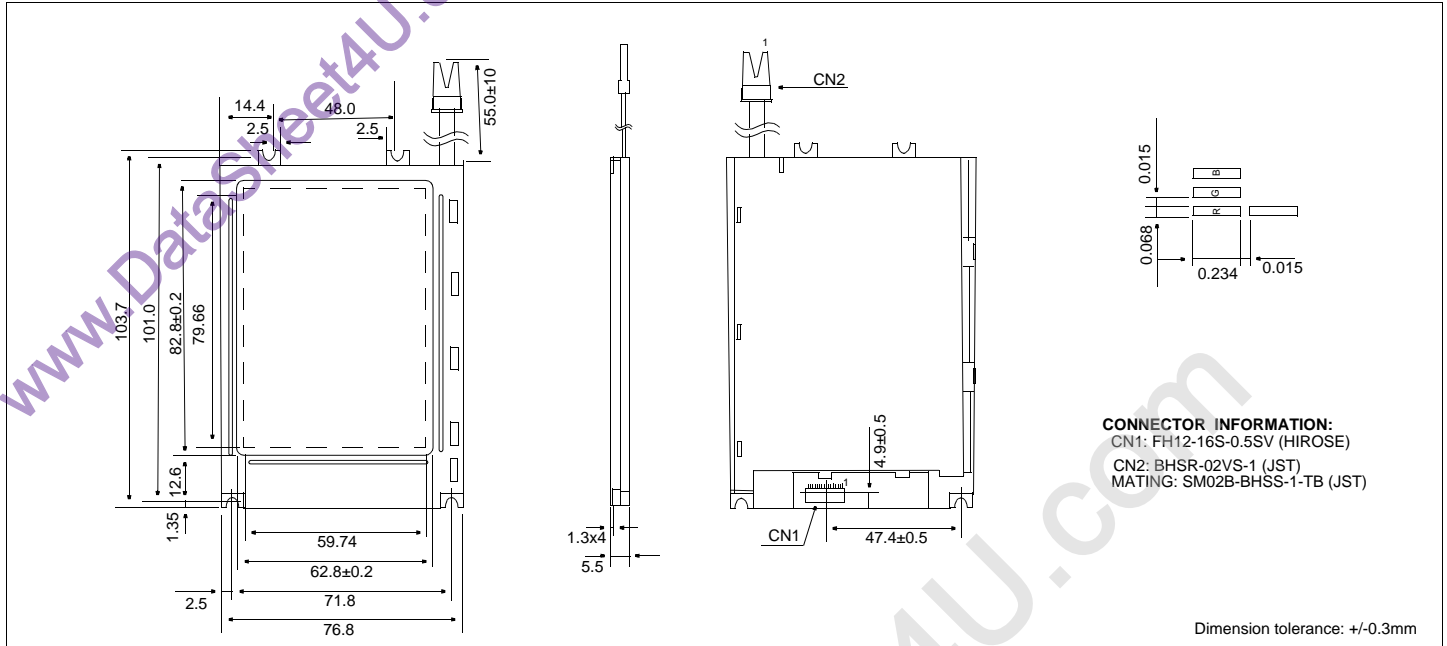


HDM 3224CL-S

Dimensional Drawing

3.9" 320 X 240 Color Graphic, Super Low Power, Thin w/LED Backlight



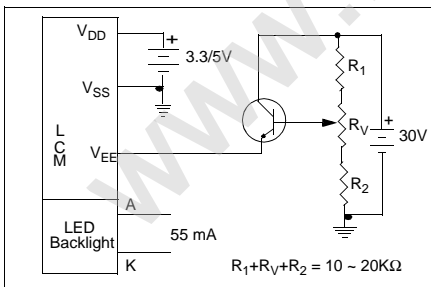
Features

- Backlight..... White LED
- Options.....ColorRGB
- Bottom / Top Viewing
- Portrait / Landscape
- Touch Screen
- Built-in Controller.....None

Physical Data

- Module Size.....76.8W x 103.7H x 5.5T mm
- Viewing Area Size.....62.8W x 82.8H mm
- Dot Pitch.....0.249W x 0.083H mm
- Dot Size.....0.234W x 0.068H mm
- Weight.....66.7g

Power Supply



Absolute Maximum Ratings

PARAMETER	SYMBOL	MIN	MAX	UNIT
SUPPLY VOLTAGE	$V_{DD}-V_{SS}$	-0.3	7.0	V
SUPPLY VOLTAGE FOR LCD	V_{EE}	0	30.0	V
INPUT VOLTAGE	V_{IN}	-0.3	$V_{DD}+0.3$	V
OPERATING TEMPERATURE	T_{OP}	0	50	°C
STORAGE TEMPERATURE	T_{STG}	-20	70	°C

Electrical Characteristics (Ta = 25°C)

PARAMETER	SYM	CONDITION	MIN	TYP	MAX	UNIT
SUPPLY VOLTAGE	V_{DD}	-	3.0	3.3	3.6	V
	V_L	-	23.2	23.5	23.8	V
INPUT HIGH VOLTAGE	V_{IH}	-	$0.8 V_{DD}$	-	V_{DD}	V
INPUT LOW VOLTAGE	V_{IL}	-	0	-	$0.2 V_{DD}$	V
LED Forward Volt-age	V_F	$I_F = 55 \text{ mA}$	-	7.2	-	V
LED Forward Current	I_F	$V_F = 7.0 \text{ V}$	-	55	83	mA
LED Power	P_F	-	-	0.4	-	V
DRIVE METHOD	1/240 DUTY					

Pin Connections

PIN NO.	SYMBOL	LEVEL	FUNCTION
DATA CONNECTOR			
1	D7	H/L	Data Bus
2	D6	H/L	
3	D5	H/L	
4	D4	H/L	
5	D3	H/L	
6	D2	H/L	
7	D1	H/L	
8	D0	H/L	
9	V_{SS}	0V	Ground
10	V_{DD}	3.3V	Power supply for logic
11	DISPOFF	H/L	H=On, L=Off
12	CP	H/L	Data shift
13	LOAD	H/L	Data Latch
14	FRAME	H	First Line Marker
15	V_{SS}	0V	Ground
16	V_{EE}	-	Operating voltage for LC
BACKLIGHT CONNECTOR			
1	A	-	Power supply for LED
2	K	-	Ground