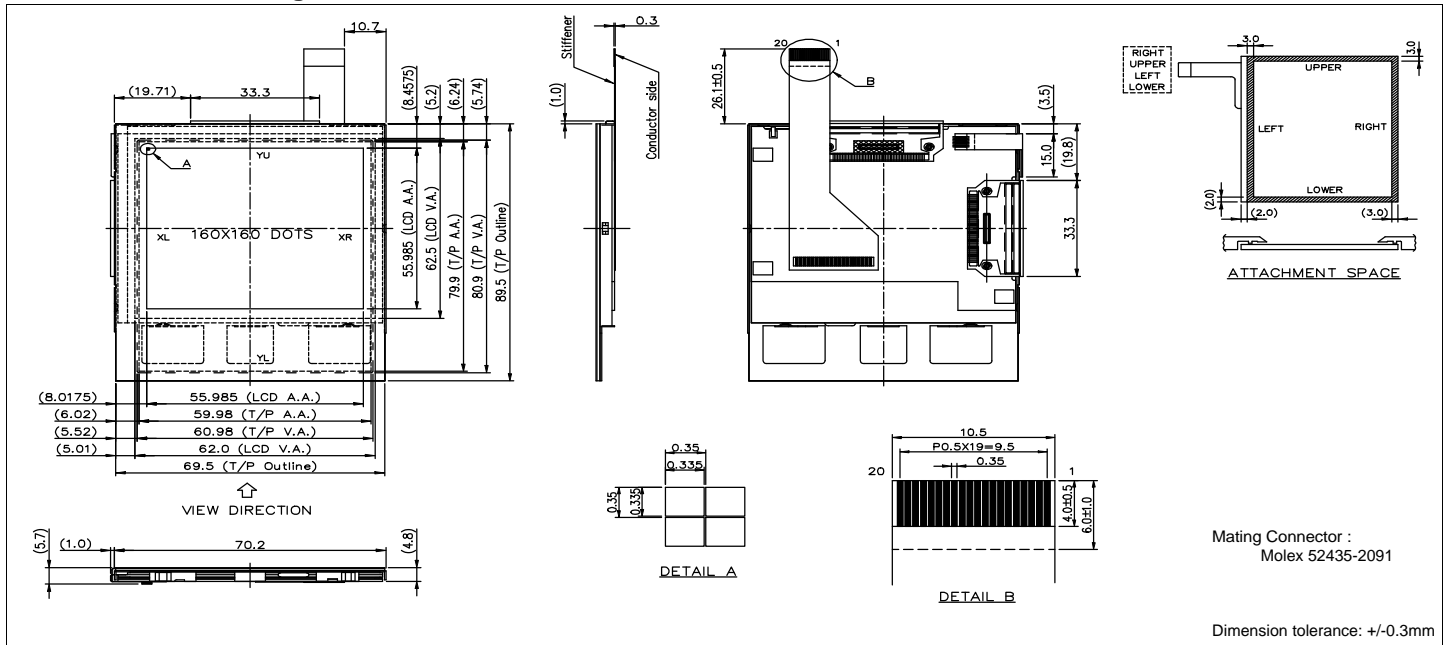


# HDM 160GS16-2

## Dimensional Drawing

160 X 160 Dots Graphic, Low Power w/Touch Screen



### Features

Backlight.....EL (Blue Green)  
Options.....FSTN, Postive mode display  
Normal/ Extended temperature  
Bottom viewing  
Touch Screen, EL Inverter  
Built-in Controller.....None

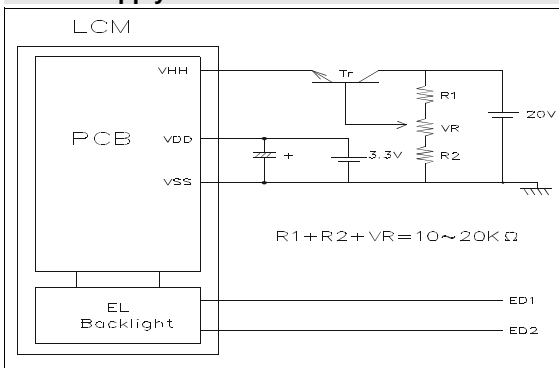
### Physical Data

Module Size.....71.2W x 90.5H x 5.7T mm  
Viewing Area Size.....62.0W x 62.5H mm  
Dot Pitch.....0.35W x 0.35H mm  
Dot Size.....0.335W x 0.335H mm  
Weight.....41.2g

### Electrical Characteristics (VDD=3.3±0.25V 25°C)

PARAMETER	SYM	CONDITION	MIN	TYP	MAX	UNIT
OPERATING VOLTAGE	V <sub>DD</sub>	-	3.0	3.3	3.6	V
POWER FOR LCD	V <sub>EE</sub> - V <sub>SS</sub>	-	17.6	17.9	18.2	V
INPUT HIGH VOLTAGE	V <sub>IH</sub>	-	0.8V <sub>DD</sub>	-	V <sub>DD</sub>	V
INPUT LOW VOLTAGE	V <sub>IL</sub>	-	GND	-	0.2V <sub>DD</sub>	V
POWER SUPPLY CURRENT	I <sub>DD</sub>	V <sub>DD</sub> =3.3V		1.3	2.0	mA
	I <sub>EE</sub>	V <sub>EE</sub> =17.9V FLM=70Hz		1.0	1.5	mA
DRIVE METHOD	1/160 Duty					

### Power Supply



### Absolute Maximum Ratings

PARAMETER	SYMBOL	MIN	MAX	UNIT
SUPPLY VOLTAGE	V <sub>DD</sub> -V <sub>SS</sub>	-0.3	7.0	V
INPUT VOLTAGE	V <sub>EE</sub> -V <sub>SS</sub>	0	30.0	V
OPERATING TEMPERATURE	T <sub>OP</sub>	0	50	°C
STORAGE TEMPERATURE	T <sub>STG</sub>	-20	70	°C

### Pin Connections

PIN NO.	SYMBOL	FUNCTION
1	ED1	AC Power Supply for EL Driving
2	ED2	AC Power Supply for EL Driving
3	NC	No Connection
4	FLM	H: First line marker
5	LP	H, H $\bar{E}$ L: Display data latch clock
6	CP	H, H $\bar{E}$ L: Latch Pulse
7	/DISPOFF	H/L: H: Display On, L: Display Off
8	V <sub>DD</sub>	Power supply for logic +3.3v
9	V <sub>SS</sub>	OV: Ground
10	V <sub>HH</sub>	Power supply for LCD
11	D0	Data bus
12	D1	
13	D2	
14	D3	
15	V <sub>SS</sub>	OV: Ground
16	V <sub>SS</sub>	OV: Ground
17	LEFT	Touch Panel Connections
18	UP	
19	RIGHT	
20	DOWN	