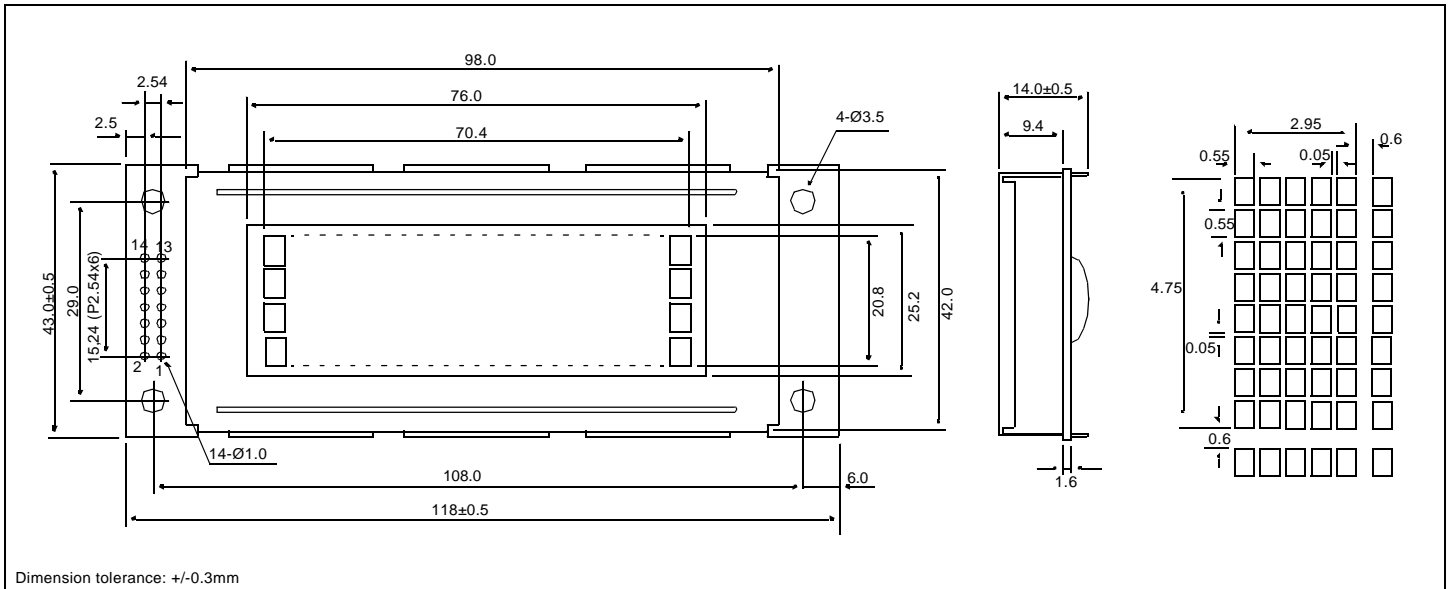


HDM20416L-B

Dimensional Drawing

20 Character x 4 Lines, LED Backlight



Features

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

Physical Data

Module Size.....118.0W x 43.0H x 14.0T mm
Viewing Area Size.....76.0W x 25.2H mm
Weight.....60g

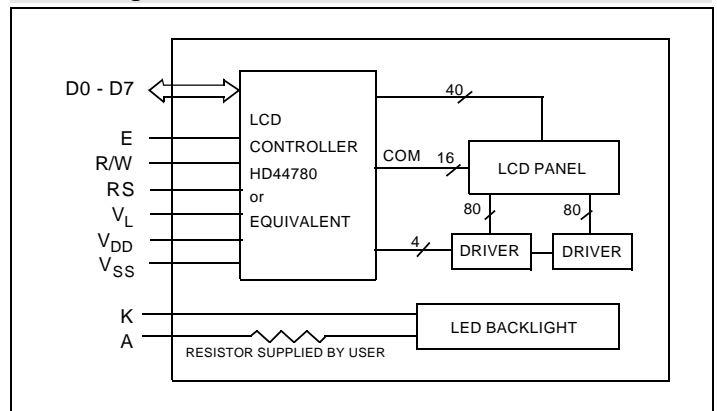
Absolute Maximum Ratings

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	13.5	V
INPUT VOLTAGE	V_{IN}	V_{SS}	V_{DD}	V
OPERATING TEMPERATURE	T_{OP}	0	50	°C
STORAGE TEMPERATURE	T_{STG}	-20	60	°C

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

PARAMETER	SYM	CONDITION	MIN	TYP	MAX	UNIT
INPUT HIGH VOLTAGE	V_{IH}	-	2.2	-	-	V
INPUT LOW VOLTAGE	V_{IL}	-	-	-	0.6	V
OUTPUT HIGH VOLTAGE	V_{OH}	$I_{OH}=0.2mA$	2.4	-	-	V
OUTPUT LOW VOLTAGE	V_{OL}	$I_{OL}=1.2mA$	-	-	0.4	V
POWER SUPPLY CURRENT	I_{DD}	$V_{DD}=5.0V$	-	0.35	0.6	mA
POWER SUPPLY FOR LCD	$V_{DD}-V_L$	$T_A=25°C$	3.0	-	11.0	V
LED FORWARD VOLTAGE	V_f	$I_f=210mA$	3.9	4.1	4.5	V
BRIGHTNESS	L	$I_f=210mA$	-	250	-	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	K	-	Anode for LED backlight
16	A	-	Cathode for LED backlight