

MC128064A6W-FPTLW-V3	128 x 64	LCD Module
Specification		
Version: 1		Date: 04/12/2022
Revision		
1	02/12/2022	First Issue

Display Features			
Resolution	128 x 64		
Appearance	Black on White		
Logic Voltage	5V		
Interface	Parallel		
Font Set	N/A		
Display Mode	Transflective		
LC Type	FSTN		
Module Size	93.00 x 70.00 x 13.00 ^{MAX} mm		
Operating Temperature	-20°C ~ +70°C		
Construction	COB	Created By	Checked By
LED Backlight	White	TSB	WE
		Box Quantity	Weight / Display
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DESIGN • MANUFACTURE • SUPPLY

* - For full design functionality, please use this specification in conjunction with the SBN6400G + SBN0064G*2 display driver specification.
(Provided Separately)

Display Accessories	
Part Number	Description
MDIB-CC1	Interconnect board for standard pitch pinouts to fine pitch wires. Providing pinouts for 2.54 pinout. 1.27, 1, 0.845, 0.8, 0.7, 0.65, 0.62, 0.6, 0.5 & 0.3 pads.

Optional Variants	
Appearances	Voltage
Black on Yellow/Green	
Black on Amber	
White on Blue	
Black on Red	



FEATURES

AVAILABLE OPTIONS	CHARACTERISTICS
DISPLAY FORMAT	128 X 64 DOT MATRIX
POLARIZER OPTIONS	Positive Transflective
BACKLIGHT TYPE OPTIONS	Edge type (Long life span version)
BACKLIGHT COLOR OPTIONS	White color
LCD PANEL OPTIONS	FSTN
VIEWING ANGLE OPTIONS	6:00 (Bottom)
TEMPERATURE RANGE OPTIONS	-20°C ~ 70°C, Positive Voltage Driving Only
SUGGESTED DRIVING VOLTAGE	Vlcm = 5.0V Vled = 5.0V
SUGGESTED LED DRIVING MODE	PIN19: LED+, PIN20:LED-
CONTROLLER ▲1	SBN6400G+SBN0064G*2
FONT MAP CODE	NO
DRIVING DUTY	1/64
DRIVING BIAS	1/9

▲1 Please ask for datasheet of the mentioned controller from Midas or Midas's authorized distributors. You can find the related information including AC & DC characteristics, Write & Read Timing diagram, Instruction table and descriptions, DDRAM & CGRAM, Rest Function and so on from the datasheet of controller.

▲1 You can ask for the example of software program (C language) from Midas or Midas's authorized distributors.

MECHANICAL SPECIFICATIONS

OVERALL SIZE	93.0W x 70.0H	mm	THICKNESS	max 13.0	mm
VIEWING AREA	72.0W x 40.0H	mm	HOLE-HOLE	88.0W x 64.0H	mm
DOT SIZE	0.48W x 0.48H	mm	DOT PITCH	0.04W x 0.04H	mm

ABSOLUTE MAXIMUM RATINGS

ITEM	SYMBOL	CONDITION	MIN	TYP	MAX	UNIT
POWER SUPPLY (LOGIC)	Vdd	25°C	-0.3	—	7.0	V
POWER SUPPLY (LCD)	V0	25°C	Vdd -19.0	—	Vdd +0.3	V
INPUT VOLTAGE	Vin	25°C	-0.3	—	Vdd +0.3	V
OPERATING TEMPERATURE	Vopr	—	-20	—	70	°C
STORAGE TEMPERATURE	Vstg	—	-30	—	80	°C

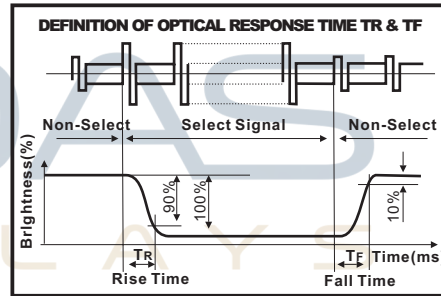
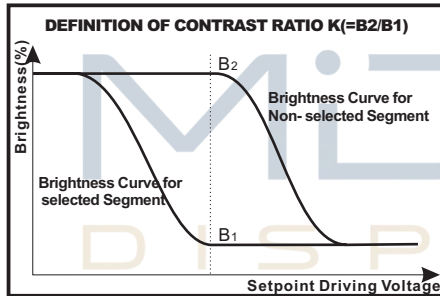
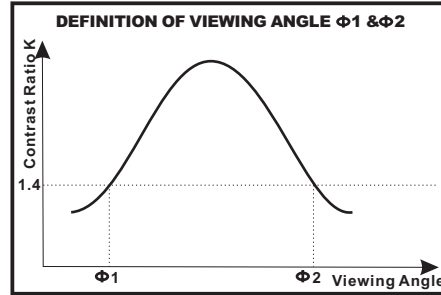
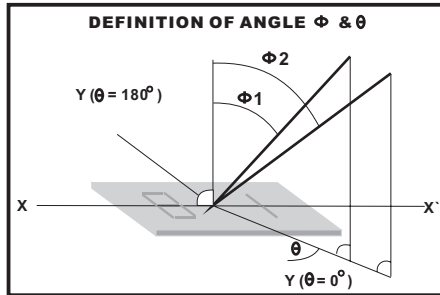
ELECTRONIC CHARACTERISTICS *

