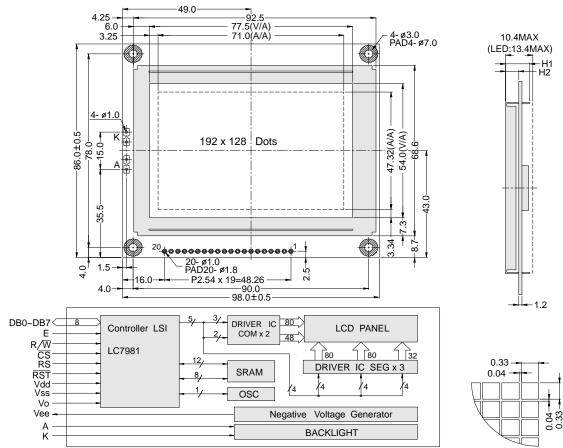# POWERTIP

PG 192128-B

OUTLINE DIMENSION & BLOCK DIAGRAM

The tolerance unless classified ± 0.3mm

MECHANICAL SPECIFICATION			
Overall Size	98.0 x 86.0	Module	H2 / H1
View Area	77.5 x 54.0	W /O B/L	5.0 / 9.2
Dot Size	0.33 x 0.33	EL B/L	5.0 / 9.2
Dot Pitch	0.37 x 0.37	LED B/L	8.0 / 12.2

PIN ASSIGNMENT		
Pin no.	Symbol	Function
1	Vss	Power supply (GND)
2	Vdd	Power supply (+)
3	Vo	Contrast adjust
4	RS	Common / Data select
5	R/$\overline{W}$	data read / write
6	E	enable signal
7	DB0	Data bus line
8	DB1	Data bus line
9	DB2	Data bus line
10	DB3	Data bus line
11	DB4	Data bus line
12	DB5	Data bus line
13	DB6	Data bus line
14	DB7	Data bus line
15	$\overline{CS}$	Chip select
16	$\overline{RST}$	Reset
17	Vee	Negative voltage output
18	N/C	No connection
19	A	Power supply for LED B/L (+)
20	K	Power supply for LED B/L (−)

ABSOLUTE MAXIMUM RATING					
Item	Symbol	Condition	Min.	Max.	Units
Supply for logic voltage	Vdd-Vss	25°C	-0.3	7.0	V
LCD driving supply voltage	Vdd-Vee	25°C	0	30.0	V
Input voltage	Vin	25°C	-0.3	Vdd+0.3	V

ELECTRICAL CHARACTERISTICS									
Item	Symbol	Condition	Min.		Typical		Max.		Units
Power supply voltage	Vdd-Vss	25°C	4.75		—		5.25		V
LCD operation voltage	Vop	Top	N	W	N	W	N	W	V
		-20°C	—	19.5	—	20.6	—	21.7	V
		0°C	19.4	—	20.4	—	21.4	—	V
		25°C	18.0	17.0	18.9	17.9	19.8	18.8	V
		50°C	16.1	—	16.9	—	17.7	—	V
		70°C	—	15.4	—	16.3	—	17.2	V
LCM current consumption (No B/L)	Idd	Vdd=5V	—		20		25		mA
Backlight current consumption	LED/edge	VB/L=4.2V	—		85		—		mA
	LED/array	VB/L=4.2V	—		—		—		mA

REMARK

LCD option: STN, TN, FSTN

Backlight Option: LED,EL Backlight feature, other Specs not available on catalog is under request.