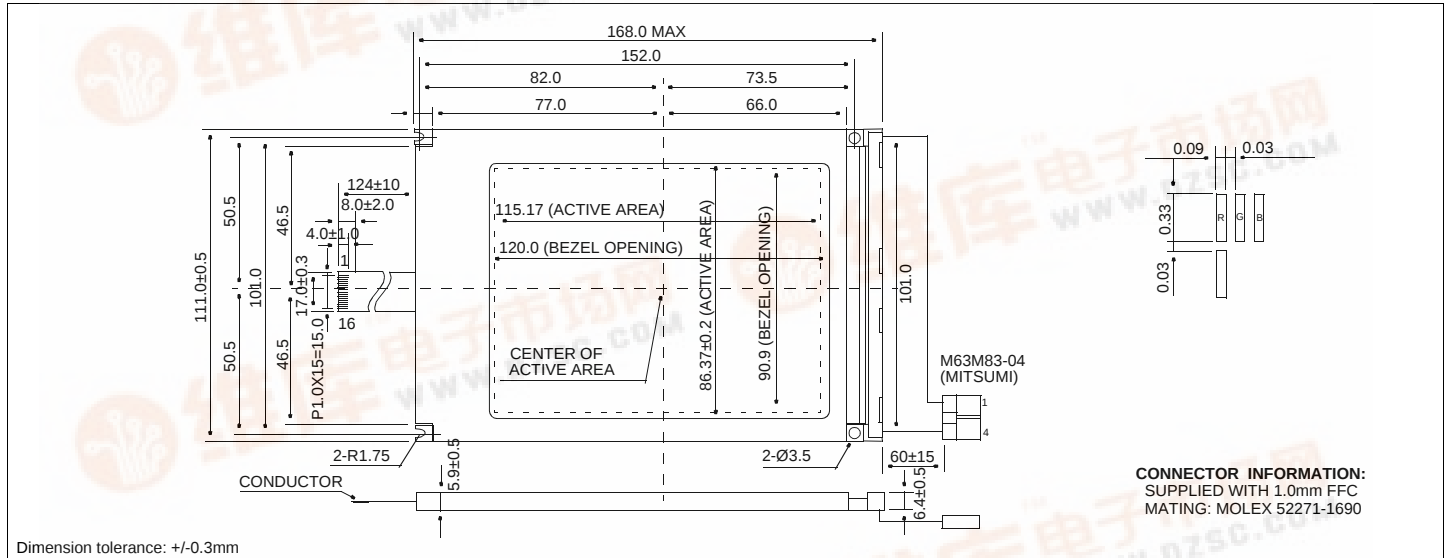


HDM3224-C

Dimensional Drawing

320 X 240 Dots Color Graphic CCFL Backlight



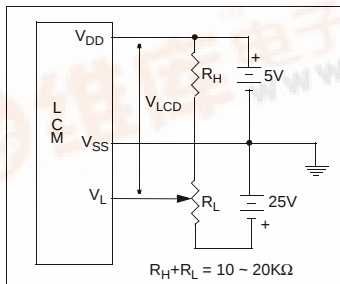
Features

Backlight.....CCFL
Options.....Color RGB
Normal/Extended Temperature
Bottom Viewing
Built-in Controller.....None

Physical Data

Module Size.....168.0W x 111.0H x 6.4T mm
Viewing Area Size.....120.0W x 90.0H mm
Dot Pitch.....0.36W x 0.36H mm
Dot Size.....0.09W x 0.33H mm
Weight.....280g

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	42.0	V
INPUT VOLTAGE	V_{IN}	-0.3	7.0	V
OPERATING TEMPERATURE	T_{OP}	0	50	°C
STORAGE TEMPERATURE	T_{STG}	-20	70	°C
OPERATING TEMPERATURE (WT)	T_{OP}	-20	70	°C
STORAGE TEMPERATURE (WT)	T_{STG}	-30	80	°C

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	V_{DD}	5V	Power supply for logic
6	V_{SS}	0V	Ground
7	V_L	-	Operating voltage for LC
8	D0	H/L	Data bus
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	
16	V_{SS}	0V	
CCFL CONNECTOR			
1	V_{CFL}	-	Power supply for CCFL
2	NC	-	No Connection
3	NC	-	No Connection
4	V_{CFL}	-	CCFL Ground

Electrical Characteristics ($V_{DD}=5.0\pm0.25V$ 25°C)

PARAMETER	SYM	CONDITION	MIN	TYP	MAX	UNIT
SUPPLY VOLTAGE	V_{DD}	-	4.5	5.0	5.5	V
	V_L	-	23.3	23.5	23.6	V
INPUT HIGH VOLTAGE	V_{IH}	-	.8 V_{DD}	-	V_{DD}	V
INPUT LOW VOLTAGE	V_{IL}	-	0	-	.2 V_{DD}	V
CCFL OP. VOLTAGE	V_{FL}	-	-	320	-	V_{rms}
CCFL OP. CURRENT	I_{FL}	-	4	5	6	mA_{rms}
CCFL START VOLTAGE	V_{FLS}	$T_A = 0^\circ C$	-	455	-	V_{rms}
CCFL FREQUENCY	F_{FL}	-	20	35	50	KHz
DRIVE METHOD	1/240 DUTY					