


MC20803A6W-GPTLY	2 x 8	5mm Character Height	LCD Module
<b>Specification</b>			
Version: 1		Date: 29/09/2016	
<b>Revision</b>			

Display Features					
Character Count	2 x 8				
Appearance	Black on Yellow/Green				
Logic Voltage	5V				
Interface	Parallel				
Font Set	English / Japanese				
Display Mode	Transflective				
Character Height	2.595mm				
LC Type	STN				
Module Size	25.00 x 17.50 x 6.30 mm				
Operating Temperature	0°C ~ +50°C				
Construction	COB			Box Quantity	Weight / Display
LED Backlight	Yellow/Green	---	---		

\* - For full design functionality, please use this specification in conjunction with the ST7066U specification. (Provided Separately)

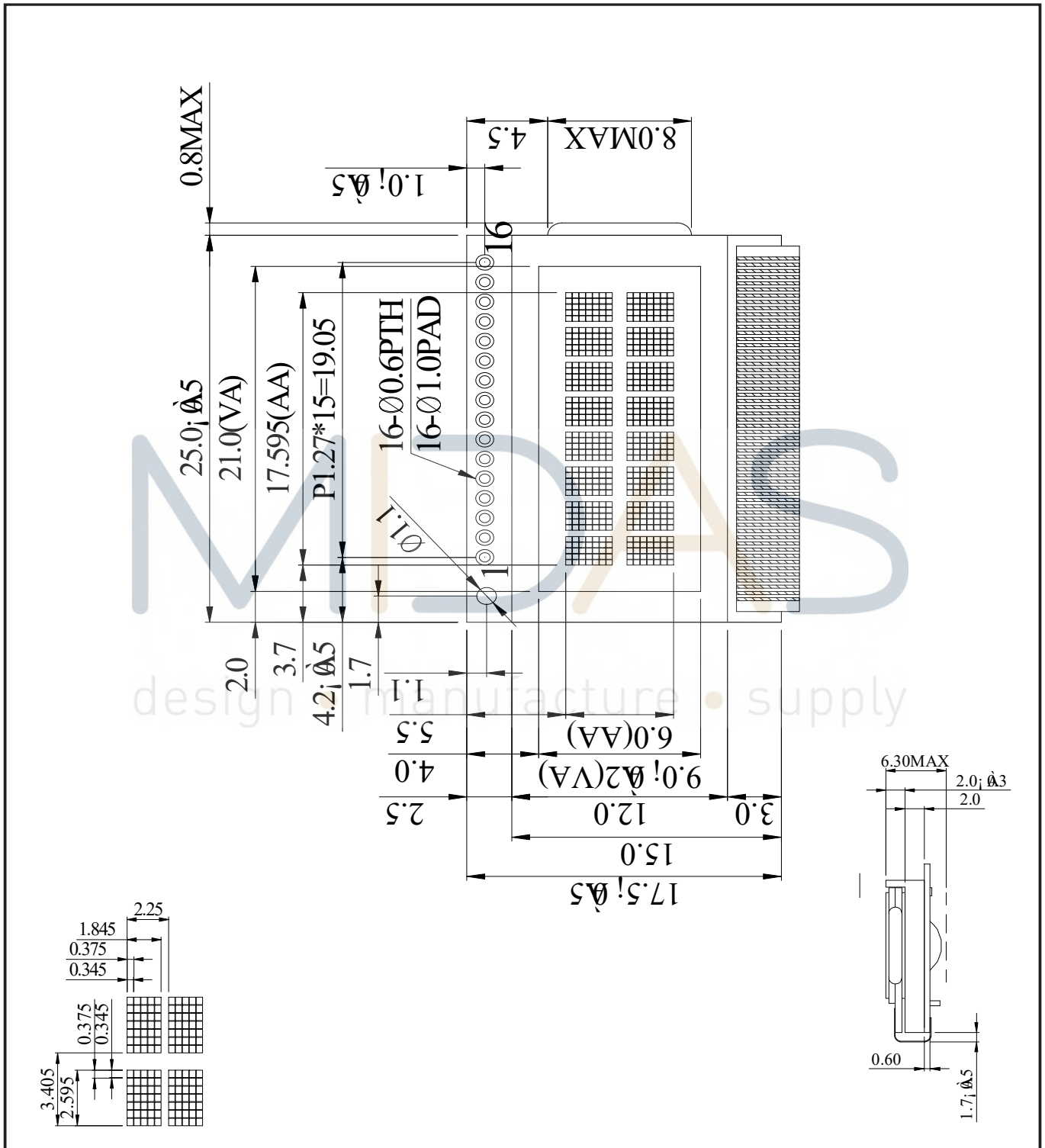
Display Accessories	
Part Number	Description
MCCMDB-16DIL	LCD Interconnect board, can be driven from either a PC or a single Board computer with a USB output.
MCCBL1A16SLIP-16DILS-150	16 Way, Single in-line to Dual In-line connector Cable.
MCCBL1A16SLIP-16SILS-150	16 Way, Single in-line to Single In-line connector Cable.

