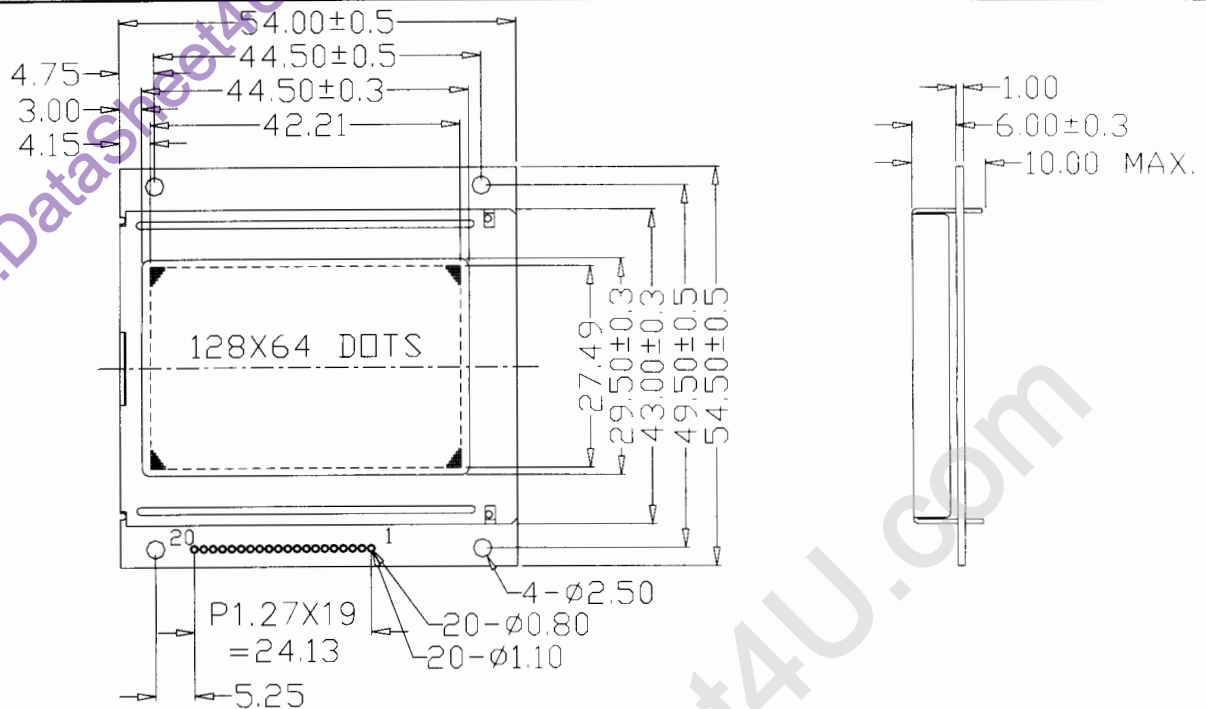
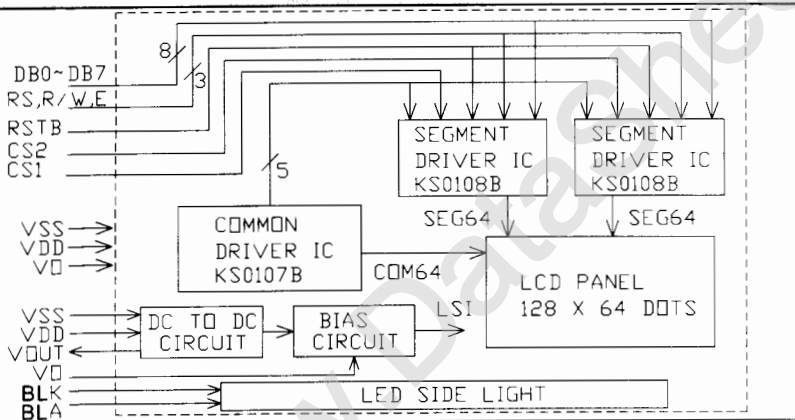


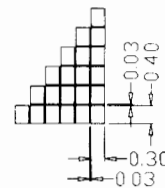
OUTLINE DIMENSION



BLOCK DIAGRAM



DISPLAY PATTERN



MECHANICAL SPECIFICATION

Item	Dimensions (W) X (H)	Units
Overall Size	54.0 X 54.5	MM
View Area	44.5 X 29.5	MM
Dot Size	0.30 X 0.40	MM
Dot Pitch	0.33 X 0.43	MM

PIN ASSIGNMENT

Pin no.	Symbol	Function
1	VSS	Ground
2	VDD	Supply voltage for logic
3	VO	Input voltage for LCD
4	D/I	H: Data signal, L: Instruction signal
5	R/W	H: Read mode, L: Write mode
6	E	Chip enable signal
7~14	DB0~7	Data bus 0~7
15	CS1	Chip select signal for KS0108B(1)
16	CS2	Chip select signal for KS0108B(2)
17	RSTB	Reset signal
18	VOUT	Output voltage for LCD
19	BLA	Back light anode
20	BLK	Back light cathode

ABSOLUTE MAXIMUM RATING

Item	Symbol	Condition	Min.	Max.	Units
Supply for logic voltage	VDD	25°C	-0.3	7.0	V
LCD driving supply voltage	VDD-VO	25°C	-0.3	VDD+0.3	V
Input voltage	VI	25°C	-0.3	VDD+0.3	V

ELECTRICAL CHARACTERISTICS

Item	Symbol	Condition	Min.	Typical	Max.	Units
Supply voltage for logic	VDD	---	4.5	5.0	5.5	V
Supply current for logic	IDD	---	---	2.2	4	mA
Operation voltage for LCD	VDD - VO	0°C	12.6	13.3	14.0	V
		25°C	12.3	13.0	13.7	V
		50°C	12.1	12.8	13.5	V
Input voltage "H" level	VIH	---	0.7VDD	---	VDD	V
Input voltage "L" level	VIL	---	0	---	0.3VDD	V
Supply voltage for back light	VF	---	---	4.2	4.6	V
Supply current for back light	IF	VF=4.2V	---	150	230	mA

REMARKS:

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