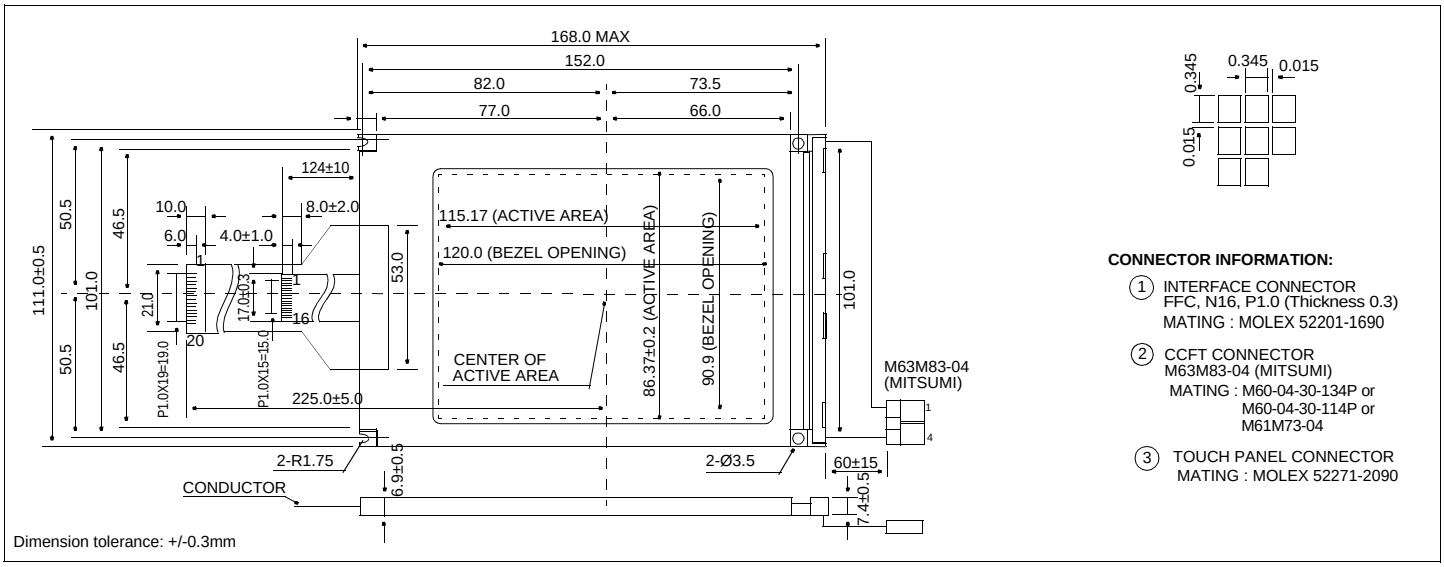
HDM3224TS-2

320 X 240 Dots Graphic CCFL Backlight w/Touch Screen

Dimensional Drawing



Dimension tolerance: +/-0.3mm

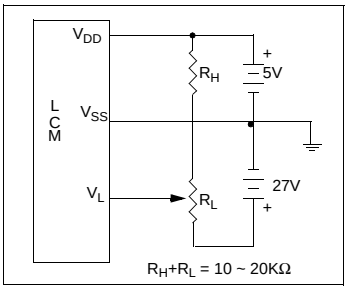
Features

Backlight.....CCFL
Options.....STN/Black and White FSTN
Normal/Extended Temperature
Bottom / Top Viewing
Built-in Controller.....None

Physical Data

Module Size.....168.0W x 111.0H x 9.0T mm
Viewing Area Size.....120.0W x 90.0H mm
Dot Pitch.....0.36W x 0.36H mm
Dot Size.....0.345W x 0.345H mm
Weight.....230g

Power Supply



Electrical Characteristics (V_{DD}=5.0±0.25V, Ta=25°C)

PARAMETER	SYM	CONDITION	MIN	TYP	MAX	UNIT
SUPPLY VOLTAGE	V_{DD}	-	4.75	5.0	5.25	V
	V_{LCD}	-	22.1	22.5	22.9	V
SUPPLY CURRENT	I_{DD}	FLM=70 Hz v_{LCD}=22.5V	-	0.6	0.9	mA
	I_{LCD}		-	6.0	10.4	mA
CCFL OP. VOLTAGE	V_{FL}	-	-	260	-	Vrms
CCFL OP. CURRENT	I_{FL}	-	2	5	6	mA
CCFL OP. FREQUENCY	F_L	-	20	35	50	KhZ
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}-V_{SS}	0	30.0	V
INPUT VOLTAGE	V_{IN}	-0.3	V_{DD}	V
OPERATING TEMPERATURE	T_{OP}	0	50	°C
STORAGE TEMPERATURE	T_{STG}	-20	70	°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 - 11	D0 - D3	H/L	Data Bus
12 - 15	D4 - D7	-	No Connection
16	V_{SS}	0V	Ground
CCFL CONNECTOR			
1	V_{CFL}	-	Power supply for CCFL
2	NC	-	No Connection
3	NC	-	No Connection
4	V_{CFL}	-	CCFL Ground

Touch Panel Connector

PIN	SYM	PIN	SYM	PIN	SYM	PIN	SYM	PIN	SYM
1	N.C	5	C7	9	R2	13	R6	17	C2
2	C10	6	C6	10	R3	14	R7	18	C3
3	C9	7	N.C.	11	R4	15	N.C.	19	C4
4	C8	8	R1	12	R5	16	C1	20	C5