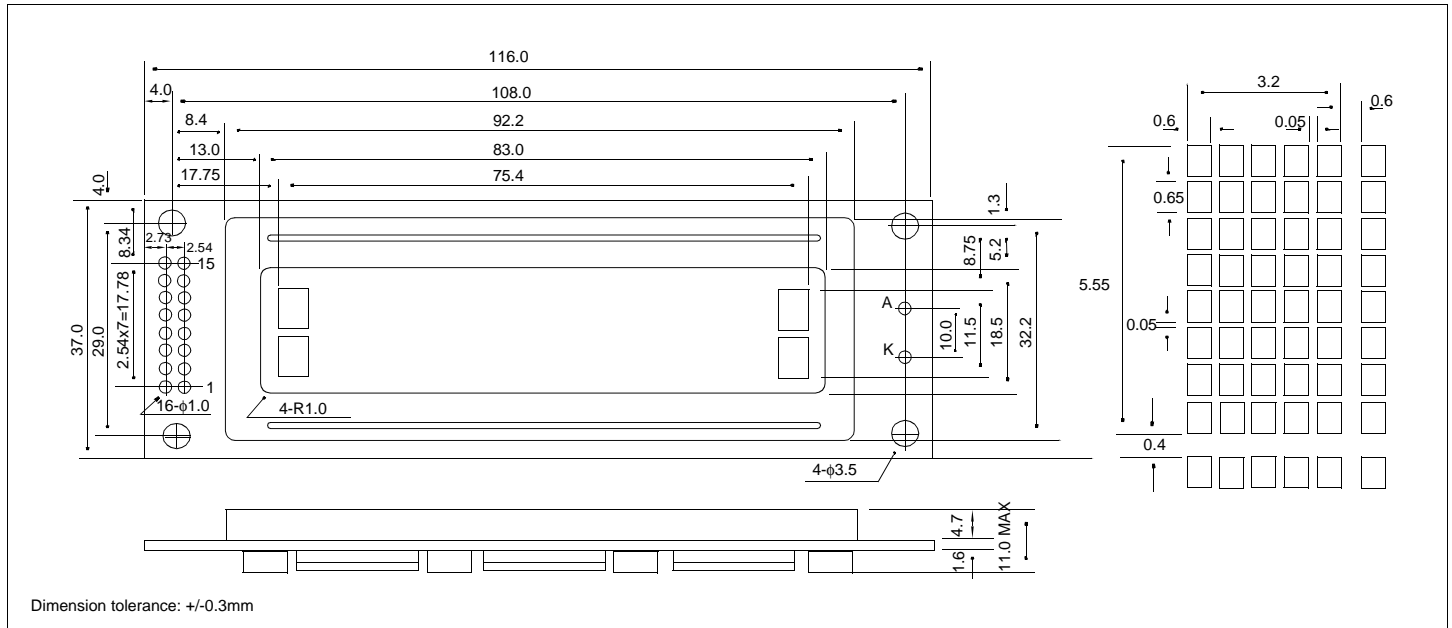


HDM20216H-3

Dimensional Drawing

20 Character x 2 Lines



Features

Character Format5x7 Dots with Cursor
Backlight.....EL Optional
Options....TN/Gray STN/Yellow STN, 12 o'Clock/6 o'Clock View
Normal/Extended Temperature
Normal/Negative Displays

Physical Data

Module Size.....116.0W x 37.0H x 11.0T mm
Viewing Area Size.....83.0W x 18.6H mm
Weight.....30g

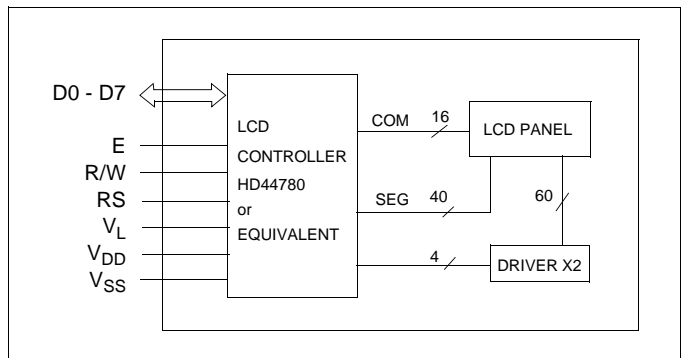
Absolute Maximum Ratings

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}	V_{SS}	V_{DD}	V
OPERATING TEMPERATURE	T_{OP}	0	50	°C
STORAGE TEMPERATURE	T_{STG}	-20	70	°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}	-	-	-	.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}	$V_{DD}=5.0V$	-	1.0	2.2	mA
POWER SUPPLY FOR LCD	$V_{DD}-V_L$	$T_A=25^{\circ}C$	4.3	-	4.7	V
DRIVE METHOD	1/16 Duty					

Block Diagram

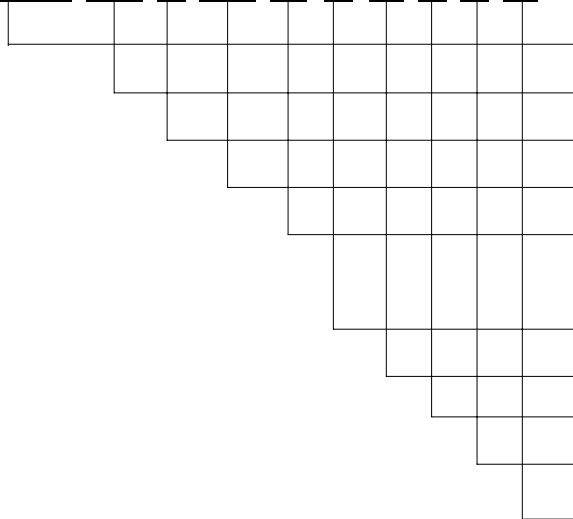


Pin Connections

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		

PART NUMBER BREAKDOWN (Character)

