

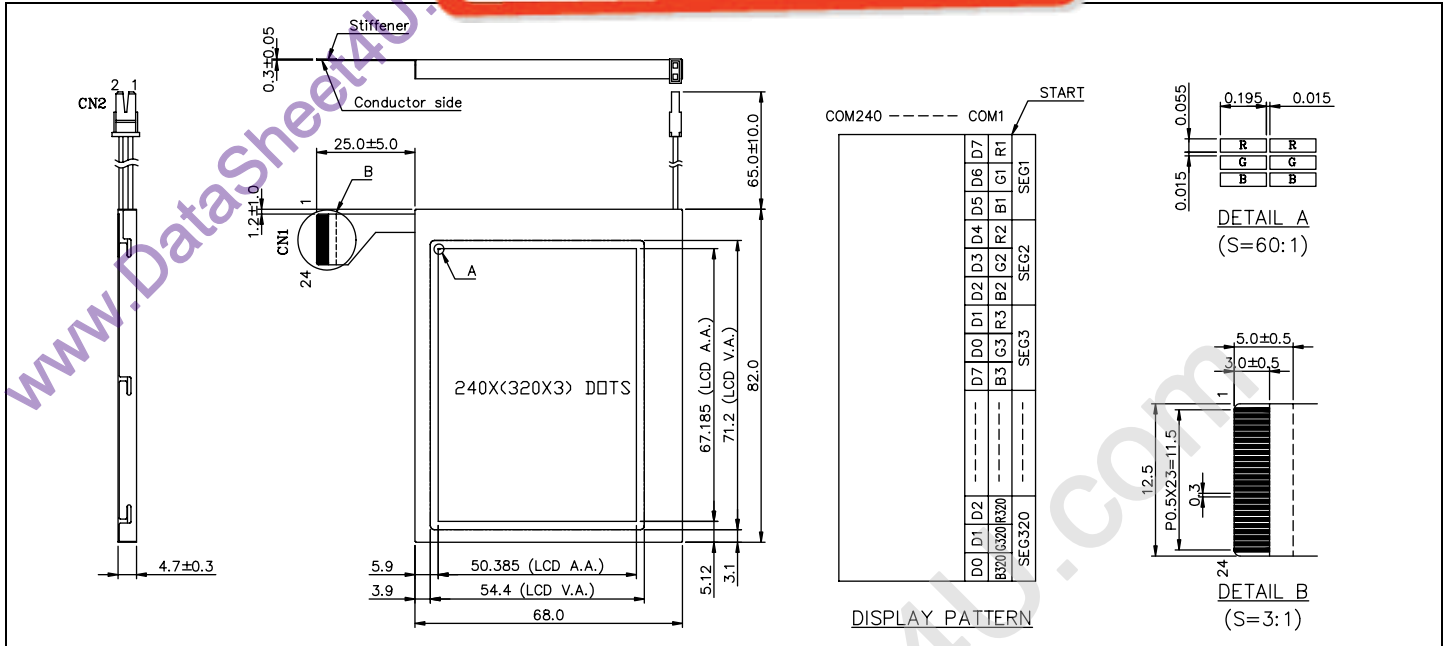
HDM 3224CL-2

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

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

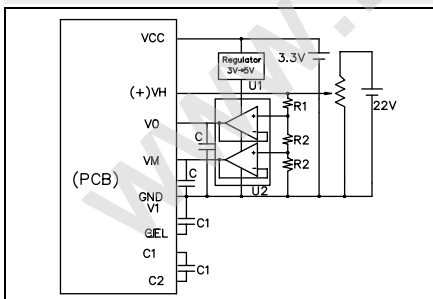
Physical Data

- 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

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	Data shift
14	CP	H/L	
15	LOAD	H/L	Data Latch
16	DF	H/L	LCD AC Waveform
17	V_{SS}	0V	Ground
18	V_1	-	LCD bias voltage
19	V_0	-	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

Power Supply



Electrical Characteristics ($V_{DD}=3.3\pm 0.25V$ 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					