

MC128064F6WE-BNMLW-V2	128 x 64	LCD Module
Specification		
Version: 1	Date: 31/10/2016	
Revision		

Display Features					
Resolution	128 x 64				
Appearance	White on Blue				
Logic Voltage	5V				
Interface	Parallel				
Font Set	N/A				
Display Mode	Transmissive				
LC Type	BSTN				
Module Size	63.20 x 54.00 x 9.50				
Operating Temperature	-20°C ~ +70°C				
Construction	COB	Box Quantity	Weight / Display		
LED Backlight	White	45 pcs	52.77 grams		

* - For full design functionality, please use this specification in conjunction with the NT7107C specification. (Provided Separately)

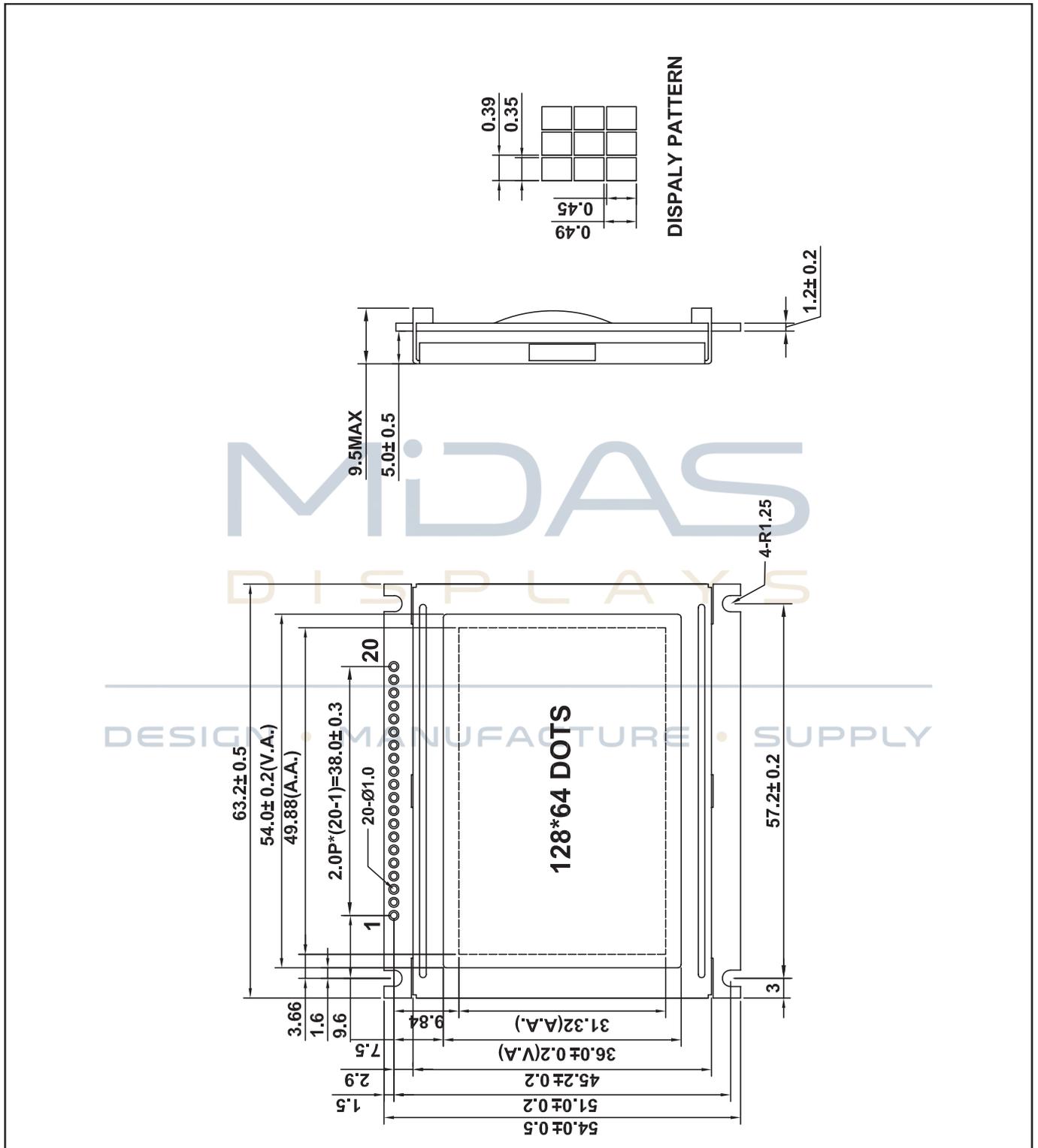
Display Accessories	
Part Number	Description
VBWFD1	USB PIC18F2550 microcontroller board to 20-way Single in-line COB Graphic LCD.

