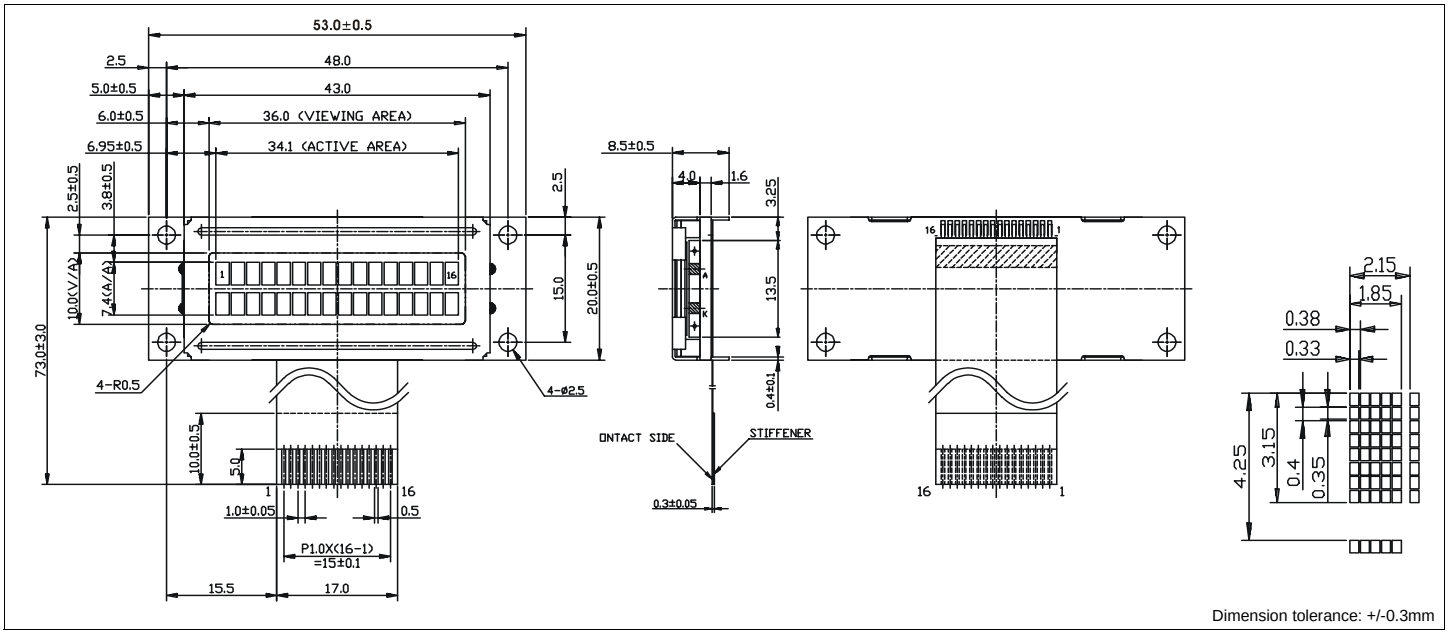
Next Vision Display
Brighten The Future

NH1602BN002HA

16 Character x 2 Lines, Very Small Size, LED Backlight

Dimensional Drawing



Dimension tolerance: +/-0.3mm

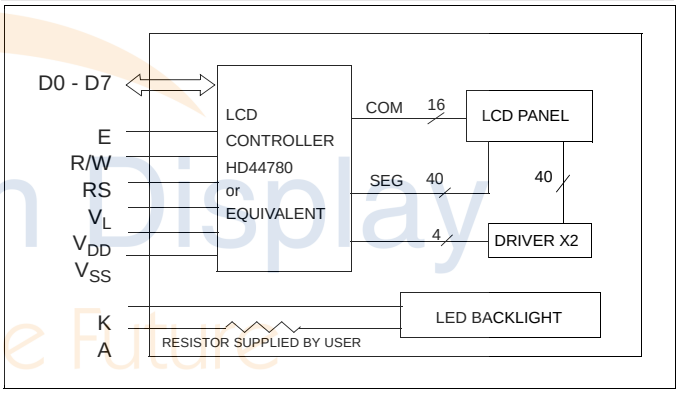
Features

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

Physical Data

Module Size.....53.0W x 20.0H x 8.5T mm
Viewing Area Size.....36.0W x 10.0H mm
Weight.....10g

Block Diagram



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
INPUT VOLTAGE	V_{IN}	0	V_{DD}+0.3	V
OPERATING TEMPERATURE	T_{OP}	0	50	°C
STORAGE TEMPERATURE	T_{STG}	-20	70	°C
LED FORWARD CURRENT	I_F	-	40	mA
LED REVERSE VOLTAGE	V_R	-	8	V
LED POWER CONSUMPTION	P_D	-	220	mW

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

PARAMETER	SYM	CONDITION	MIN	TYP	MAX	UNIT
INPUT HIGH VOLTAGE	V_{IH}	-	2.2		V_{DD}	V
INPUT LOW VOLTAGE	V_{IL}	-	V_{SS}	-	0.6	V
OUTPUT HIGH VOLTAGE	V_{OH}	I_{OH}=0.2mA	2.4	-	V_{DD}	V
OUTPUT LOW VOLTAGE	V_{OL}	I_{OL}=1.2mA	V_{SS}	-	0.4	V
POWER SUPPLY CURRENT	I_{DD}	V_{DD}=5.0V, V_L=4.4V	-	1.0	2.0	mA
POWER SUPPLY FOR LCD	V_{DD}-V_L	T_A=25°C		4.4		V
LED FORWARD VOLTAGE	V_F	I_F=20mA		4.2		V
BRIGHTNESS	L	V_F=4.2V, I_F=20mA	7	10	-	NIT
DRIVE METHOD	1/16 Duty					

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 back light	
16	K		Cathode for LED back light	