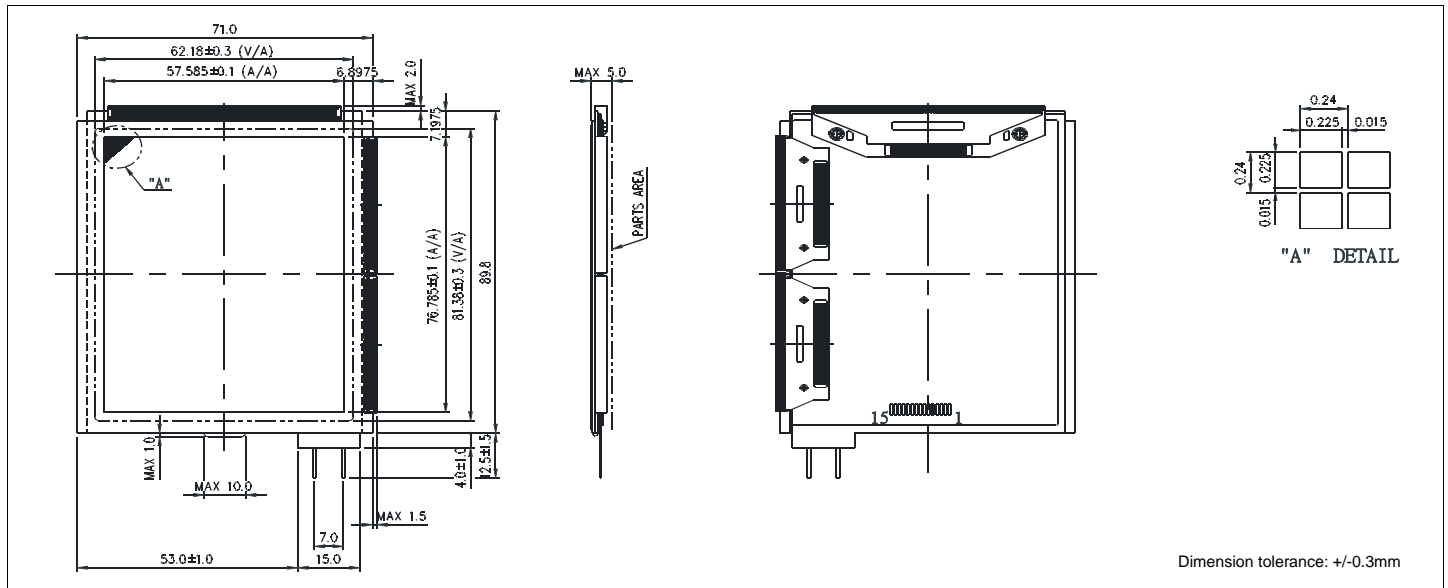


HDM3224-SM

Dimensional Drawing

320 X 240 Dots Graphic, 3.9" Mono QVGA



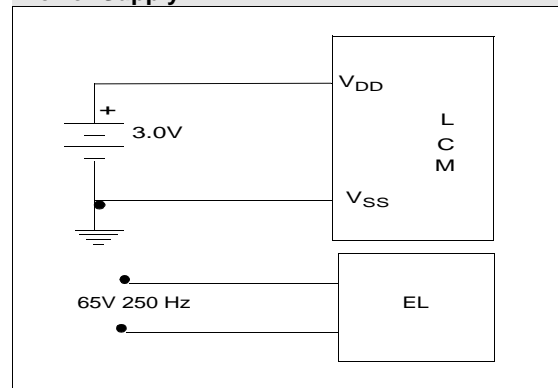
Features

- Backlight.....EL
- Options.....Normally White FSTN
- Extended Temperature
- Bottom Viewing
- Multi-Line Address Driver
- Built-in DC/DC Converter for LCD power
- Built-in Controller.....None

Physical Data

- Module Size.....91.8W x 72.5H x Max 5.0T mm
- Viewing Area Size.....81.38W x 62.18H mm
- Dot Pitch.....0.24W x 0.24H mm
- Dot Size.....0.225W x 0.225H mm
- Weight.....40g

Power Supply



Absolute Maximum Ratings

PARAMETER	SYMBOL	MIN	MAX	UNIT
SUPPLY VOLTAGE	$V_{DD}-V_{SS}$	-0.3	5.5	V
INPUT VOLTAGE	V_{IN}	-0.3	V_{DD}	V
OPERATING TEMPERATURE	T_{OP}	-20	70	°C
STORAGE TEMPERATURE	T_{STG}	-30	80	°C

Electrical Characteristics (VDD=3.0±10%)

PARAMETER	SYM	CONDITION	MIN	TYP	MAX	UNIT
INPUT HIGH VOLTAGE	V_{IH}	-	0.7 V_{DD}	-	V_{DD}	V
INPUT LOW VOLTAGE	V_{IL}	-	- 0.3	-	0.2 V_{DD}	V
LCD Driving VOLTAGE	V_{OP}	25°C	14.1	14.4	14.7	V
Power Supply Current	I_{DD}	$V_{DD} = 3V$		2.1	3.2	mA
Power Supply Current for EL	I_{EL}	65 V_{rms} 250Hz		5.5	8.3	mA
Frame Start Signal	YD		83.0±10			HZ
DRIVE METHOD	1/240 DUTY					

Pin Connections

PIN NO.	SYMBOL	LEVEL	FUNCTION
1	V_{DD}	3.3V	Power supply for logic
2	V_{SS}	0V	Ground
3	LP	H/L	Display Data Latch clock
4	XSLP	-	Switch on or off the display
5	XSCL	H/L	Display Data shift clock
6	YD	H/L	First Line Marker
7	DOFF	H/L	H= Display ON, L = Display OFF
8	D0	H/L	Display data
9	D1	H/L	
10	D2	H/L	
11	D3	H/L	
12	D4	H/L	
13	D5	H/L	
14	D6	H/L	
15	D7	H/L	