

MC128064C6W-BNMLW3.3-V2	128 x 64	LCD Module
Specification		
Version: 1		Date: 08/12/2021
Revision		
1	06/12/2021	

Display Features			
Resolution	128 x 64		
Appearance	White on Blue		
Logic Voltage	3.3V		
Interface	Parallel		
Font Set	N/A		
Display Mode	Transmissive		
LC Type	Blue STN		
Module Size	75.00 x 52.70 x 13.00mm		
Operating Temperature	-20°C ~ +70°C		
Construction	COB	Box Quantity	Weight / Display
LED Backlight	White	...	...

* - For full design functionality, please use this specification in conjunction with the NT7107 + NT7108 specification. (Provided Separately)

Display Accessories	
Part Number	Description

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



FEATURES

AVAILABLE OPTIONS	CHARACTERISTICS
DISPLAY FORMAT	128 X 64 DOT MATRIX
POLARIZER OPTIONS	Negative Transmissive
BACKLIGHT TYPE OPTIONS	Edge Type LED Backlight (Standard Version)
BACKLIGHT COLOR OPTIONS	White color
LCD PANEL OPTIONS	Blue STN
VIEWING ANGLE OPTIONS	6:00 (Bottom)
TEMPERATURE RANGE OPTIONS	-20°C ~ 70°C, Single Supply Voltage
SUGGESTED DRIVING VOLTAGE	V _{lcm} = 3.3V V _{led} = 3.3V
SUGGESTED LED DRIVING MODE	PIN19: LED+, PIN20: LED-
CONTROLLER	NT7107+NT7108*2
FONT MAP CODE	NO FONT SET
DRIVING DUTY	1/64
DRIVING BIAS	1/9

MECHANICAL SPECIFICATIONS

OVERALL SIZE	75.0W x 52.7H	mm	THICKNESS	max 13.0	mm
VIEWING AREA	60.0W x 32.5H	mm	HOLE-HOLE	70.0W x 49.7H	mm
DOT SIZE	0.39W x 0.39H	mm	DOT PITCH	0.04W x 0.04H	mm

ABSOLUTE MAXIMUM RATINGS

ITEM	SYMBOL	CONDITION	MIN	TYP	MAX	UNIT
POWER SUPPLY (LOGIC)	V _{dd}	25°C	-0.3	—	7.0	V
POWER SUPPLY (LCD)	V ₀	25°C	V _{dd} -19.0	—	V _{dd} +0.3	V
INPUT VOLTAGE	V _{in}	25°C	-0.3	—	V _{dd} +0.3	V
OPERATING TEMPERATURE	V _{opr}	—	-20	—	70	°C
STORAGE TEMPERATURE	V _{stg}	—	-30	—	80	°C

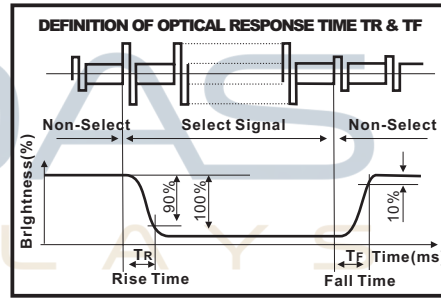
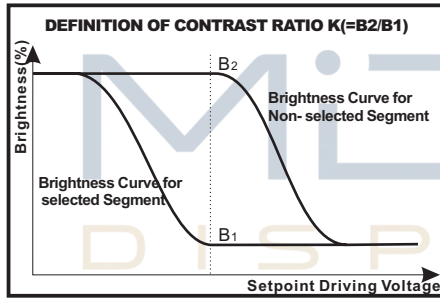
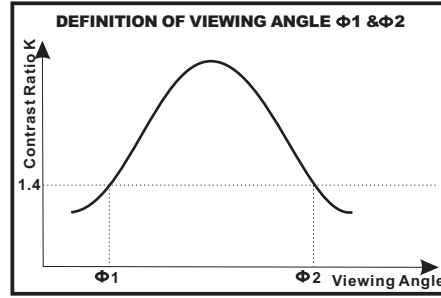
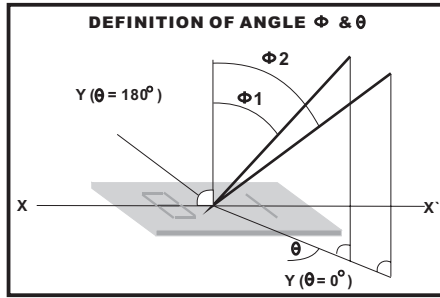
ELECTRONIC CHARACTERISTICS