Optional Variants		
Fonts	Appearances	Voltage



## Mechanical Specifications

Module Size	25.00 x 17.50 x 6.30 ( With Backlight)				W x H x D mm
Viewing Area	21.0 x 9.00	W x H mm	Hole-to-Hole	53.00 x 27.00	W x H mm
Character Size	1.845 x 2.595	W x H mm	Character Pitch	2.250 x 3.405	W mm
Dot Size	0.345 x 0.345	W x H mm	Dot Pitch	0.375 x 0.375	W x H mm

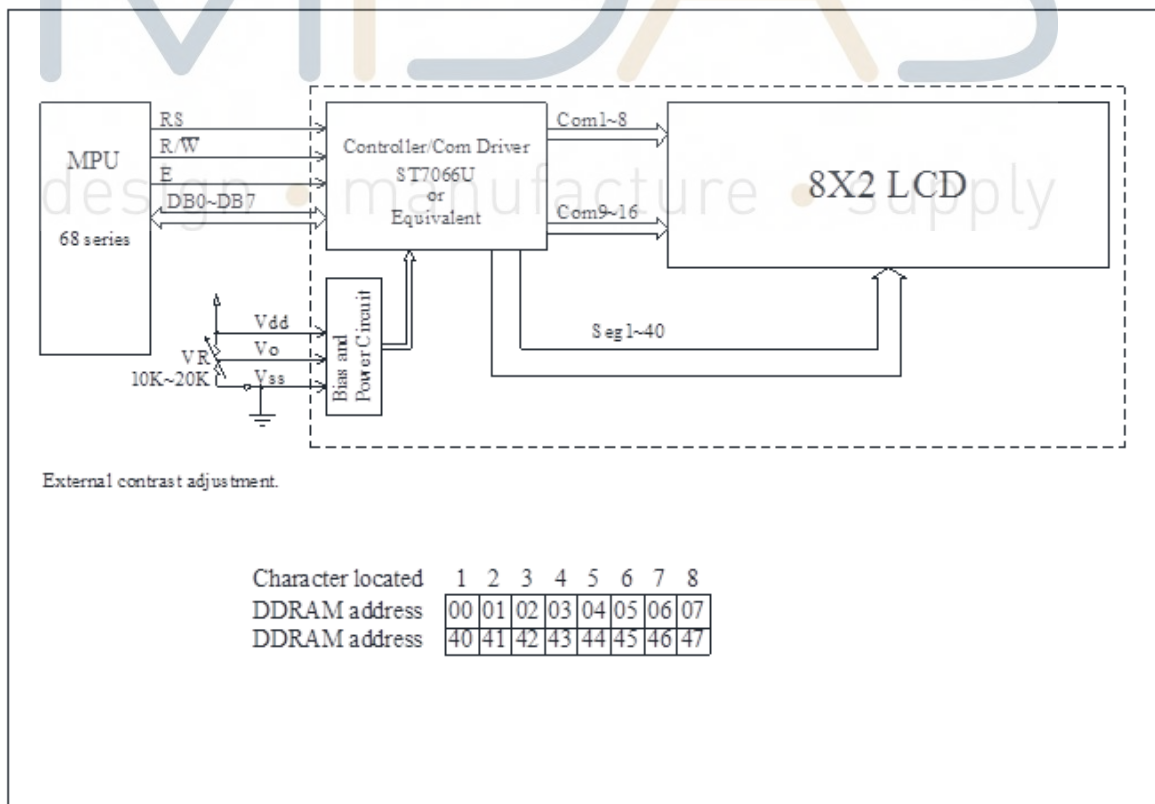


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# Pin Layout

PI	SYMBOL	DESCRIPTION	REMARKS
1	Vss	GND	
2	Vdd	Power supply for LCM	5.0V
3	V0	Operating Voltage for LCD	
4	RS	Instruction Code	
5	R/W	Data Read / Write	
6	E	Chip 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	LED+	Power Supply for BKL	
16	LED-	Power Supply for BKL	



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# 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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### 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	-0.3	---	13	V
Input Voltage	Vin	25 °C	Vss	---	Vdd	V
Operating Temperature	Vopr	---	0	---	50	°C
Storage Temperature	Vstg	---	-20	---	70	°C

### Electronic Characteristics

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Input Voltage High	V <sub>IH</sub>	---	0.70	---	V <sub>DD</sub>	V
Input Voltage Low	V <sub>IL</sub>	---	V <sub>SS</sub>	---	0.60	V
Output Voltage High	V <sub>OH</sub>	---	3.90	---	Vdd	V
Output Voltage Low	V <sub>OL</sub>	---	---	---	0.40	V
Supply Voltage Logic	V <sub>DD</sub> ~ V <sub>SS</sub>	---	4.50	5.00	5.50	V
Supply Voltage LCD	V <sub>DD</sub> ~ V <sub>0</sub>	Ta=25°C	3.20	3.40	3.60	V
Supply Current	I <sub>DD</sub>	V <sub>DD</sub> =5.0V	---	2.00	---	mA

### LCD Characteristics

For STN/FSTN LCD Panel Types						
Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Viewing Angle	Φ <sub>2</sub> – Φ <sub>1</sub>	CR ≥ 2	20	---	---	ψ=180°
	Θ	---	---			
Contrast Ratio	CR	---	---	10	15	---
Response Time (Rise)	TR	---	---	80	160	ms
Response Time (Fall)	TF	---	---	100	120	ms

### LED Characteristics

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Supply Current	I <sub>LED</sub>	V=3.1V	---	15	---	mA
Supply Voltage	V	---	2.90	3.10	3.30	V
Reverse Voltage	VR	---	---	---	3	V
Luminance (Without LCD)	IV	I <sub>LED</sub> =15mA	1600	2000	---	Cd/m <sup>2</sup>
Wave Length	λP	I <sub>LED</sub> =15mA	565	570	575	nm
LED Life Time	---	I <sub>LED</sub> =15mA	---	50K	---	Hour

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