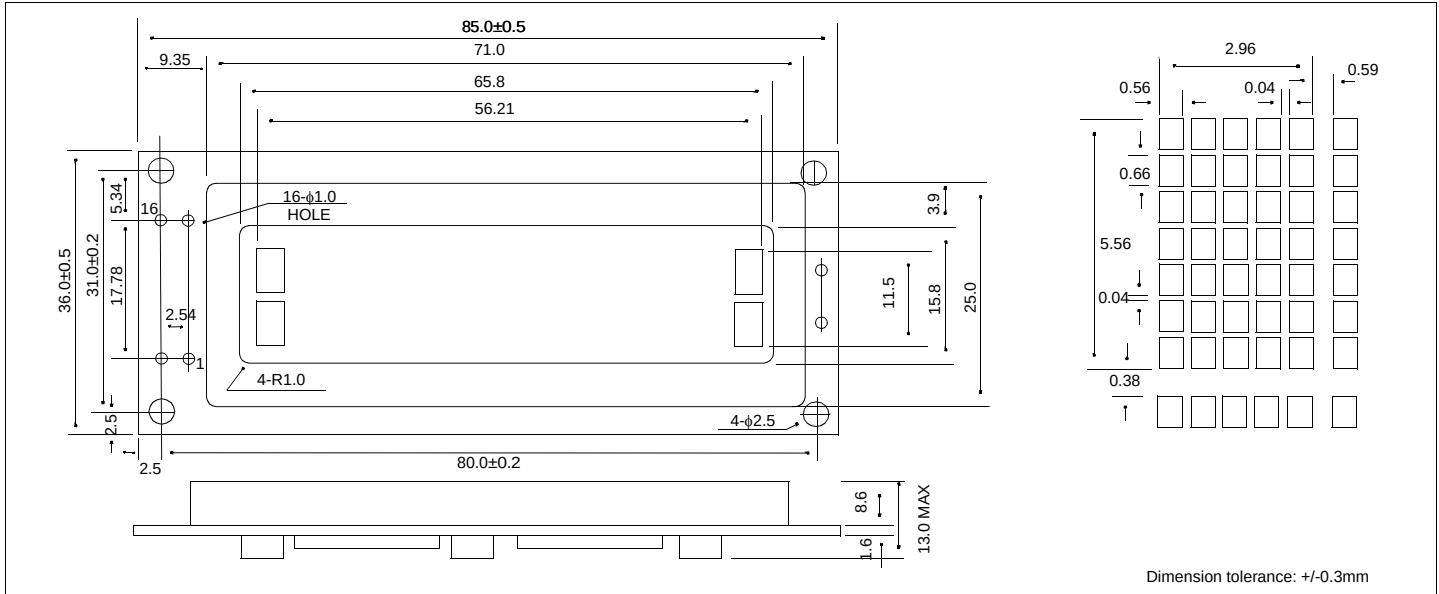


HDM16216L-2

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..... $85.0 \text{ W} \times 36.0 \text{ H} \times 13.0 \text{ T mm}$
Viewing Area Size..... $65.8 \text{ W} \times 15.8 \text{ H mm}$
Weight..... 35g

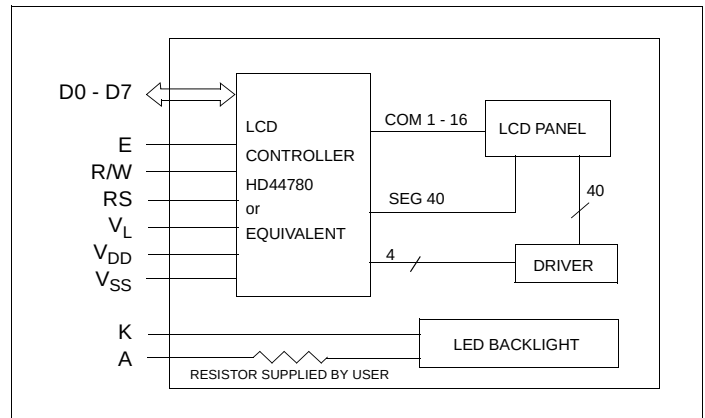
Absolute Maximum Ratings

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 ($V_{DD}=5.0 \pm 0.25 \text{ V}$ 25°C)

PARAMETER	SYM	CONDITION	MIN	TYP	MAX	UNIT
POWER SUPPLY CURRENT	I_{DD}	$V_{DD}=5.0 \text{ V}$	-	1.0	2.2	mA
POWER SUPPLY FOR LCD	$V_{DD}-V_L$	$T_A=25^\circ \text{C}$	4.3	-	4.7	V
LED FORWARD Vtg (White) (Yellow)	V_F	$I_F=20 \text{ mA}$	3.0	3.4	3.6	V
		$I_F=120 \text{ mA}$	3.9	4.1	4.5	V
BRIGHTNESS (White) (Yellow)	L	$I_F=20 \text{ mA}$	60	75	-	cd/m ²
		$I_F=120 \text{ mA}$	30	50	-	cd/m ²
DRIVE METHOD	1/16 Duty					

Block Diagram



Pin Connections

PIN NO.	SYMBOL	LEVEL	FUNCTION
1	V_{SS}	-	0V
2	V_{DD}	-	5V
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