	ITEM	SYMBOL	CONDITION	MIN	TYP	MAX	UNIT
	INPUT VOLTAGE	V _{lcm} = V _{dd}	—	—	3.3	—	V
	SUPPLY CURRENT	I _{dd}	V _{dd} =3.3V	—	2.5	—	mA
	DRIVING VOLTAGE FOR LCD PANEL	V _{lcd} = (V _{dd} - V ₀)	-20°C	8.30	—	8.65	V
			0°C	—	—	—	
			25°C	7.80	8.20	8.30	
			50°C	—	—	—	
			70°C	7.60	—	8.20	

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



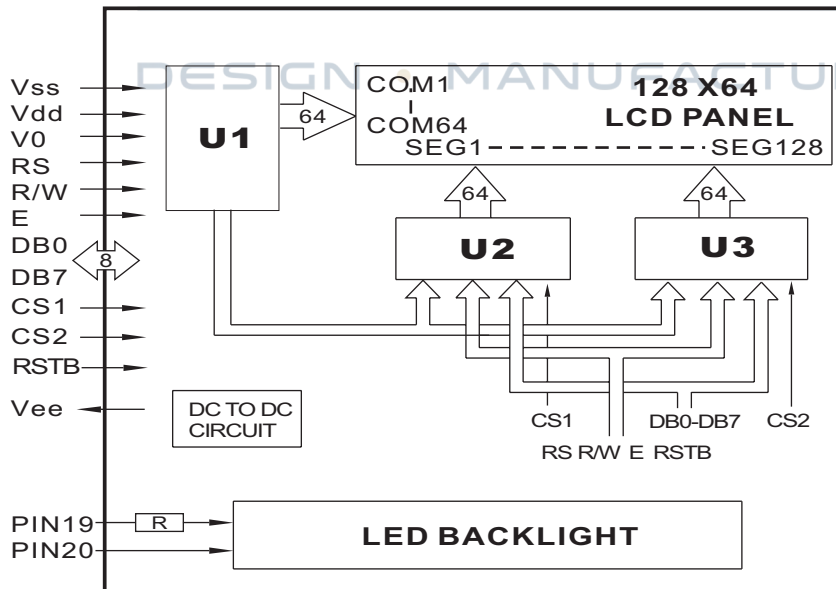
LED CHARACTERISTICS

	ITEM	SYMBOL	CONDITION	MIN	TYP	MAX	UNIT
	LED FORWARD VOLTAGE	Vf	25 °C If = 25 mA	—	5.0	—	V
	LED FORWARD CURRENT	If	25 °C	—	25	—	mA
	LED REVERSE CURRENT	Ir	25 °C Vr = 5V	—	—	20	μA
	LED COLOR RANGE	X coordinate	25 °C If = 25 mA	0.26	—	0.30	—
		Y coordinate		0.27	—	0.31	—
	LED BRIGHTNESS (WITHOUT LCD)	Lv	25 °C If = 25 mA	—	450	—	cd/m ²
	LED BRIGHTNESS UNIFORMITY	Lvmin/Lvmax	25 °C If = 25 mA	70	—	—	Ratio
	LED LIFE TIME	—	25 °C If = 25 mA	9K	—	—	Hours

PIN ASSIGNMENT

PIN	SYMBOL	DESCRIPTION	REMARKS
1	Vdd	Power supply for LCM	3.3V
2	Vss	GND	
3	V0	Contrast Adjust	
4	DB0	Data bus line	
5	DB1	Data bus line	
6	DB2	Data bus line	
7	DB3	Data bus line	
8	DB4	Data bus line	
9	DB5	Data bus line	
10	DB6	Data bus line	
11	DB7	Data bus line	
12	CS1	When CS1=H,CS2=L, select U2	
13	CS2	When CS1=L,CS2=H, select U3	
14	RST	Reset signal	
15	R/W	Read / Write	
16	D/I	H/L H: Data, L: Instruction code	
17	E	Enable Signal	
18	VEE	Negative voltage output	
19	LED+	Power supply for BKL	3.3V
20	LED-	Power supply for BKL	

BLOCK DIAGRAM



POWER SUPPLY DIAGRAM

