### Absolute Maximum Ratings

PARAMETER	SYMBOL	MIN	MAX	UNIT
SUPPLY VOLTAGE	$V_{DD}-V_{SS}$	-0.3	7.0	V
SUPPLY VOLTAGE FOR LCD	$V_{DD}-V_L$	-0.3	12.0	V
OPERATING TEMPERATURE	$T_{OP}$	0	50	°C
STORAGE TEMPERATURE	$T_{STG}$	-20	70	°C
LED FORWARD CURRENT (White) (Yellow)	$I_F$	-	25 120	mA
LED REVERSE VOLTAGE (White) (Yellow)	$V_R$	-	5 8	V
LED POWER CONSUMPTION (White) (Yellow)	$P_D$	-	80 540	mW

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

PARAMETER	SYM	CONDITION	MIN	TYP	MAX	UNIT
POWER SUPPLY CURRENT	$I_{DD}$	$V_{DD}=5.0V$	-	1.0	2.2	mA
POWER SUPPLY FOR LCD	$V_{DD}-V_L$	$T_A=25°C$	4.3	-	4.7	V
LED FORWARD Vtg (White) (Yellow)	$V_F$	$I_F=20mA$	3.0	3.4	3.6	V
		$I_F=120mA$	3.9	4.1	4.5	V
BRIGHTNESS (White) (Yellow)	L	$I_F=20mA$	60	75	-	cd/m <sup>2</sup>
		$I_F=120mA$	30	50	-	cd/m <sup>2</sup>
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 backlighting
16	K	-	Cathode for led backlighting