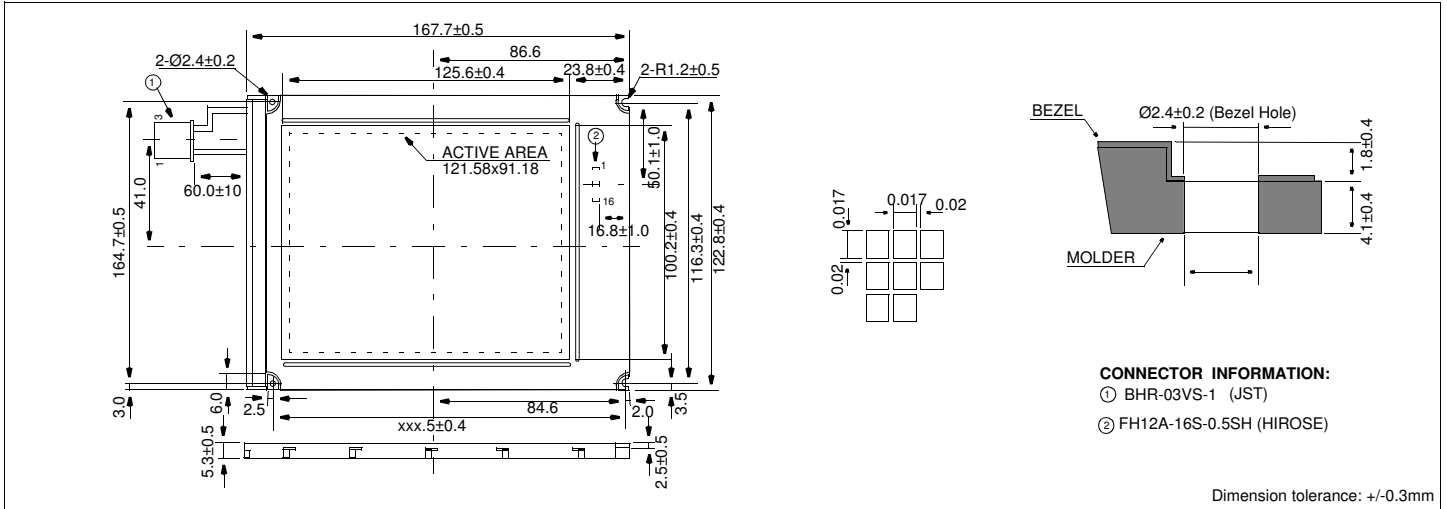


# HDM6448-6

## Dimensional Drawing

640 X 480 Dots Graphic Small Size CCFL Backlight



### Features

Backlight.....CCFL  
 Options.....Black & White FSTN  
 Bottom Viewing  
 Built-in Controller.....None

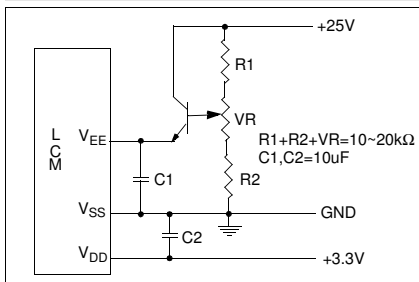
### Physical Data

Module Size.....167.7W x 122.8H x 5.3 mm  
 Viewing Area Size.....125.6W x 95.2H mm  
 Dot Pitch.....0.19W x 0.19H mm  
 Dot Size.....0.17W x 0.17H mm  
 Weight.....150g

### Absolute Maximum Ratings

PARAMETER	SYMBOL	MIN	MAX	UNIT
SUPPLY VOLTAGE	$V_{DD}-V_{SS}$	0	6.0	V
SUPPLY VOLTAGE FOR LCD	$V_{EE}-V_{SS}$	0	30.0	V
INPUT VOLTAGE	$V_{IN}$	0	$V_{DD}$	V

### Power Supply



### Electrical Characteristics (VDD=3.3±0.3V 25°C)

PARAMETER	SYM	CONDITION	MIN	TYP	MAX	UNIT
INPUT HIGH VOLTAGE	$V_{IH}$	-	0.8 $V_{DD}$	-	$V_{DD}$	V
INPUT LOW VOLTAGE	$V_{IL}$	-	0	-	0.2 $V_{DD}$	V
SUPPLY VOLTAGE	$V_{DD}$	-	3.0	3.3	5.5	V
	$V_{EE}-V_{SS}$	25°C	20.1	20.5	20.9	V
LOGIC CURRENT	$I_{DD}$	$V_{DD}=5V$	-	0.7	3.0	mA
LCD CURRENT	$I_{EE}$	$V_{DD}=5V$	-	6.7	15.0	mA
DRIVE METHOD	1/240 DUTY					

### Pin Connections

PIN NO.	SYMBOL	LEVEL	FUNCTION	
<b>DATA CONNECTOR</b>				
1	FLM	H	First Line Marker	
2	CL1	H	Latch pulse	
3	CL2	H	Data shift clock	
4	DISPOFF	H/L	H= On, L= Off	
5	$V_{DD}$	3.3V	Power supply for logic	
6	$V_{SS}$	0V	Ground	
7	$V_{EE}$	-	Operating voltage for LC	
8	UD0	H/L	Upper data bus	
9	UD1	H/L		
10	UD2	H/L		
11	UD3	H/L	Lower data bus	
12	$V_{SS}$	0V		Ground
13	LD1	H/L		
14	LD2	H/L		
15	LD3	H/L		
16	LD4	H/L		
<b>CCFL CONNECTOR</b>				
1	$V_{CFL}$	-	CCFL Ground	
2	NC	-	No Connection	
3	$V_{CFL}$	-	Power supply for CCFL	