


MC24005AA6W9-BNMLW-V2	2 x 40	5mm Character Height	LCD Module
Specification			
Version: 1		Date: 31/10/2016	
Revision			

Display Features			
Character Count	2 x 40		
Appearance	White on Blue		
Logic Voltage	5V		
Interface	Parallel		
Font Set	English / Japanese		
Display Mode	Transmissive		
Character Height	5.55mm		
LC Type	BSTN		
Module Size	182.00 x 33.50 x 11.00 mm		
Operating Temperature	-20°C ~ +70°C		
Construction	COB	Box Quantity	Weight / Display
LED Backlight	White	15 pcs	120 grams



RoHS
compliant

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

Display Accessories	
Part Number	Description
MCCMDB-16DIL	LCD Interconnect board, can be driven from either a PC or a single Board computer with a USB output.
MCCBL1A16DLIP-16DILS-150	16 Way, Dual in-line to Dual In-line connector Cable.

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



Font Map

Upper 4bit Lower 4bit	LLLL	LLLH	LLHL	LLHH	LHLL	LHLH	LHHL	LHHH	HLLL	HLLH	HLHL	HLHH	HHLL	HHLH	HHHL	HHHH
LLLL	CG RAM (1)															
LLLH	(2)															
LLHL	(3)															
LLHH	(4)															
LHLL	(5)															
LHLH	(6)															
LHHL	(7)															
LHHH	(8)															
HLLL	(1)															
HLLH	(2)															
HLHL	(3)															
HLHH	(4)															
HHLL	(5)															
HHLH	(6)															
HHHL	(7)															
HHHH	(8)															

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			Page 4 of 5



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 -13.5	---	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	4.7	5.0	5.5	v
Supply Current	Idd	Vdd=3V	---	1.6	---	mA
Driving Voltage for LCD Panel	Vlcd = (Vdd - V0)	-20°C	4.50	---	5.20	v
		0°C	4.35	---	5.05	
		25°C	4.20	4.50	4.90	
		50°C	4.05	---	4.71	
		70°C	3.85	---	4.55	

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	2.9	---	3.4	V
LED Forward Current*	If	25°C	---	60	80	mA
LED Reverse Current	Ir	25°C	---	40	---	μA
LED Colour Range	X Coordinate	25°C If=60mA	0.25	---	0.28	---
	Y Coordinate		0.26	---	0.29	---
LED Brightness (Without LCD)	Lv	25°C If=60mA	130	---	---	cd/m ²
LED Life Time	---	25°C If=60mA	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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			Page 5 of 5