HDM 16 2 16 H-5-S 0 0 X



HANTRONIX DISPLAY MODULE

of Characters per Line

of Lines

Duty Cycle

Type of Backlight

H = EL or No backlight

L = LED Backlight

SIZE Code

LCD Type (*1)

Back Light/Viewing Angle (*2)

Custom / Option Code

Internal Stock Code

LCD TYPE (*1)

OPTION	LCD TYPE	POLARIZER	LCD POWER	TEMPERATURE
0	TN	REFLECTIVE	SINGLE	NORMAL
3	TN	REFLECTIVE	DUAL	WIDE
4	TN	TRANSFLECTIVE	SINGLE	NORMAL
7	TN	TRANSFLECTIVE	DUAL	WIDE
8	TN	TRANSMISSIVE	SINGLE	NORMAL
B	TN	TRANSMISSIVE	DUAL	WIDE
D	YELLOW STN	REFLECTIVE	DUAL	WIDE
E	YELLOW STN	TRANSFLECTIVE	DUAL	WIDE
F	YELLOW STN	TRANSMISSIVE	SINGLE	WIDE
G	YELLOW STN	TRANSMISSIVE	DUAL	WIDE
H	YELLOW STN	REFLECTIVE	SINGLE	NORMAL
I	GRAY STN	TRANSMISSIVE	SINGLE	NORMAL
J	YELLOW STN	REFLECTIVE	DUAL	NORMAL
L	YELLOW STN	TRANSFLECTIVE	SINGLE	NORMAL
N	YELLOW STN	TRANSFLECTIVE	DUAL	NORMAL
P	GRAY STN	REFLECTIVE	DUAL	WIDE
R	GRAY STN	REFLECTIVE	DUAL	NORMAL
S	GRAY STN	REFLECTIVE	SINGLE	NORMAL
T	GRAY STN	TRANSFLECTIVE	DUAL	NORMAL
U	GRAY STN	TRANSFLECTIVE	SINGLE	NORMAL
V	YELLOW STN	TRANSMISSIVE	SINGLE	NORMAL
W	GRAY STN	TRANSMISSIVE	DUAL	NORMAL
X	GRAY STN	TRANSFLECTIVE	DUAL	WIDE
1	FSTN	REFLECTIVE, ANTI GLARE	SINGLE	NORMAL
2	FSTN	REFLECTIVE, ANTI GLARE	DUAL	WIDE
5	FSTN	REFLECTIVE	SINGLE	NORMAL
6	FSTN	REFLECTIVE	DUAL	WIDE
9	FSTN	TRANSMISSIVE, ANTI GLARE	SINGLE	NORMAL
A	FSTN	TRANSMISSIVE, ANTI GLARE	DUAL	WIDE
C	FSTN	TRANSMISSIVE	SINGLE	NORMAL
K	FSTN	TRANSMISSIVE	DUAL	WIDE
M	FSTN	TRANSFLECTIVE, ANTI GLARE	SINGLE	NORMAL
Q	FSTN	TRANSFLECTIVE, ANTI GLARE	DUAL	WIDE
Y	FSTN	TRANSFLECTIVE	SINGLE	NORMAL
Z	FSTN	TRANSFLECTIVE	DUAL	WIDE

Back Light/ Viewing Angle (*2)

OPTION	B/L COLOR	VIEWING DIRECTION	DISPLAY TYPE
0	NO BACKLIGHTING	6 O'CLOCK	POSITIVE
1	WHITE	6 O'CLOCK	POSITIVE
2	CCFL	6 O'CLOCK	POSITIVE
3	YELLOW (LED)	6 O'CLOCK	POSITIVE
4	BLUE-GREEN	6 O'CLOCK	POSITIVE
5	ORANGE	6 O'CLOCK	POSITIVE
6	BLUE	6 O'CLOCK	POSITIVE
7	RED	6 O'CLOCK	POSITIVE
9	NO BACKLIGHTING	12 O'CLOCK	POSITIVE
A	WHITE	12 O'CLOCK	POSITIVE
B	CCFL	12 O'CLOCK	POSITIVE
C	YELLOW (LED)	12 O'CLOCK	POSITIVE
D	BLUE-GREEN	12 O'CLOCK	POSITIVE
E	ORANGE	12 O'CLOCK	POSITIVE
F	BLUE	12 O'CLOCK	POSITIVE
G	RED	12 O'CLOCK	POSITIVE
H	WHITE	6 O'CLOCK	NEGATIVE
J	CCFL	6 O'CLOCK	NEGATIVE
K	YELLOW (LED)	6 O'CLOCK	NEGATIVE
L	BLUE-GREEN	6 O'CLOCK	NEGATIVE
M	ORANGE	6 O'CLOCK	NEGATIVE
N	BLUE	6 O'CLOCK	NEGATIVE
P	RED	6 O'CLOCK	NEGATIVE
Q	WHITE	12 O'CLOCK	NEGATIVE
R	CCFL	12 O'CLOCK	NEGATIVE
S	YELLOW (LED)	12 O'CLOCK	NEGATIVE
T	BLUE-GREEN	12 O'CLOCK	NEGATIVE
U	ORANGE	12 O'CLOCK	NEGATIVE
V	BLUE	12 O'CLOCK	NEGATIVE
W	RED	12 O'CLOCK	NEGATIVE