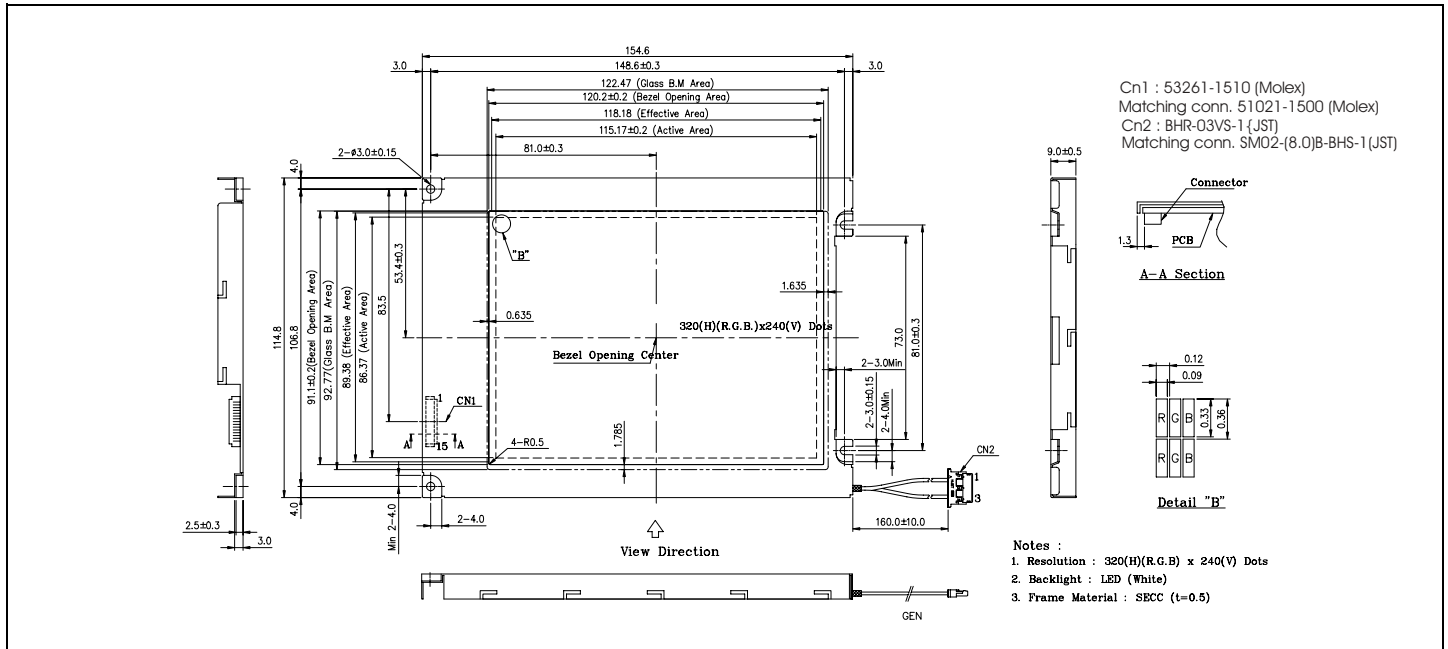


# HDM 3224-CWL

## Dimensional Drawing

5.7", 320X240, Color Graphic, White LED Backlight



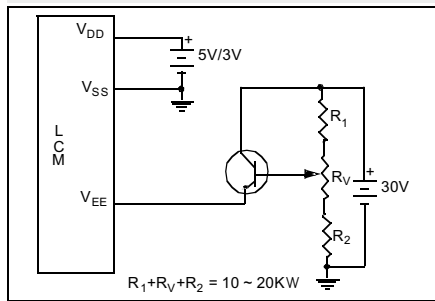
### Features

Backlight.....White LED  
 Options.....Color FSTN  
 Extended Temperature  
 Built-in Controller.....None

### Physical Data

Module Size.....154.6W x114.8 0H x9.0 T mm  
 Viewing Area Size.....118.18W x89.38 H mm  
 Dot Pitch.....0.12W x 0.36H mm  
 Dot Size.....0.09W x 0.33H mm  
 Weight.....195g

### Power Supply



### Electrical Characteristics ( $V_{DD}=5.0/3.0 \pm 0.25V$ 25°C)

PARAMETER	SYM	CONDITION	MIN	TYP	MAX	UNIT
INPUT HIGH VOLTAGE	$V_{IH}$	-	$0.8V_{DD}$	-	$V_{DD}$	V
INPUT LOW VOLTAGE	$V_{IL}$	-	0	-	$0.2V_{DD}$	V
SUPPLY VOLTAGE	$V_{DD}$	-	4.75 2.7	5.0 3.0	5.25 3.3	V
	$V_L$	-	25.2	25.6	26.0	V
LED BACKLIGHT VOLTAGE	$I_F$	$V_F = 5.0V$	-	-	200	mA
	$V_F$	$I_F = 200mA$	-	5.0	-	V
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	$V_{EE}$	0	.30	V
INPUT VOLTAGE	$V_{IN}$	-0.3	$V_{DD} + 0.3$	V
OPERATING TEMPERATURE	$T_{OP}$	-20	70	°C
STORAGE TEMPERATURE	$T_{STG}$	-40	80	°C

### Pin Connections

PIN NO.	SYMBOL	LEVEL	FUNCTION
<b>DATA CONNECTOR</b>			
1	FRM	H	Begging of the frame
2	LOAD	H - L	Data latch clock
3	CP	H - L	Data shift clock
4	DISP	L/H	Display control signal
5	VDD	-	Power supply for logick
6	VSS	-	GND
7	VEE	-	Power supply for LCD
8	D7	H/L	Data Bus
9	D6		
10	D5		
11	D4		
12	D3		
13	D2		
14	D1		
15	D0		
<b>CCFL CONNECTOR</b>			
1	A	-	Backlight (+)
2	N/C	-	No connection
3	K	-	Backlight (-)