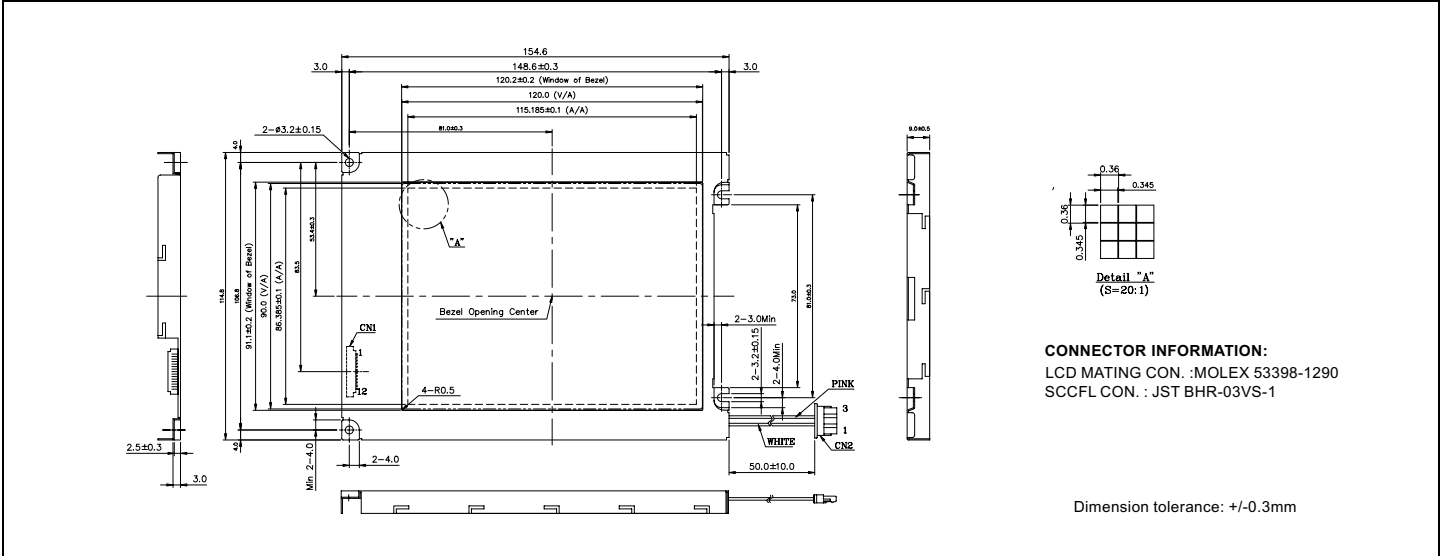


HDM3224-M

Dimensional Drawing

320 X 240 Dots Graphic CCFL Backlight



Features

- Backlight.....CCFL
- Options.....Normally Black, FSTN
Extended Temperature
12 o'clock
- Built-in Controller.....None

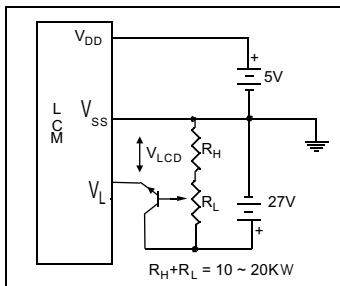
Physical Data

- Module Size.....154.6W x 114.8H x 9.0T mm
- Viewing Area Size.....122.0W x 92.0H mm
- Dot Pitch.....0.36W x 0.36H mm
- Dot Size.....0.345W x 0.345H mm
- Weight.....190g

Absolute Maximum Ratings

PARAMETER	SYMBOL	MIN	MAX	UNIT
SUPPLY VOLTAGE	$V_{DD}-V_{SS}$	0	7.0	V
SUPPLY VOLTAGE FOR LCD	$V_{DD}-V_{EE}$	0	30.0	V
INPUT VOLTAGE	V_{IN}	-	7.0	V
OPERATING TEMPERATURE	T_{OP}	-20	70	°C
STORAGE TEMPERATURE	T_{STG}	-40	80	°C

Power Supply



Electrical Characteristics (VDD=5.0±0.25V 25°C)

PARAMETER	SYM	CONDITION	MIN	TYP	MAX	UNIT
INPUT HIGH VOLTAGE	V_{IH}	-	0.8 V_{DD}	-	-	V
INPUT LOW VOLTAGE	V_{IL}	-	-	-	0.2 V_{DD}	V
SUPPLY VOLTAGE	V_{DD}	-	4.5	5.0	5.5	V
	$-V_L$	-	22.3	22.7	23.1	V
DRIVE METHOD	1/240 DUTY					

Pin Connections

PIN NO.	SYMBOL	LEVEL	FUNCTION
DATA CONNECTOR			
1	FRAME	H	First Line Marker
2	LOAD	H/L	Data Latch
3	CP	H/L	Data shift
4	DISPOFF	H/L	H=On, L=Off
5	vDD	5V	Power supply for logic
6	V_{SS}	0V	Ground
7	V_{LCD}	-	Operating voltage for LC
8	D0	H/L	Display Data
9	D1		
10	D2		
11	D3		
12	V	0V	Ground
CCFL CONNECTOR			
1	V_{CFL}	-	CCFL Ground
2	NC	-	No Connection
3	V_{CFL}	-	Power supply for CCFL