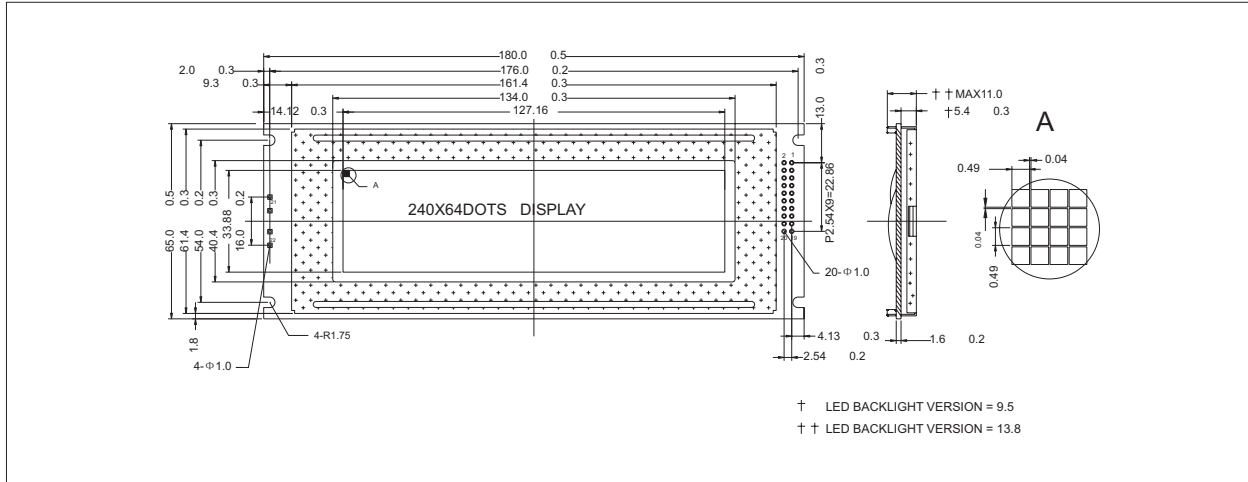


YMS24064-02

240 x 64DOTS  
1/64DUTY, 1/9BIAS

1 EXTERNAL DIMENSION AND DISPLAY PATTERN



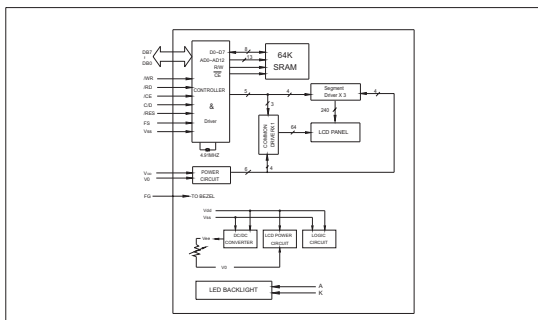
2 MECHANICAL DATA

ITEM	SPECIFICATION	UNIT
Module Size(WXHT)	180.0 x 65.0 x 11.0 (LED:13.8)	mm
Viewing Area(WXH)	134.0 x 40.4	mm
Number of Dots	240 x 64	dots
Dot Pitch (WXH)	0.53 x 0.53	mm
Dot Size(WXH)	0.49 x 0.49	mm

3 PIN CONFIGURATION

PIN	SYMBOL	LEVEL	SIGNAL DESCRIPTION
1	FG	0V	
2	V <sub>SS</sub>	0V	GND(0V)
3	V <sub>DD</sub>	+5V	Supply Voltage for Logic and LCD
4	V <sub>o</sub>	-	Operating Voltage for LCD (Variable)
5	/WR	L	Write Signal
6	/RD	L	Read Signal
7	/CE	L	Chip Enable Signal
8	C/D	H/L	H:Instruction Code,L:Data Code
9	V <sub>EE</sub>	-	Supply Voltage LCD Driver
10	/RES	H,H-L	Reset Signal
11	DB0	H/L	Data Bit 0
12	DB1	H/L	Data Bit 1
13	DB2	H/L	Data Bit 2
14	DB3	H/L	Data Bit 3
15	DB4	H/L	Data Bit 4
16	DB5	H/L	Data Bit 5
17	DB6	H/L	Data Bit 6
18	DB7	H/L	Data Bit 7
19	FS	H/L	Font Select Signal(H:6 x 8Dots,L:8 x 8 Dots)
20	NC	-	No Connection
21	A	-	Anode of LED Unit
22	K	-	Cathode of LED Unit

4 BLOCK DIAGRAM



5 ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	MIN.	MAX.	UNIT
Supply Voltage Logic	V <sub>DD</sub> ( V <sub>DD</sub> -V <sub>SS</sub> )	-0.3	7.0	V
Supply Voltage Driver	V <sub>DD</sub> -V <sub>EE</sub>	-0.3	30.0	V
Input Voltage	V <sub>IN</sub>	-0.3	V <sub>DD</sub> +0.3	V
Operating Temp.		See page 9		
Storage Temp.		See page 9		

6 ELECTRICAL CHARACTERISTICS(Ta=25 °C )

ITEM	SYMBOL	CONDITION	SPEC. VALUE			UNIT
			MIN.	TYP.	MAX.	
Supply Voltage (Logic)	V <sub>DD</sub> -V <sub>SS</sub>		4.5	5.0	5.5	V
Supply Current (Logic)	I <sub>DD</sub>	V <sub>DD</sub> =5V	-	8.7	13.0	mA
Input Voltage	"HIGH"	V <sub>IN</sub>	-	V <sub>DD</sub> -2.2	-	V <sub>DD</sub> V
	"LOW"	V <sub>IL</sub>	-	0	-	0.8 V
Output Voltage	"HIGH"	V <sub>OH</sub>	I <sub>OL</sub> =3.0mA	V <sub>DD</sub> -0.3	-	V <sub>DD</sub> V
	"LOW"	V <sub>OL</sub>	I <sub>OL</sub> =3.0mA	0	-	0.3 V
LCD Operating Voltage	V <sub>DD</sub> -V <sub>o</sub>	V <sub>DD</sub> =5V	-	11.0	-	V
Supply Voltage LCD Drive	I <sub>o</sub>	Ta=25 °C	-	2.0	3.0	mA

Note(1): ( )Value is high Reliability type  
Note(2): Electro-Optical Characteristics: See page 6.

7 BACKLIGHT CHARACTERISTICS(Ta=25 °C )

ITEM	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Voltage	V <sub>LED</sub>	-	7.9	8.2	8.5	V
Power Consumption	P <sub>LED</sub>	IF=400mA	-	3280	-	mW
Luminous	I <sub>v</sub>	IF=400mA	-	-	-	cd/m <sup>2</sup>

8 SWITCHING TIMEING CHARACTERISTICS

PARAMETER	SYMBOL	MIN.	MAX.	UNIT
C/D Set Up Time	t <sub>CS</sub>	100	-	ns
C/D Hold Time	t <sub>CH</sub>	10	-	ns
/CE, /RD, /WR Puls Width	t <sub>CE</sub> , t <sub>RD</sub> , t <sub>WR</sub>	80	-	ns
Data Set Up Time	t <sub>DS</sub>	80	-	ns
Data Hold time	t <sub>DH</sub>	40	-	ns
Access time	t <sub>ACC</sub>	-	150	ns
Output Hold time	t <sub>OH</sub>	10	50	ns

Condition: V<sub>DD</sub>=+5.0V 10%V<sub>DD</sub>/50%V<sub>DD</sub>

