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MC22005A6W1-SPTLY	2 x 20	5mm Character Height	LCD Module
Specification			
Version: 1		Date: 31/10/2016	
Revision			
1	30/10/2016	First Issue	

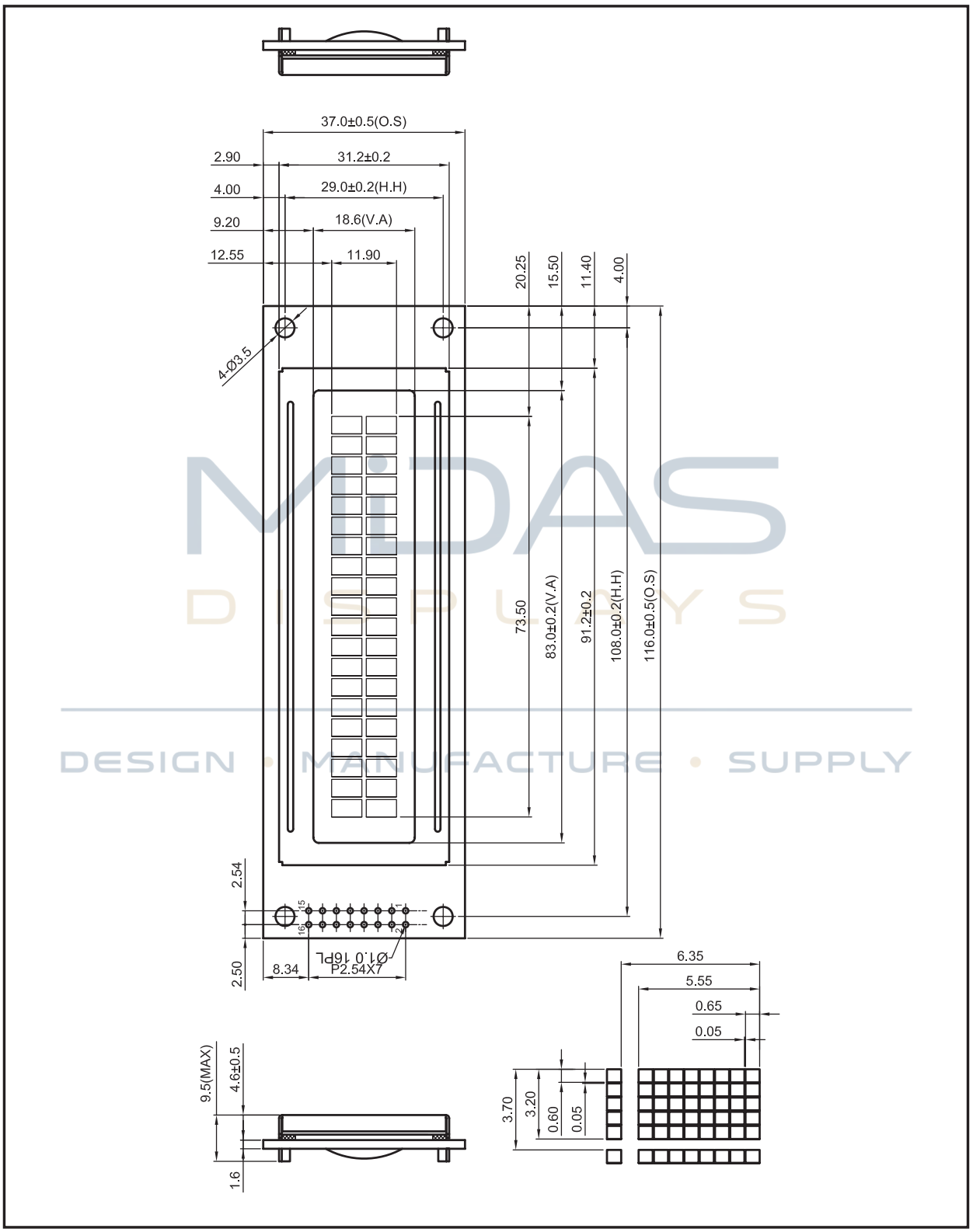
Display Features			
Character Count	2 x 20		
Appearance	Black on Yellow/Green		
Logic Voltage	5V		
Interface	Parallel		
Font Set	English / Japanese		
Display Mode	Reflective		
Character Height	5.55mm		
LC Type	STN		
Module Size	116.00 x 37.00 x 9.50 mm		
Operating Temperature	-20°C ~ +70°C		
Construction	COB	Box Quantity	Weight / Display
LED Backlight	N/A	~	~

