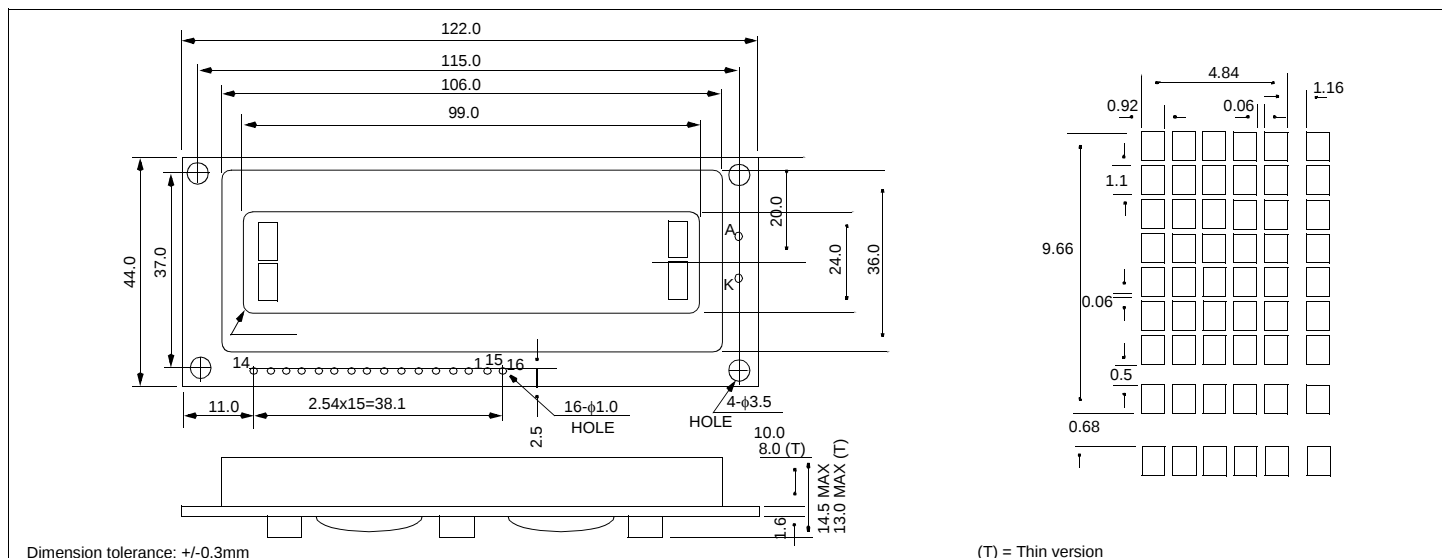


Dimensional Drawing

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

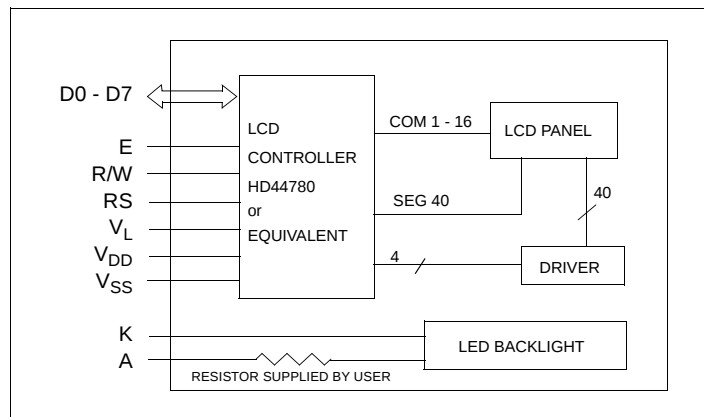
Absolute Maximum Ratings

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 Vtg (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 ²
(Yellow LED)		I _F =120mA	30	50	-	
DRIVE METHOD	1/16 Duty					

Block Diagram



Pin Connections

PIN NO.	SYMBOL	LEVEL	FUNCTION	
1	V _{SS}	-	0V	Power supply
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 backlight	
16	K	-	Cathode for LED backlight	