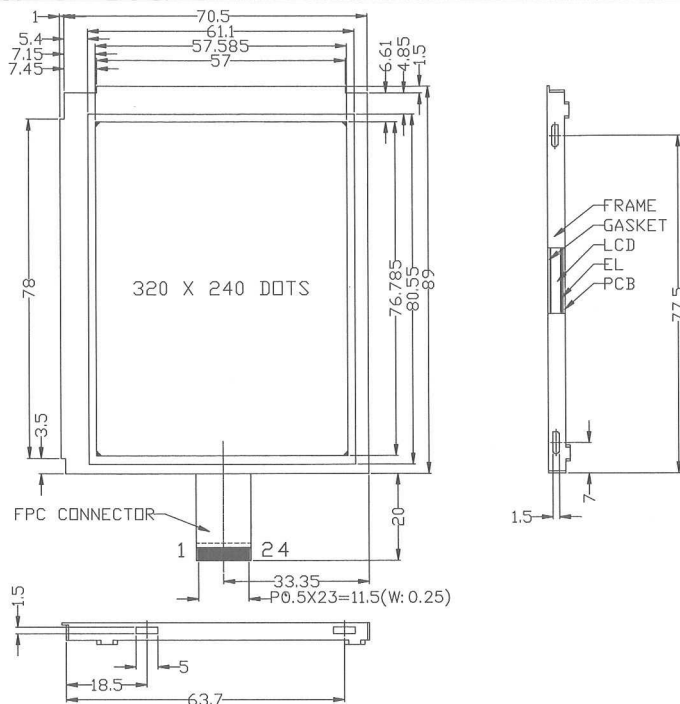
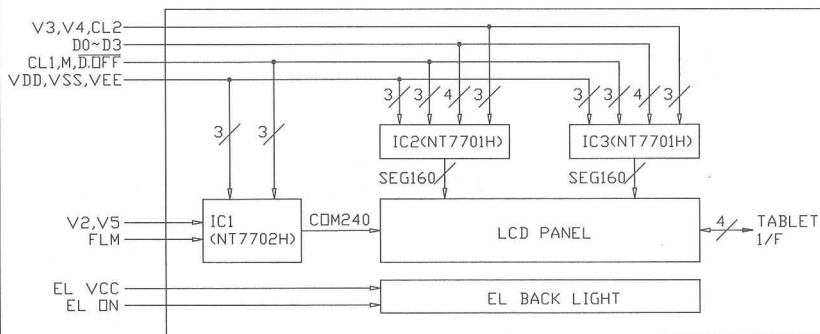


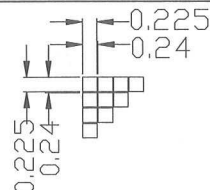
# OUTLINE DIMENSION



## BLOCK DIAGRAM



## DISPLAY PATTERN



## MECHANICAL SPECIFICATION

Item	Dimensions (w) X (H)	Unit
Overall Size	70.5 X 89.0	MM
View Area	61.1 X 80.55	MM
Dot Size	0.225 X 0.225	MM
Dot Pitch	0.24 X 0.24	MM

## PIN ASSIGNMENT

Pin no.	Symbol	Function
1~2	V5, V2	supply voltage for LCD driver bias
3	VEE	supply voltage for LCD driver
4	VDD	Supply voltage for logic
5	FLM	Frame signal
6	VSS	Ground
7	CL1	Latch pulse input for dsplay data
8	VSS	Ground
9	M	AC signal input for LCD driving wave form
10	/D.OFF	Control input for output deselect level
11	CL2	Clock input for taking display data
12~13	V4, V3	Supply voltage for LCD driver voltage bias
14~17	D3~D0	Data bus 3~0
18	NC	No connection
19~22	TP(X2, Y1, X1, Y2)	Touch panel (X2, Y1, X1, Y2)
23, 24	EL VCC, EL ON	EL light AC supply

## ABSOLUTE MAXIMUM RATING

Item	Symbol	Condition	Min.	Max.	Unit
Supply for logic voltage	V <sub>DD</sub>	25°C	-0.3	7.0	V
LCD driving supply voltage	V <sub>DD-Vo</sub>	25°C	-0.3	30	V
Input voltage	V <sub>i</sub>	25°C	-0.3	V <sub>DD</sub>	V

## ELECTRICAL CHARACTERISTICS

Item	Symbol	Condition	Min.	Typical	Max.	Unit
Supply voltage for logic	V <sub>DD</sub>	---	2.7	---	5.5	V
Supply current for logic	I <sub>DD</sub>	---	---	400	500	mA
Operation voltage for LCD	V <sub>DD - V<sub>O</sub></sub>	0°C	20.4	21.5	22.6	V
		25°C	19.6	20.7	21.8	V
		50°C	18.8	19.9	21.0	V
Input voltage "H" level	V <sub>IH</sub>	---	0.7V <sub>DD</sub>	---	V <sub>DD</sub>	V
Input voltage "L" level	V <sub>IL</sub>	---	0	---	0.3V <sub>DD</sub>	V
Supply voltage for EL	V <sub>F</sub>	---	---	100	150	V
Supply frequency for EL	Freq	---	---	400	1000	Hz

## REMARKS:

- LCD options: STN, FSTN.
- Back light Options: EL Back light feature, other Specs not available on catalog is under request.