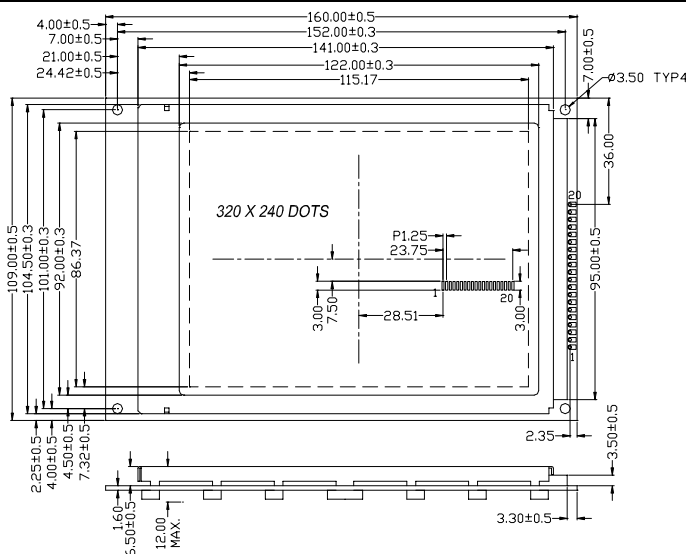


Standard LCD module

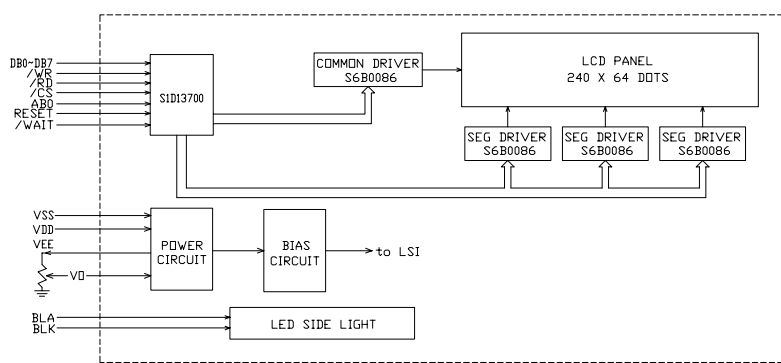
MG320240-02

OUTLINE DIMENSION

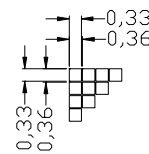


Tolerance: ± 0.20mm, unless otherwise specified.

BLOCK DIAGRAM



DISPLAY PATTERN



MECHANICAL SPECIFICATION

Item	Dimensions(W)X(H)	Unit
Overall Size	160.0x109.0	MM
View Area	122.0x92.0	MM
Dot Size	0.33x0.33	MM
Dot Pitch	0.36x0.36	MM

Graphic Type

PIN ASSIGNMENT

Pin No.	Symbol	Description
1	VSS	Ground
2	VDD	Supply voltage for logic
3	VEE	LCD supply voltage
4	VO	Contrast adjust
5	/WR	Write strobe for MPU interface
6	/RD	Read strobe for MPU interface
7	/CS	Chip select for MPU interface
8	/WAIT	Wait output for MPU interface
9	/RESET	Reset input
10	AB0	Command or parameter
11~18	D0~D7	Data bit 0~7
19	BLA	Back light anode
20	BLK	Back light cathode

ABSOLUTE MAXIMUM RATING

Item	Symbol	Condition	Min	Max	Unit
Supply for logic voltage	V _{DD}	25	-0.3	7.0	V
LCD driving supply voltage	V _{EE}	25	0	30.0	V
Input voltage	V _I	25	-0.3	V _{DD} +0.3	V

ELECTRICAL CHARACTERISTICS

Item	Symbol	Condition	Min.	Typical	Max.	Unit
Supply voltage for logic	V _{DD}	---	4.5	5.0	5.5	V
Supply current for logic	I _{DD}	---	---	170	---	mA
Operation voltage for LCD	V _{EE}	25	---	21.5	---	V
Input voltage "H" level	V _{IH}	---	0.7V _{DD}	---	V _{DD}	V
Input voltage "L" level	V _{IL}	---	0	---	0.3V _{DD}	V
Supply voltage for BL	V _F	---	---	3.1	---	V
Supply current for BL	I _F	V _F =3.1V	---	240	---	mA

REMARKS:

- LCD options: STN, FSTN.
- Back light type: LED Back light feature.