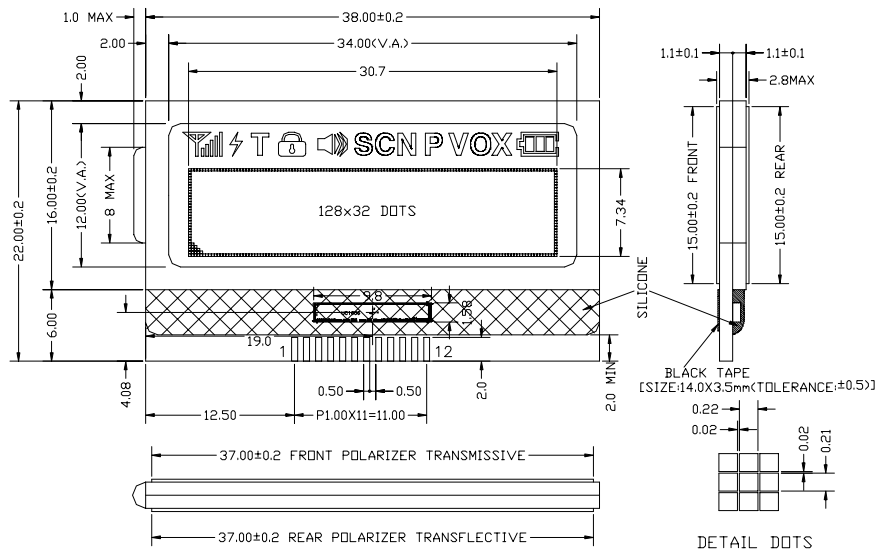
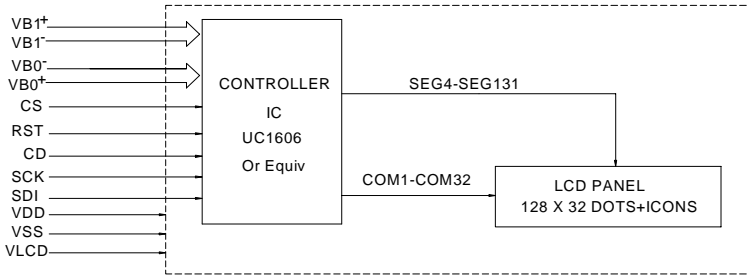


**OUTLINE DIMENSION**

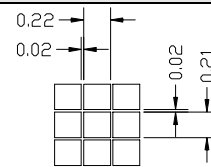


Tolerance: ± 0.20mm, unless otherwise specified.

**BLOCK DIAGRAM**



**DISPLAY PATTERN**



**MECHANICAL SPECIFICATION**

Item	Dimensions(W)X(H)	Unit
Overall Size	38.0x22.0	MM
View Area	34.0x12.0	MM
Dot Size	0.22x0.21	MM
Dot Pitch	0.24x0.23	MM

**PIN ASSIGNMENT**

Pin no	Symbol	Function
1	CS	Chip select
2	RST	Reset
3	CD	Select control data or display data for read/write operation.
4	SCK	Serial clock
5	SDI	Input data
6	VDD	Power Supply(+)
7	VSS	Power Supply(GND)
8	VB1+	Voltage booster cap 1+
9	VB1-	Voltage booster cap 1-
10	VB0+	Voltage booster cap 0+
11	VB0-	Voltage booster cap 0-
12	VLCD	Internal voltage booster output

**ABSOLUTE MAXIMUM RATING**

Item	Symbol	Condition	Min	Max	Unit
Supply for logic voltage	V <sub>DD</sub>	---	-0.3	5.5	V
LCD driving supply voltage	V <sub>DD</sub> -V <sub>O</sub>	---	-0.3	12.5	V
Input voltage	V <sub>I</sub>	---	-0.3	V <sub>DD</sub> +0.3	V

**ELECTRICAL CHARACTERISTICS**

Item	Symbol	Condition	Min	Typical	Max	Unit
Supply voltage for logic	V <sub>DD</sub>	---	2.0	3.0	---	V
Supply current for logic	I <sub>DD</sub>	---	---	---	---	mA
Input voltage " H " level	V <sub>IH</sub>	---	---	2.4	---	V
Input voltage " L " level	V <sub>IL</sub>	---	---	0.4	---	V

**REMARKS:**

- LCD options: STN, FSTN.
- Back light type: Without Back light feature, if need backlight, need request.