Optional Variants	
Appearances	Voltage
Black on Yellow/Green	



Mechanical Specifications

Module Size	63.20 x 54.00 x 9.50 (With Backlight)				W x H x D mm
Viewing Area	54.00 x 36.00	W x H mm	Hole-to-Hole	57.20 x 51.00	W x H mm
Dot Size	0.35 x 0.45	W x H mm	Dot Pitch	0.04 x 0.04	W x H mm



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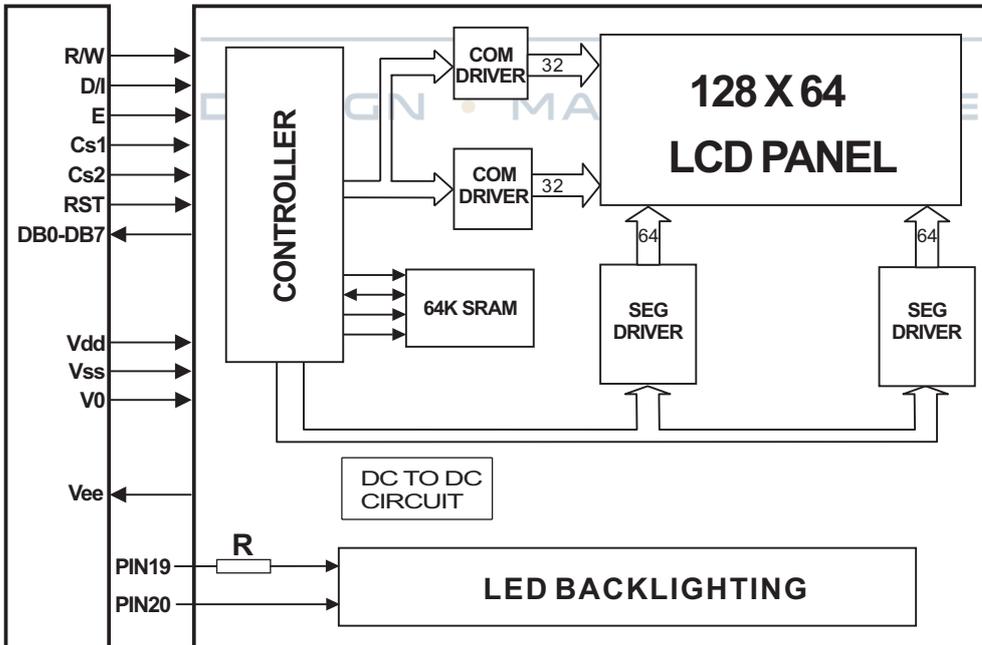


Pin Layout

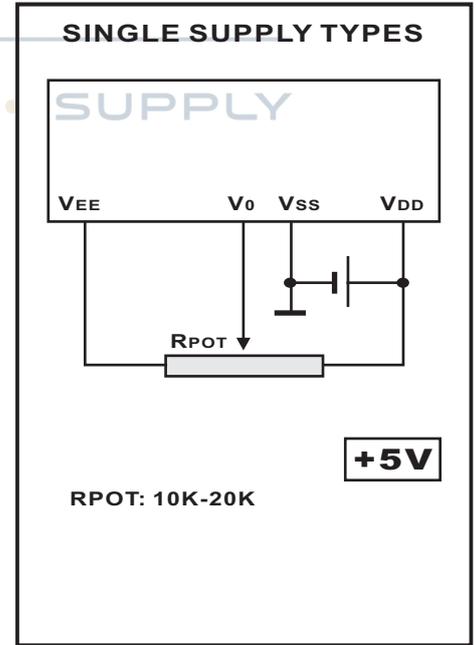
Dj b	Gna Vc`	8 YgWjdljcb	FYa Uf_g
1	Vss	GND	
2	Vdd	Power Supply for LCM	5.0V
3	V0	Contrast Adjust	
4	D/I	H/L H: Data, L: Instruction Code	
5	R/W	Data Read / Write	
6	E	Enable Signal	
7	DB0	Data bus Line	
8	DB1	Data bus Line	
9	DB2	Data bus Line	
10	DB3	Data bus Line	
11	DB4	Data bus Line	
12	DB5	Data bus Line	
13	DB6	Data bus Line	
14	DB7	Data bus Line	
15	CS1	When CS1=L, CS2=H, Select U3	
16	CS2	When CS1=H, CS2=L, Select U2	
17	RST	Reset Signal	
18	VEE	Negative Voltage Output	
19	LED+	Anode of LED Unit	4.0V
20	LED-	Cathode of LED Unit	



Block Diagram



Power Supply Diagram



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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 -19.00	---	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	+5V	2.7	5.0	5.5	v
Supply Current	Idd	Vdd=5V	---	3.1	---	mA
Driving Voltage for LCD Panel	Vlcd = (Vdd - V0)	-20°C	9.20	---	9.60	v
		0°C	8.80	---	9.60	
		25°C	8.50	---	8.90	
		50°C	8.40	---	8.90	
		70°C	8.00	---	8.50	

LCD Characteristics

For STN/FSTN LCD Panel Types						
Item	Symbol	Condition	Min	Typ	Max	Unit
Viewing Angle	$\Phi 2 - \Phi 1$	K = 4	40°	---	---	Deg
	Θ		60°			
Contrast Ratio	K	---	---	10	---	---
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	---	4.0	---	V
LED Forward Current*	If	25°C	---	45	60	mA
LED Reverse Current	Ir	25°C	---	10	---	μA
LED Colour Range	X Coordinate	25°C If=45mA	0.26	---	0.30	---
	Y Coordinate		0.27	---	0.31	---
LED Brightness (Without LCD)	Lv	25°C If=45mA	250	---	---	cd/m ²
LED Life Time	---	25°C If=45mA	9K	---	---	Hours

Attention: It is constant current, not constant voltage, which should be applied when driving the LED backlight, please ensure you adhere to this rule.

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