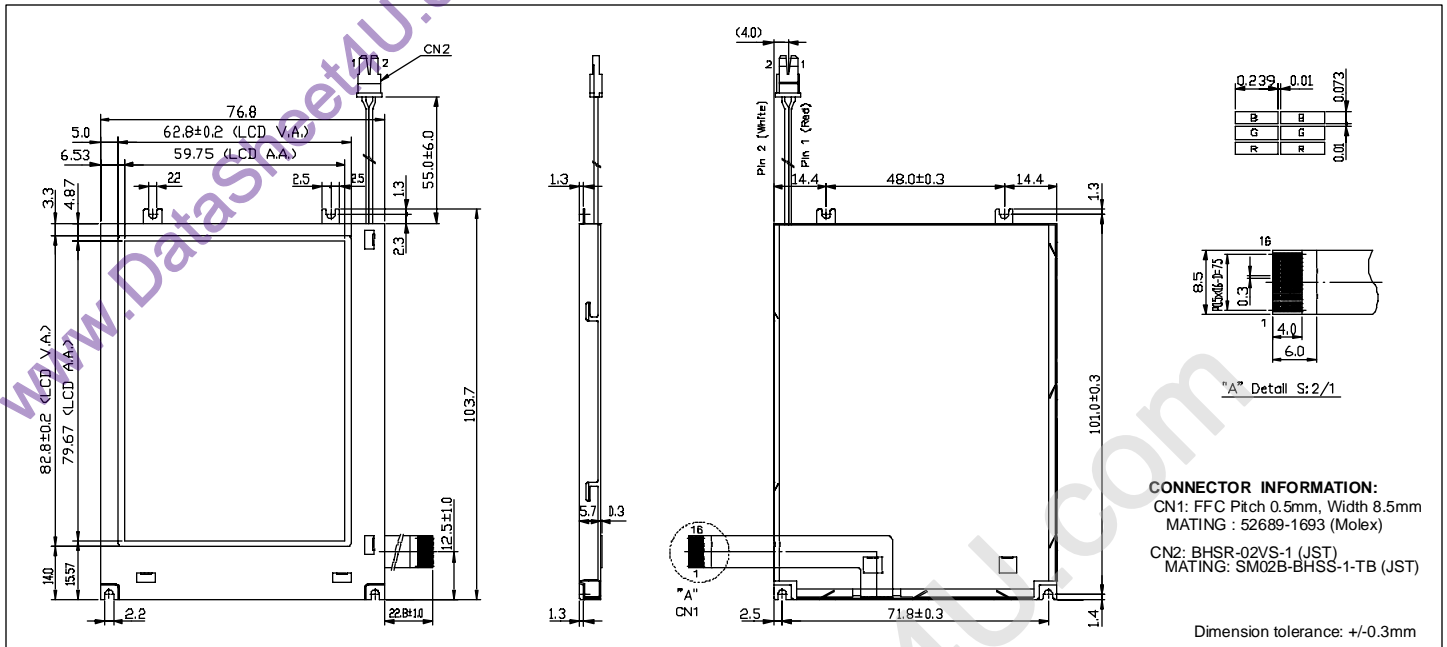


HDM 3224CL-S-TF

Dimensional Drawing

3.9" 320 X 240 Color Graphic, Transflective w/LED Backlight



Features

- Backlight..... White LED
- Options..... Color STN, Transflective
Bottom / Top Viewing
Portrait / Landscape
Touch Screen
- Built-in Controller..... None

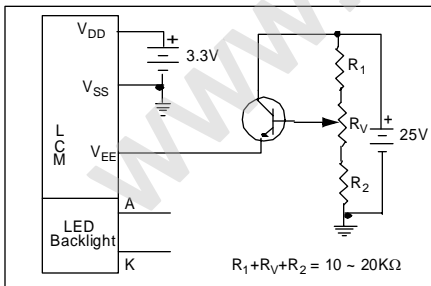
Physical Data

- 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..... 0.239W x 0.073H mm
- Weight..... 66.5g

Electrical Characteristics (Ta = 25°C)

PARAMETER	SYM	CONDITION	MIN	TYP	MAX	UNIT
Power Supply Voltage	V _{DD}	-	3.0	3.3	3.6	V
	V _{EE} -V _{SS}	-	19.7	20.0	20.3	V
Power Supply Current	I _{DD}	-	-	9.0	13.5	mA
	V _{EE}	-	-	0.3	0.5	mA
LED Forward Voltage	V _F	I _F = 140 mA	3.3	3.6	4.0	V
LED Forward Current	I _F	V _F = 3.6 V	-	140	-	mA
LED Power	P _F	-	-	0.7	-	W
DRIVE METHOD	1/240 DUTY					

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}	-20	70	°C
STORAGE TEMPERATURE	T _{STG}	-40	80	°C

Pin Connections

PINNO.	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	M	-	AC Signal for LC Driving
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