RoHS compliant

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

DESIGN • MANUFACTURE • SUPPLY

Mechanical Specifications					
Module Size	116.00 x 37.00 x 9.50 (With Backlight)				W x H x D mm
Viewing Area	83.00 x 18.60	W x H mm	Hole-to-Hole	108.00 x 29.00	W x H mm
Character Size	3.20 x 5.55	W x H mm	Character Pitch	0.60 x 0.80	W x H mm
Dot Size	0.60 x 0.65	W x H mm	Dot Pitch	0.05 x 0.05	W x H mm



MIDAS DISPLAYS
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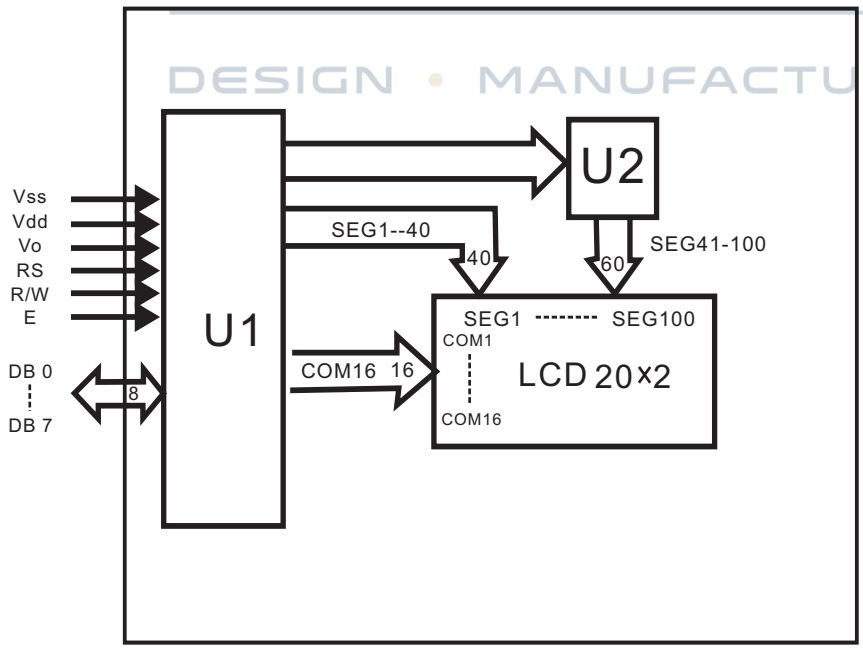
MC22005A6W-SPR-V2	2 x 20	5mm Character Height	LCD Module
Specification			
Version: 1		Date: 31/10/2016	
Revision			

Pin Layout

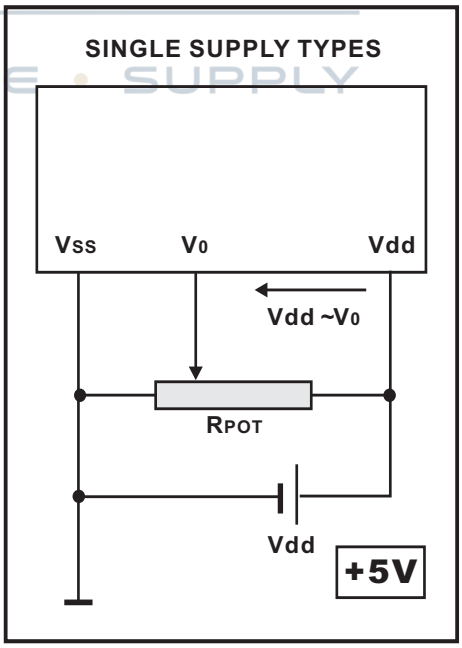
PI	SYMBOL	DESCRIPTION	REMARKS
1	Vss	GND	
2	Vdd	Power supply for LCM	5.0V
3	V0	Contrast Adjust	
4	RS	Register Select Signal	
5	R/W	Data Read / Write	
6	E	Enable Signal	
7	DB0	Data bus line	
8	DB1	Data bus line	
9	DB2	Data bus line	
10	DB3	Data bus line	
11	DB4	Data bus line	
12	DB5	Data bus line	
13	DB6	Data bus line	
14	DB7	Data bus line	
15	NC	No Connection	
16	NC	No Connection	

