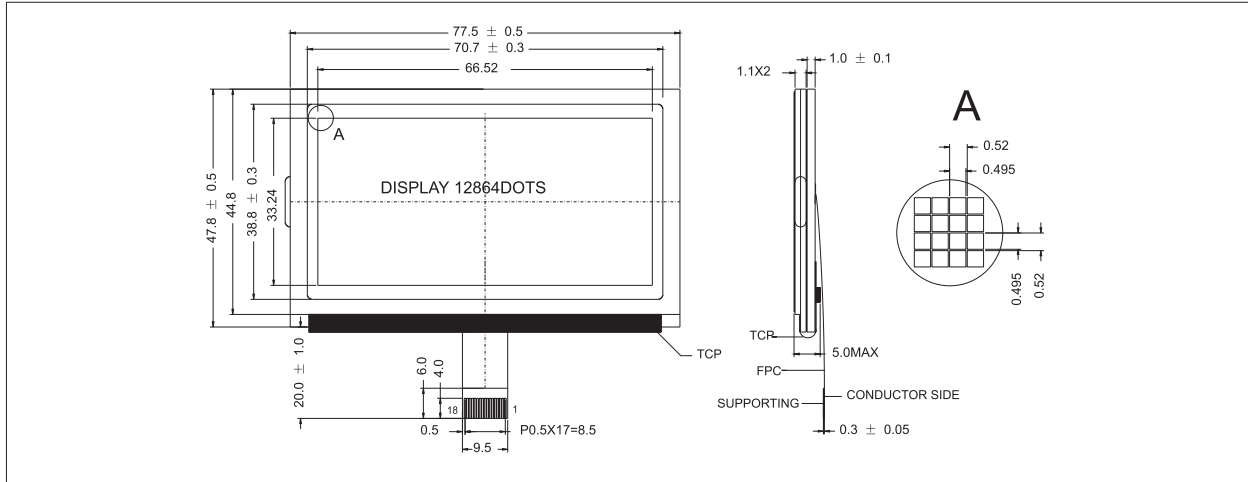


YMS12864-05

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

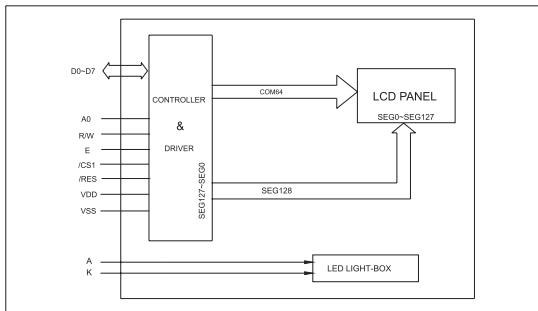
1 EXTERNAL DIMENSION AND DISPLAY PATTERN



2 MECHANICAL DATA

ITEM	SPECIFICATION	UNIT
Module Size(WXHXT)	77.5 x 47.8 x 5.0	mm
Viewing Area(WXH)	70.7 x 38.8	mm
Number of Dots(WXH)	128 x 64	dots
Dot Pitch(WXH)	0.52 x 0.52	mm
Dot Size(WXH)	0.495 x 0.495	mm

3 BLOCK DIAGRAM



4 PIN CONFIGURATION

PIN	SYMBOL	LEVEL	SIGNAL DESCRIPTION
1	/CS1	H/L	Chip Select Signal for IC
2	/RES	H,H-L	Reset Signal
3	A0	H/L	H:Data,L:Instruction Code
4	R/W	H/L	H:Read(Module-MPU),L:Write(MPU-Module)
5	E	H,H-L	Chip Enable Signal
6	DB0	H/L	Data Bit 0
7	DB1	H/L	Data Bit 1
8	DB2	H/L	Data Bit 2
9	DB3	H/L	Data Bit 3
10	DB4	H/L	Data Bit 4
11	DB5	H/L	Data Bit 5
12	DB6	H/L	Data Bit 6
13	DB7	H/L	Data Bit 7
14	V _{DD}	+5V	Supply Voltage for Logic And LCD
15	V _{SS}	0V	Ground
16	A		Anode of LED Unit
17	K		Cathode of LED Unit
18	NC		

5 ABSOLUTE MAXIMUM RATINGS(Ta=25 °C)

PARAMETER	SYMBOL	MIN.	MAX.	UNIT
Supply Voltage Logic	V _{DD} (V _{DD} -V _{SS})	-0.3	7.0	V
Supply Voltage Driver	V _{DD} -V _{EE}	-0.3	18.0	V
Input Voltage	V _{IN}	-0.3	V _{DD} +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 _{DD} -V _{SS}		4.5	5.0	5.5	V
Supply Current (Logic)	I _{DD}	V _{DD} =5V	-	3.0	4.5	mA
Input Voltage	"HIGH"	V _{OH}	0.7 V _{DD}	-	V _{DD}	V
	"LOW"	V _{OL}	0	-	0.3 V _{DD}	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 _{DD} -V _{EE}	V _{DD} =5V Ta=25 °C	-	8.5	-	V
Supply Current LCD Drive	I _{EE}		-	0.8	1.0	mA

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

7 INTERFACE TIMING CHARACTERISTICS

PARAMETER	SYMBOL	MIN.	MAX.	UNIT
E Cycle Time	t _{cycle}	1000	-	ns
E Signal Level Width	t _{sig}	450	-	ns
E Low Level Width	t _{low}	450	-	ns
E Rise Time	t _r	-	25	ns
E Fall Time	t _f	-	25	ns
Address Setup Time	t _{su}	140	-	ns
Address Hold Time	t _{sh}	10	-	ns
Data Setup Time	t _{su}	200	-	ns
Data Delay Time	t _{cd}	-	300	ns
Data Delay Time(Write)	t _{cdw}	10	-	ns
Data Hold Time(Read)	t _{chd}	20	-	ns