	ITEM	SYMBOL	CONDITION	MIN	TYP	MAX	UNIT
	INPUT VOLTAGE	Vlcm = Vdd	—	—	5.0	—	V
	SUPPLY CURRENT	Idd	Vdd=5V	—	2.1	—	mA
	DRIVING VOLTAGE FOR LCD PANEL	Vlcd = (Vdd - V0)	-20°C	8.10	—	8.60	V
			0°C	—	—	—	
			25°C	8.20	—	8.70	
			50°C	—	—	—	
			70°C	8.10	—	8.50	

LCD CHARACTERISTICS

FOR STN/FSTN TYPE LCD Panel (TA=25°C, Vlcd=5.0V ± 0.5V)

	ITEM	SYMBOL	CONDITION	MIN	TYP	MAX	UNIT
	VIEWING ANGLE	$\Phi 2 - \Phi 1$	K=4	40	—	—	deg
		θ		60			
	CONTRAST RATIO	K	—	6	—	—	—
	RESPONSE TIME(RISE)	TR	—	—	150	250	ms
	RESPONSE TIME(FALL)	TF	—	—	150	250	ms



LED CHARACTERISTICS

ICONS	ITEM	SYMBOL	CONDITION	MIN	TYP	MAX	UNIT
	LED FORWARD VOLTAGE	Vf	25°C If = 25mA	—	3.0	—	V
	LED FORWARD CURRENT A2	If	25°C	—	25	—	mA
	LED REVERSE CURRENT	Ir	25°C	—	—	50	μA
	LED COLOR RANGE	X coordinate	25°C If = 25mA	0.26	—	0.30	—
		Y coordinate		0.27	—	0.31	—
	LED BRIGHTNESS (WITHOUT LCD)	Lv	25°C If = 25mA	—	310	—	cd/m ²
	LED BRIGHTNESS UNIFORMITY	Lvmin/Lvmax	25°C If = 25mA	70	—	—	Ratio
	LED LIFE TIME	—	25°C If = 25mA	20K	—	—	Hours

A2 YOUR ATTENTION: It is constant current (not constant voltage) that should be applied when driving LED backlight. Therefore, this data is very important!

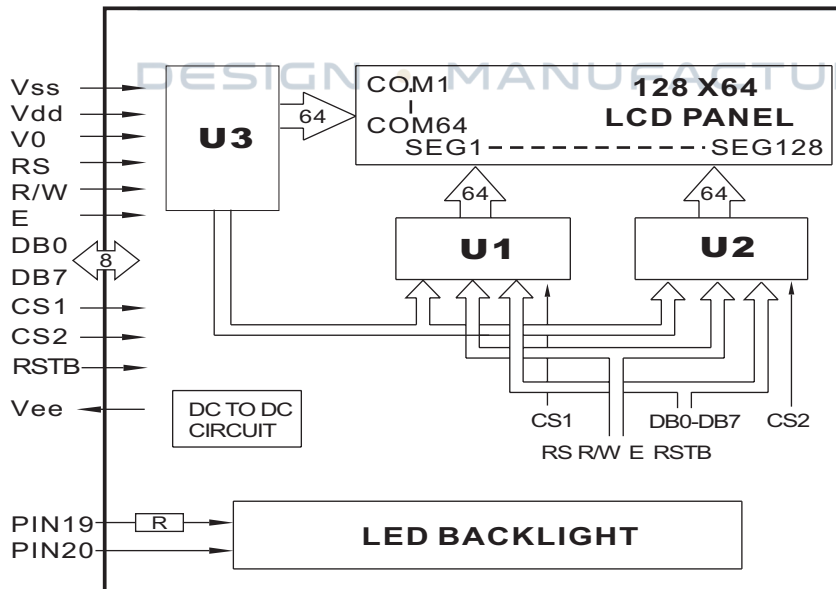
* For operation above 25°C, The Ifm Ifp & Pd must be derated, the Current derating is -0.36*5mA/°C for DC drive and -0.86*5 mA/°C for Pulse drive, the power dissipation is -75*5mW/°C The product working current must not be more than 60% of the Ifm or Ifp according to the working temperature.

* Wrong storage condition will decrease the adhesive power of film and shell. Suggested Storage Condition: Temperature (-25°C + 10 °C) and Humidity (65%RH + 20%RH)

PIN ASSIGNMENT

PIN	SYMBOL	DESCRIPTION	REMARKS
1	Vss	GND	
2	Vdd	Power supply for LCM	5.0V
3	V0	Contrast Adjust	
4	RS	Register Select Signal	
5	R/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	CS1	When CS1=H,CS2=L, select U1	
16	CS2	When CS1=L,CS2=H, select U2	
17	RST	Reset signal	
18	VEE	Negative voltage output	
19	LED+	Power supply for BKL	5.0V
20	LED-	Power supply for BKL	

BLOCK DIAGRAM



POWER SUPPLY DIAGRAM