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Block Diagram

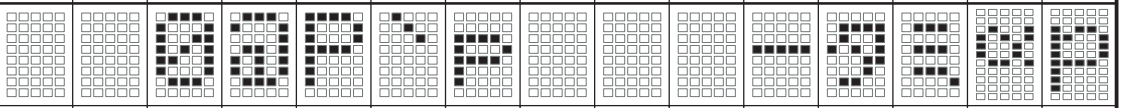
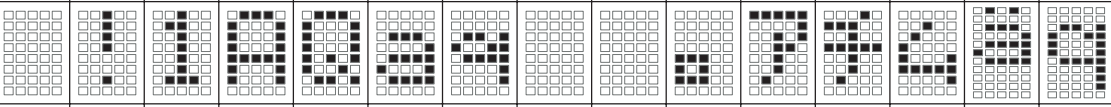
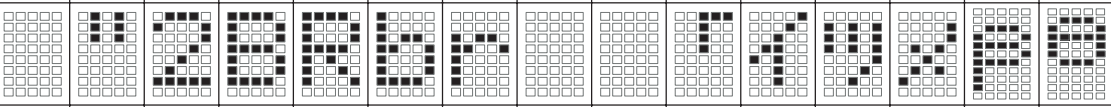
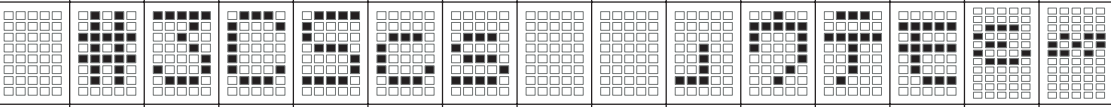
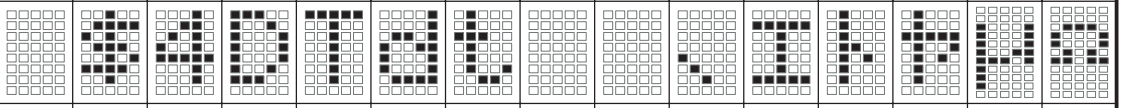
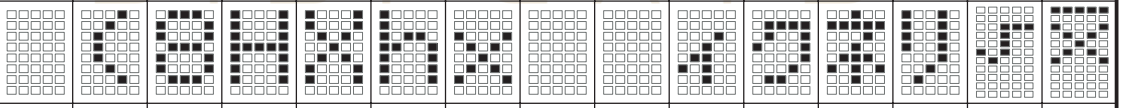
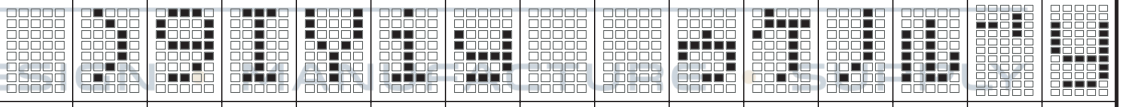
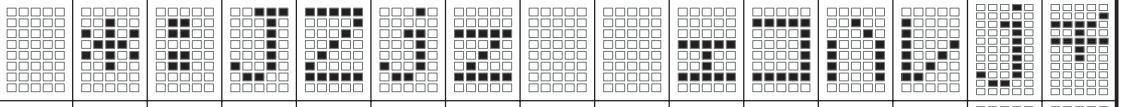
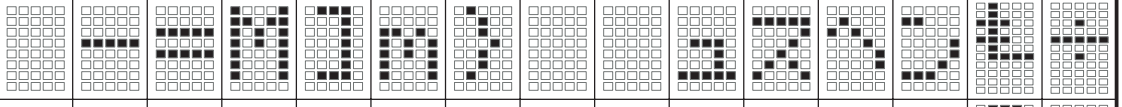


Power Supply Diagram



MC22005A6W-SPR-V2	2 x 20	5mm Character Height	LCD Module
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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	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	---	---	5.0	---	V
Supply Current	Idd	Vdd=5V	---	1.4	---	mA
Driving Voltage for LCD Panel	Vlcd = (Vdd - V0)	-20°C	4.40	---	4.90	V
		0°C	4.35	---	4.90	
		25°C	4.30	4.50	4.90	
		50°C	4.20	---	4.80	
		70°C	4.10	---	4.70	

LCD Characteristics

For STN/FSTN LCD Panel Types

Item	Symbol	Condition	Min	Typ	Max	Unit
Viewing Angle	Φ2 – Φ1	K = 4	40°	---	---	Deg
	Θ		60°			
Contrast Ratio	K	---	6		---	---
Response Time (Rise)	TR	---	---	150	250	ms
Response Time (Fall)	TF	---	---	150	250	ms

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