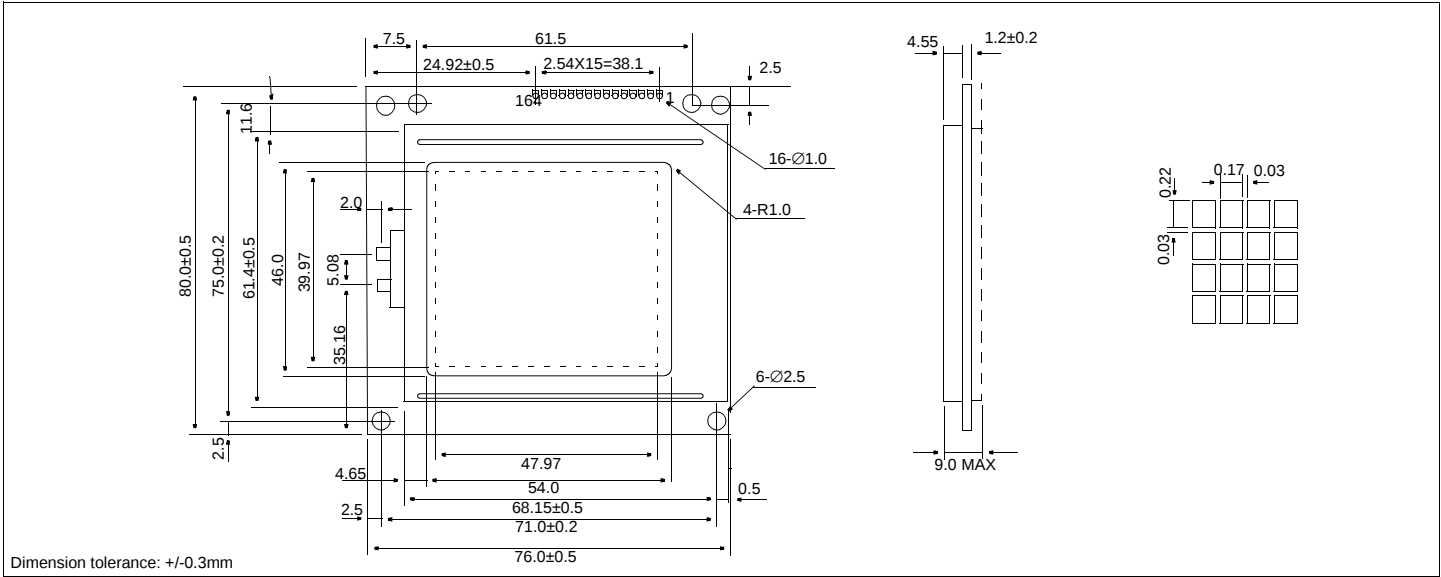


HDM240GS16

240 X 160 Dots Graphic

Dimensional Drawing



Features

Backlight.....None or EL Optional
Options.....Gray STN / Yellow STN
Normal/Extended Temperature
Bottom / Top Viewing
Built-in Controller.....None

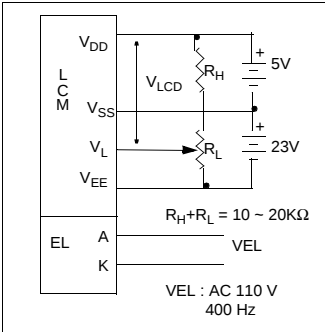
Physical Data

Module Size.....76.0W x 80.0H x 9.0T mm
Viewing Area Size.....54.0W x 46.0H mm
Dot Pitch.....0.20W x 0.25H mm
Dot Size.....0.17W x 0.22H mm
Weight.....52g or 55g

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

PARAMETER	SYM	CONDITION	MIN	TYP	MAX	UNIT
OPERATING VOLTAGE	V _{DD}	-	4.75	5.0	5.25	V
POWER SUPPLY FOR LCD	V _{DD} -V _L	-	20.6	21.0	21.4	V
INPUT HIGH VOLTAGE	V _{IH}	-	0.7V _{DD}	-	V _{DD}	V
INPUT LOW VOLTAGE	V _{IL}	-	0	-	0.3V _{DD}	V
OUTPUT HIGH VOLTAGE	V _{OH}	I _{OH} =0.2mA	V _{DD} -0.4	-	V _{DD}	V
OUTPUT LOW VOLTAGE	V _{OL}	I _{OL} =1.2mA	0	-	0.4	V
POWER SUPPLY CURRENT	I _{DD}	V _{DD} =5.0V	-	-	3.0	mA
DRIVE METHOD	1/160 Duty					

Power Supply



Absolute Maximum Ratings

PARAMETER	SYMBOL	MIN	MAX	UNIT
SUPPLY VOLTAGE	V _{DD} -V _{SS}	0	6.5	V
POWER SUPPLY FOR LCD	V _L	0	28.0	V
INPUT VOLTAGE	V _{IN}	0	6.8	V
OPERATING TEMPERATURE	T _{OP}	0	50	°C
STORAGE TEMPERATURE	T _{STG}	-20	70	°C

Pin Connections

PIN NO.	SYMBOL	FUNCTION	
1	FRAME	H/L	Frame signal
2	CL1	H/L	Display data latch
3	M	H/L	LCD drive signal
4	DISPOFF	L	Display off
5	CL2	H/H→L	Display data shift clock
6	DB0	H/L	Data bus
7	DB1	H/L	
8	DB2	H/L	
9	DB3	H/L	
10	N/C	-	No connection
11	V _{DD}	5V	Power supply for logic
12	V _{SS}	0V	Ground
13	V _{EE}	-	Power supply voltage for LCD
14	V _L	-	Operating voltage for LCD
15	A	-	Power supply voltage for EL
16	K	-	Power supply voltage for EL