

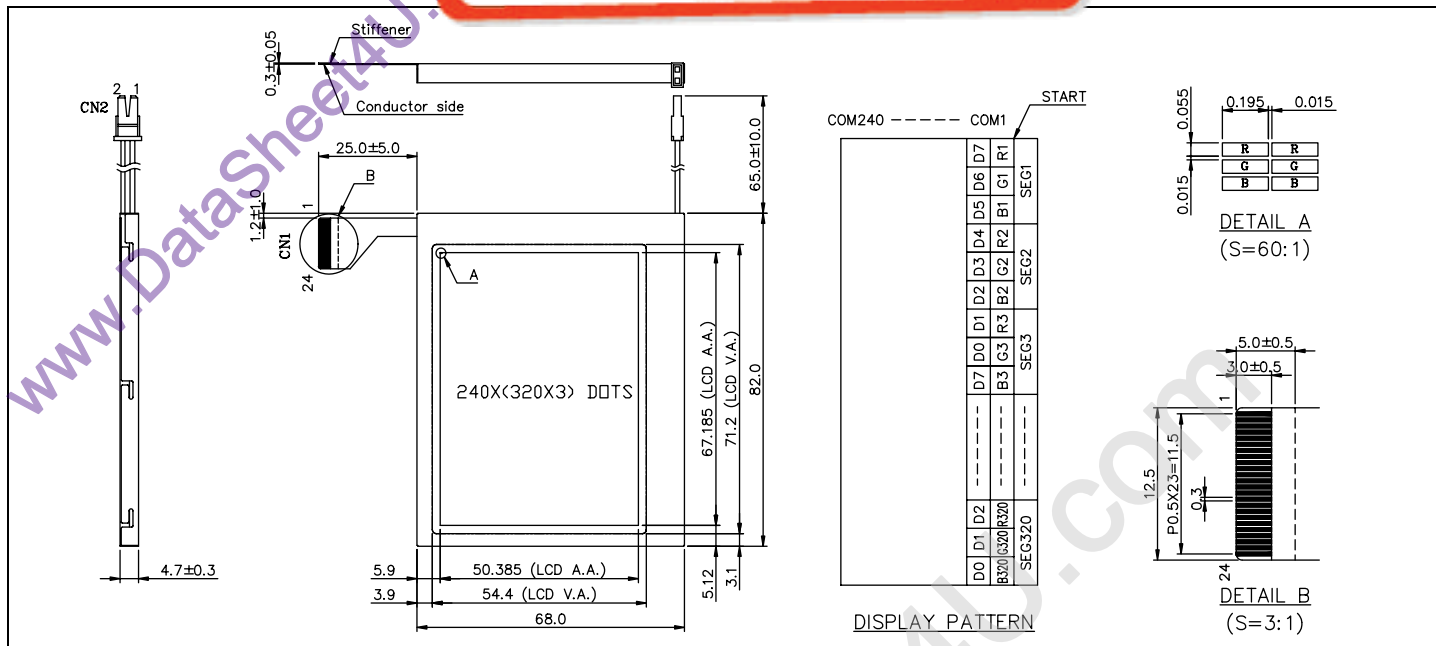
HDM 3224CL-2

Dimensional Drawing

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Http://www.lcdfriends.com

3.9" 240 X 320 Color Graphic, Low Power, 1pin w/White LED Backlight



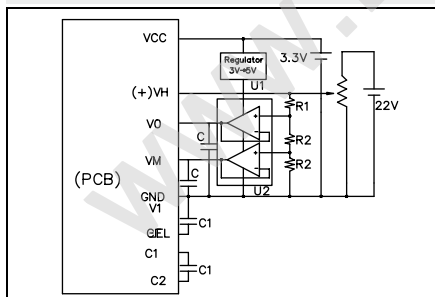
Features

Backlight.....White LED
Options.....Color FSTN
Extended Temperature
Built-in Controller.....None

Physical Data

Module Size.....68.0W x 82.0H x 4.7T mm
Viewing Area Size.....50.3W x 67.18H mm
Dot Pitch.....0.21W x 0.07H mm
Dot Size.....0.195W x 0.055H mm
Weight.....42g

Power Supply



Electrical Characteristics (V_{DD}=3.3±0.25V 25°C)

PARAMETER	SYM	CONDITION	MIN	TYP	MAX	UNIT
INPUT HIGH VOLTAGE	V _H	-	0.8V _{DD}	-	V _{DD}	V
INPUT LOW VOLTAGE	V _L	-	0	-	0.2V _{DD}	V
SUPPLY VOLTAGE	V _{DD}	-	3.0	3.3	3.6	V
	V _L	V _{DD} = 3.3V	18.2	18.5	18.8	V
LED BACKLIGHT VOLTAGE	I _F	V _F = 4.0V	-	105	-	mA
	V _F	I _F = 105mA	-	4.0	-	V
DRIVE METHOD		1/240 DUTY				

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	25.0	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

PIN NO.	SYMBOL	LEVEL	FUNCTION
DATA CONNECTOR			
1	V _{EE}	-	Operating voltage for LC
2	NC	-	H=On, L=Off
3	/D.OFF	H/L	No connection
4	FRM	H	First Line Marker
5	V _{DD}	3.3V	Power supply for logic
6	D7	H/L	Data Bus
7	D6	H/L	
8	D5	H/L	
9	D4	H/L	
10	D3	H/L	
11	D2	H/L	
12	D1	H/L	
13	D0	H/L	
14	CP	H/L	Data shift
15	LOAD	H/L	Data Latch
16	DF	H/L	LCD AC Waveform
17	V _{SS}	0V	Ground
18	V1	-	LCD bias voltage
19	V0	-	LCD bias voltage
20	VM	-	LCD bias voltage
21	CEEL	-	Connect to capacitor C1(2), pin1
22	V _{SS}	0V	Ground
23	C2	-	Connect to capacitor C1(1), pin2
24	C1	-	Connect to capacitor C1(1), pin1
CCFL CONNECTOR			
1	A	-	Power supply for LED Backlight
2	K	-	Ground