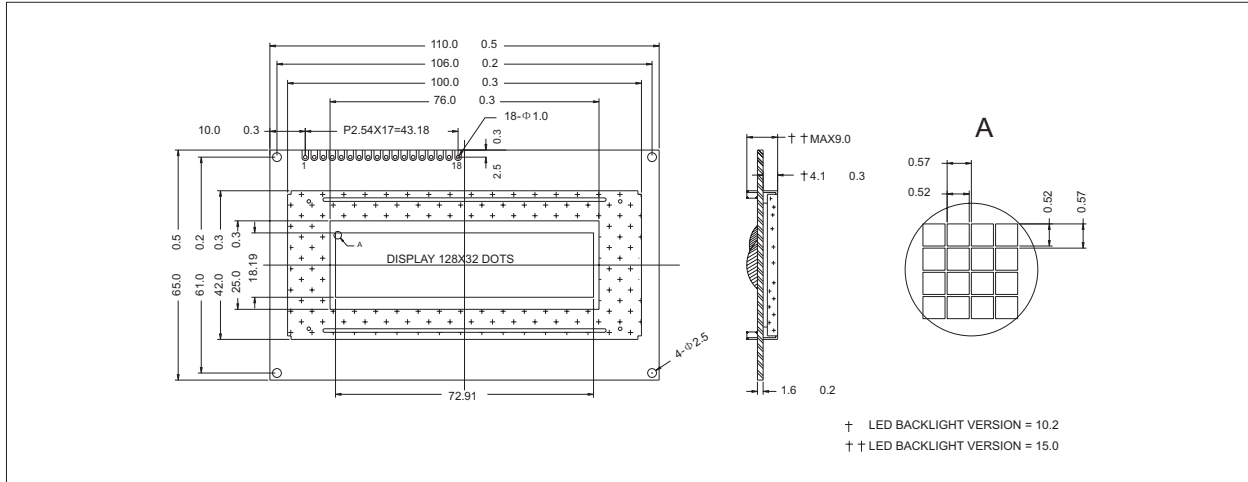


YMS12832-01

128 x 32DOTS
1/64DUTY, 1/9BIAS

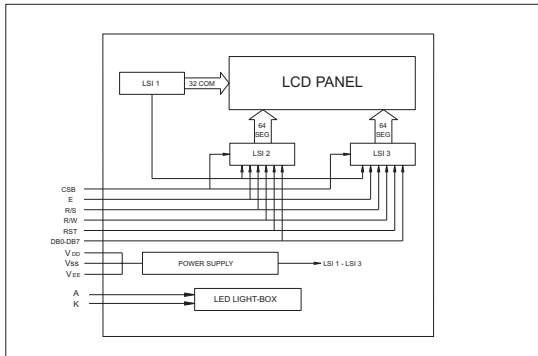
1 EXTERNAL DIMENSION AND DISPLAY PATTERN



2 MECHANICAL DATA

ITEM	SPECIFICATION	UNIT
Module Size(WXHXH)	110.0 x 65.0 x 9.0 (LED:15.0)	mm
Viewing Area(WXH)	76.0 x 25.0	mm
Number of Dots(WXH)	128 x 32	dots
Dot Pitch(WXH)	0.57 x 0.57	mm
Dot Size(WXH)	0.52 x 0.52	mm

3 BLOCK DIAGRAM



4 PIN CONFIGURATION

PIN	SYMBOL	LEVEL	SIGNAL DESCRIPTION
1	V _{ss}	0V	Ground
2	V _{cc}	+5V	Supply Voltage for Logic and LCD
3	V _{cc}	-	Operating Voltage for LCD (Variable)
4	E	H,H-L	Chip Enable Signal
5	R/S	H/L	H:Data, L:Instruction Code
6	R/W	H/L	H:Read(Module-MPU), L:Write(MPU-Module)
7	RST	H,H-L	Reset Signal
8	CSB	H/L	Chip Select Signal for IC
9	DB0	H/L	Data Bit 0
10	DB1	H/L	Data Bit 1
11	DB2	H/L	Data Bit 2
12	DB3	H/L	Data Bit 3
13	DB4	H/L	Data Bit 4
14	DB5	H/L	Data Bit 5
15	DB6	H/L	Data Bit 6
16	DB7	H/L	Data Bit 7
17	A	-	Anode of LED Unit
18	K	-	Cathode of LED Unit

5 ABSOLUTE MAXIMUM RATINGS(Ta=25 °C)

PARAMETER	SYMBOL	MIN.	MAX.	UNIT
Supply Voltage Logic	V _{cc} (V _{cc} -V _{ss})	-0.3	7.0	V
Supply Voltage Driver	V _{cc} -V _{EE}	-0.3	18	V
Input Voltage	V _{IN}	-0.3	V _{cc} +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 _{cc} -V _{ss}		4.5	5.0	5.5	V
Supply Current (Logic)	I _{cc}	V _{cc} =5V	-	3.0	4.5	mA
Input Voltage	"HIGH"	V _{ih}	0.7 V _{cc}	-	-	V
	"LOW"	V _{il}	0	-	0.3 V _{cc}	V
Output Voltage	"HIGH"	V _{oh}	I _{oh} =-0.205mA	2.4	-	V
	"LOW"	V _{ol}	I _{ol} =1.6mA	-	0.4	V
LCD Operating Voltage	V _{cc} -V _{EE}	V _{cc} =5V	-	9.0	-	V
Supply Current LCD Drive	I _{cc}	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)

LED

ITEM	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Voltage	V _{LED}	-	-	4.2	4.6	V
Power Consumption	P _{LED}	IF=240mA	-	1008	-	mW
Luminous	I _v	IF=240mA	-	200	-	cd/m ²

8 INTERFACE TIMING CHARACTERISTICS

PARAMETER	SYMBOL	MIN.	MAX.	UNIT
E Cycle Time	t _{cy}	1000	-	ns
E High Level Width	t _{ah}	450	-	ns
E Low Level Width	t _{al}	450	-	ns
E Rise Time	t _r	-	25	ns
E Fall Time	t _f	-	25	ns
Address Setup Time	t _{as}	140	-	ns
Address Hold Time	t _{ah}	10	-	ns
Data Setup Time	t _{ds}	200	-	ns
Data Delay Time	t _{dd}	-	300	ns
Data Delay Time(Write)	t _{wd}	10	-	ns
Data Hold Time(Read)	t _{hd}	20	-	ns

