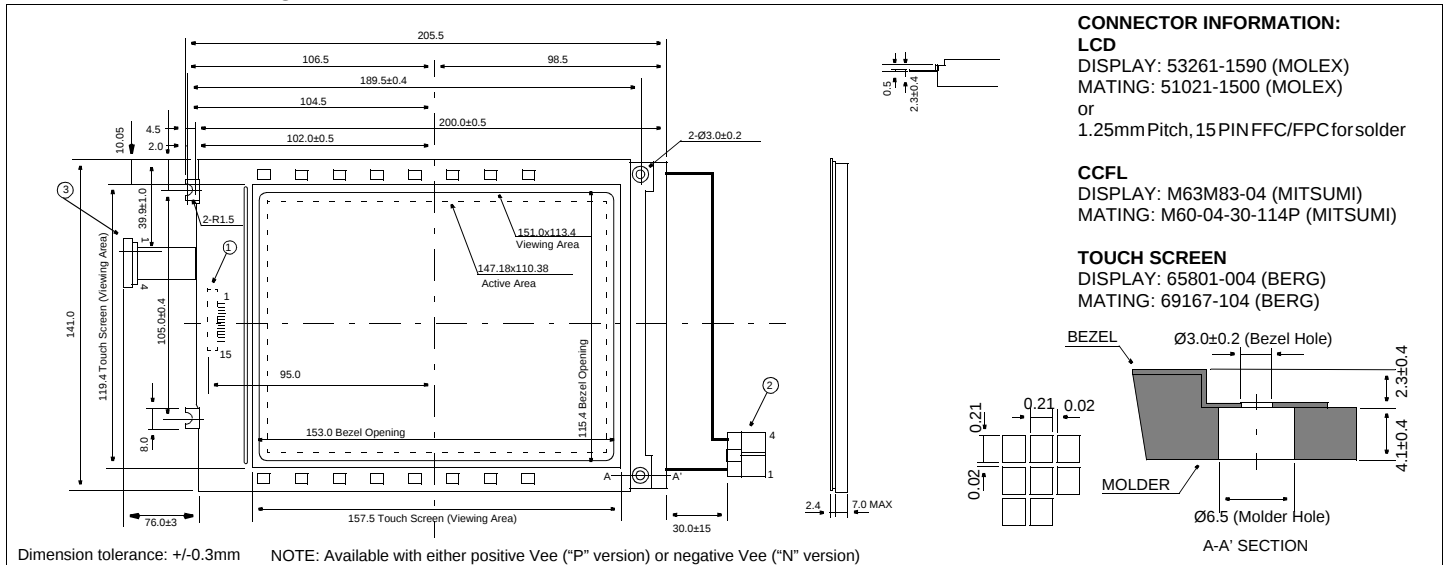


HDM6448TS-S

Dimensional Drawing

640 X 480 7.4" VGA Monochrome, with Touch Screen



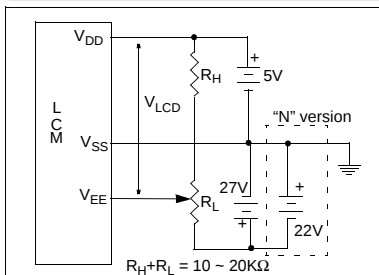
Features

Backlight.....CCFL
 Options.....Black and White FSTN
 Built-in Controller.....None

Physical Data

Module Size.....205.5W x 141.0H x 7.0T mm
 Viewing Area Size.....151.0W x 113.4H mm
 Dot Pitch.....0.23W x 0.23H mm
 Dot Size.....0.21W x 0.21H mm
 Weight.....310g

Power Supply



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

PARAMETER	SYM	CONDITION	MIN	TYP	MAX	UNIT
SUPPLY VOLTAGE	V_{DD}	-	4.75	5.0	5.25	V
	$V_{EE} (N)$	$V_{DD} - V_{EE}$	22.3	22.8	23.3	V
	$V_{EE} (P)$	$V_{EE} - V_{SS}$	21.3	22.7	23.1	V
POWER SUPPLY CURRENT	$I_{DD} (N)$	$V_{DD} = 5.0V$	-	12.0	-	mA
	$I_{EE} (N)$	$V_{EE} = -17.0V$	-	5.0	-	mA
	$I_{DD} (P)$	$V_{DD} = 5.0V$	-	2.0	4.0	mA
	$I_{EE} (P)$	$V_{EE} = +22.7V$	-	6.8	13.0	mA
INPUT HIGH VOLTAGE	V_{IH}	-	4.5	-	V_{DD}	V
INPUT LOW VOLTAGE	V_{IL}	-	0.3	-	0.5	V
CCFL OP. VOLTAGE	V_{FL}	$I_{FL} = 5mA_{rms}$	200	350	600	Vrms
CCFL OP. CURRENT	I_{FL}	$V_{FL} = 360V$	3.0	5.0	6.0	mA
CCFL START VOLTAGE	V_{FLS}	$T_a = 0^\circ C$	900	-	-	Vrms
CCFL FREQUENCY	f_{FL}	-	20	-	-	kHz
FRAME FREQUENCY	f_{FP}	-	65	72	80	Hz
DRIVE METHOD	1/240 DUTY					

Absolute Maximum Ratings

PARAMETER	SYMBOL	MIN	MAX	UNIT
SUPPLY VOLTAGE	$V_{DD} - V_{SS}$	-0.3	6.5	V
SUPPLY VOLTAGE FOR LCD	$V_{DD} - V_{EE} (N)$	0	27.0	V
	$V_{EE} - V_{SS} (P)$	0	27.0	V
INPUT VOLTAGE	V_{IN}	-0.3	$V_{DD} + 0.3$	V
OPERATING TEMPERATURE	T_{OP}	0	50	°C
STORAGE TEMPERATURE	T_{STG}	-20	70	°C
HUMIDITY (NO CONDENSATION)	-	10	85	%RH

Pin Connections

PIN NO.	SYMBOL	LEVEL	FUNCTION
DATA CONNECTOR			
1	FP	H	First Line Marker
2	LP	H/L	Data Latch
3	SCP	H/L	Shift clock
4	DISPOFF	H/L	H = On, L = Off
5	V_{DD}	5V	Power supply for logic
6	V_{SS}	0V	Ground
7	V_{EE}	-	Operating voltage for LC
8	UD0	H/L	Upper screen data input
9	UD1	H/L	Upper screen data input
10	UD2	H/L	Upper screen data input
11	UD3	H/L	Upper screen data input
12	LD0	H/L	Lower screen data input
13	LD1	H/L	Lower screen data input
14	LD2	H/L	Lower screen data input
15	LD3	H/L	Lower screen data input
CCFL CONNECTOR			
1	V_{FL}	-	Power supply for CCFL
2&3	NC	-	No Connection
4	V_{FLG}	-	Ground
TOUCH SCREEN CONNECTOR			
1	Y+	-	Top Direction
2	Y-	-	Bottom Direction
3	X-	-	Left Direction
4	X+	-	Right Direction