

MC128064A6W-GPTLY-V2	128 x 64	LCD Module
Specification		
Version: 1	Date: 31/10/2016	
Revision		

Display Features	
Operating Temp. Range	-20°C ~ +70°C
Viewing Direction	6 O'Clock
STN	Gray Transflective
Backlight	LED Yellow/Green
Controller	NT7107
Characters	128 x 64
Voltage	5V
Module Size	93.00 x 70.00 x 13.00 mm
Display Construction	Chip on Board



Box Quantity	Weight / Display
30 pcs	75 grams

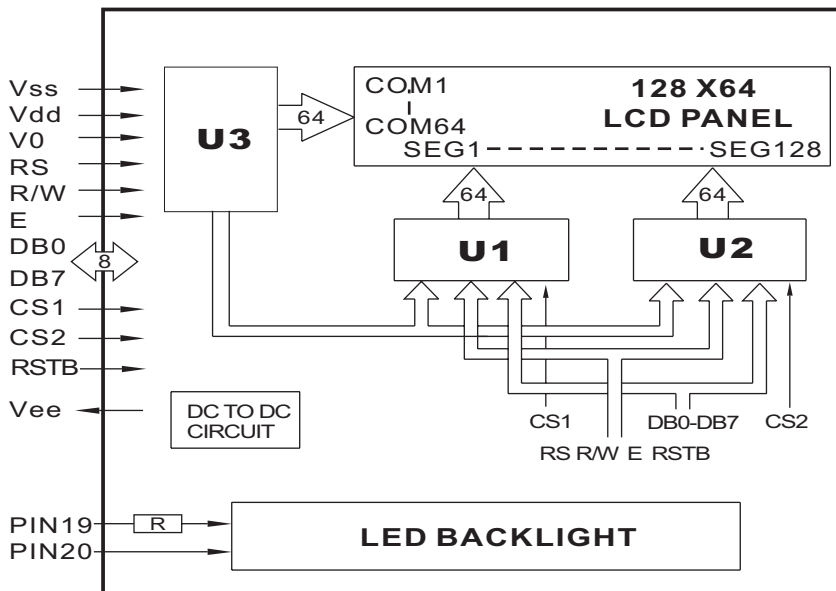
* - For full design functionality, please use this specification in conjunction with the NT7107 specification. (Provided Separately)

Optional Variants			Display Accessories	
Fonts	Physical Aspects	Voltage	Part Number	Description
N/A	N/A	N/A	MCCMDB-16SIL	LCD interconnect board, can be driven from either a PC or a single board computer with a USB output.

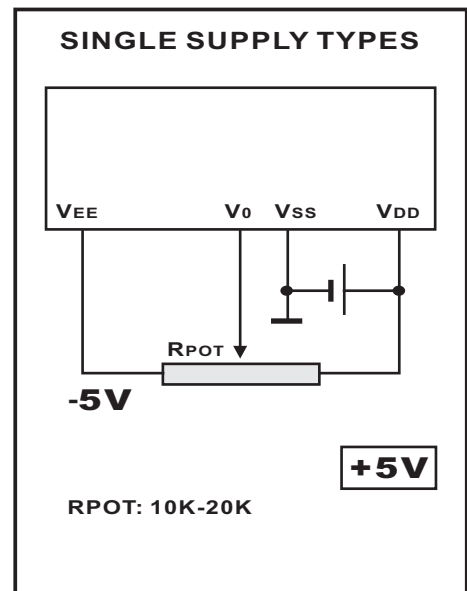
Pin Layout

D j b	G ra V c `	8 Y g W j d h c b	F Y a U f _g
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



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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	---	---	5.0	---	V
Supply Current	Idd	Vdd=5V	---	2.5	---	mA
Driving Voltage for LCD Panel	Vlcd = (Vdd - V0)	-20°C	8.30	---	8.90	V
		0°C	8.25	---	8.60	
		25°C	8.20	---	8.60	
		50°C	8.10	---	8.50	
		70°C	7.50	---	8.00	

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 If=10mA	---	3.0	---	V
LED Forward Current*	If	25°C	---	10	---	mA
LED Reverse Current	Ir	25°C Vr=5.0V	---	---	20	A
LED Peak Wave Length	λp	25°C If=10mA	569	---	575	nm
LED Brightness (Without LCD)	Lv	25°C If=10mA	---	130	---	cd/m ²
LED Brightness Uniformity	Lvmin/Lvmax	25°C If=10mA	70	---	---	Ratio
LED Life Time	---	25°C If=10mA	20K	---	---	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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