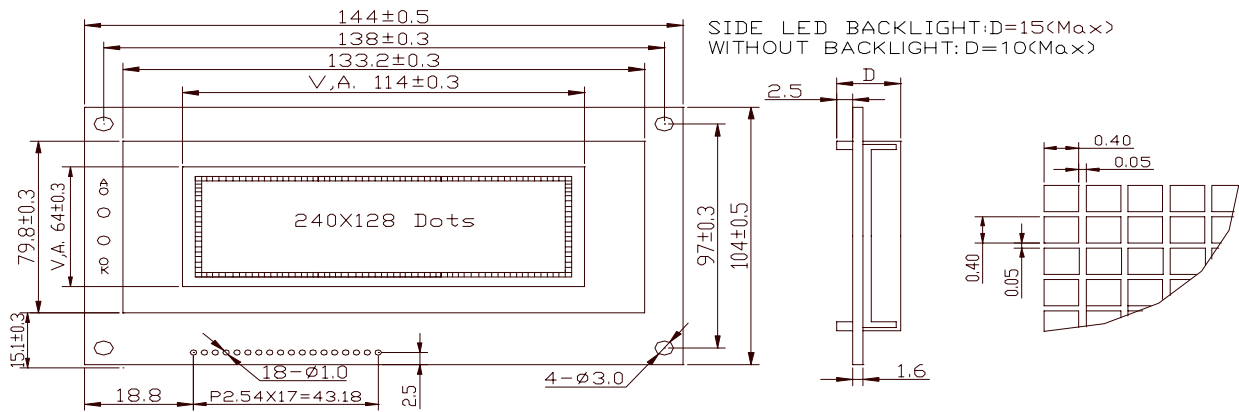
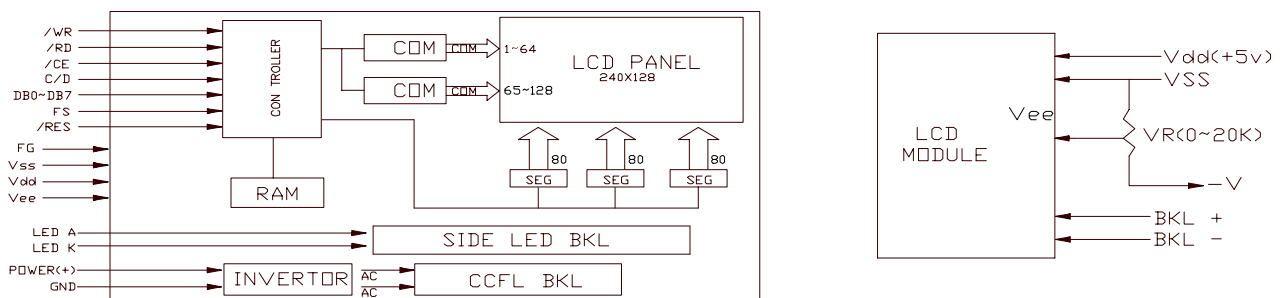


● OUTLINE DIMENSION



● BLOCK DIAGRAM & POWER SUPPLY



● MECHANICAL SPEC.&FEATURES

Item	Dimension(mm)
Module Size(WxHxT)	144.0x104.0x10.0/15.0
Viewing Area(WxH)	114.0x64.0
Dot Size(WxH)	0.40x0.40
Dot Pitch(WxH)	0.45x0.45
DotsxDots	240x128

Features	
LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Polarizer	Reflective, Transflective, Transmissive
View Angle	6:00 o'clock or 12:00 o'clock
Display Type	Positive or Negative
Backlight	LED(Optional)
Operating Temp.	0°C ~ 50°C or -20°C ~ 70°C
Controller	T6963C or Equivalent

● INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function
1	FG	Frame ground
2	Vss	Ground for logic
3	Vdd	Power supply for logic
4	Vee	Power supply for LCD
5	/WR	Write enable
6	/RD	Read enable
7	/CE	Enable signal for IC

Pin No.	Symbol	Function
8	C/D	Register selection(H:Data,L:Instruction)
9	/RES	Reset signal
10~17	DB0~DB7	Data bus lines
18	FS	Font selection
	A	Anode of LED
	K	Cathode of LED

● ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	4.5	5.0	5.5	V
Operating Voltage for LCD	Vlcd	Ta=25°C	...	-14	...	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	...	9.5	...	mA
Supply Voltage for LED	Vf	Ta=25°C	...	4.1	...	V
Supply Current for LED	If	Ta=25°C, Vf=4.1V	...	110	...	mA