


MC160080A6W-FPTLW	160 x 80	LCD Module
Specification		
Version: 1	Date: 31/10/2016	
Revision		

Display Features			
Resolution	160 x 80		
Appearance	Black on White		
Logic Voltage	5V		
Interface	Parallel		
Font Set	English/European/Japanese		
Display Mode	Transflective		
LC Type	FSTN		
Module Size	100.00 x 54.00 x 14.60		
Operating Temperature	-20°C ~ +70°C		
Construction	COB	Box Quantity	Weight / Display
LED Backlight	White	---	---



RoHS
compliant

* - For full design functionality, please use this specification in conjunction with the RA6963 specification.(Provided Separately)

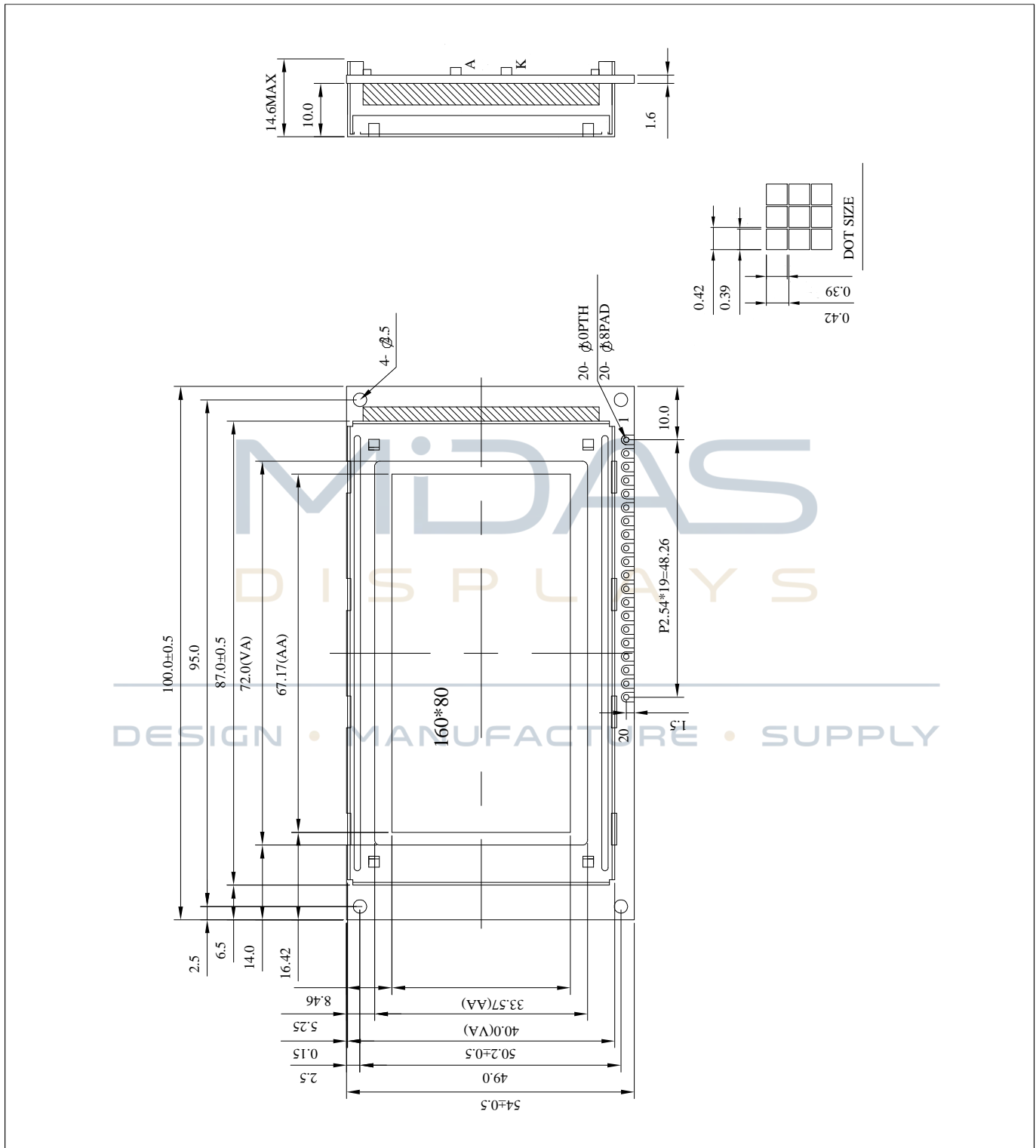
Display Accessories	
Part Number	Description
VBWFD1	USB PIC18F2550 microcontroller board to 20-way Single in-line COB Graphic LCD.

Optional Variants	
Appearances	Voltage
White on Blue	



Mechanical Specifications

Module Size	100.00 x 54.00 x 14.60 (With Backlight)				W x H x D mm
Viewing Area	72.00 x 40.00	W x H mm	Hole-to-Hole	95.00 x 49.00	W x H mm
Dot Size	0.39 x 0.39	W x H mm	Dot Pitch	0.42 x 0.42	W x H mm



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Pin Layout

Dj	Grn Vc`	8 YgW]dh]cb	FYa Uf_g
1	Vee	Negative Voltage Output	
2	Vss	Ground	
3	Vdd	Power Supply for Logic	
4	V0	U[, ^!AU"]]]^ A; ASOOA: a^!	
5	Y Ü	ÖææY !æ^	
6	ÜÖ	Data Read	
7	CE	Chip Enable	
8	CD	Command Data	
9	RST	Reset LCM	
10	DB0	Data bus Line	
11	DB1	Data bus Line	
12	DB2	Data bus Line	
13	DB3	Data bus Line	
14	DB4	Data bus Line	
15	DB5	Data bus Line	
16	DB6	Data bus Line	
17	DB7	Data bus Line	
18	FS	Pins for Selection of Font	
19	LED+	Power Supply for BKL	
20	LED-	Power Supply for BKL	

MIDAS

DISPLAYS

DESIGN • MANUFACTURE • SUPPLY

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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	---	---	---	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	Minimum	Typical	Maximum	Unit
Input Voltage High	V _{IH}	---	0.80	---	V _{DD}	V
Input Voltage Low	V _{IL}	---	0	---	0.20	V
Output Voltage High	V _{OH}	---	-0.30	---	---	V
Output Voltage Low	V _{OL}	---	0	---	0.30	V
Supply Voltage Logic	V _{DD} - V _{SS}	---	3.00	---	5.50	V
Supply Voltage LCD	V _{DD} - V ₀	Ta=25°C	11.00	11.50	12.00	V
Supply Current	I _{DD}	V _{DD} =5.0V	13.80	14.20	16.00	mA

LCD Characteristics

For STN/FSTN LCD Panel Types

Item	Symbol	Condition	Min	Typ	Max	Unit
Viewing Angle	$\Phi 2 - \Phi 1$	CR ≥ 2	0°	---	30	$\psi = 180^\circ$
	Θ		0°			
Contrast Ratio	K	---	---	3	---	---
Response Time (Rise)	TR	---	---	200	300	ms
Response Time (Fall)	TF	---	---	250	350	ms

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LED Characteristics

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Supply Current	I _{LED}	V=3.5V	---	64	80	mA
Supply Voltage	V	---	3.40	3.50	3.60	V
Reverse Voltage	VR	---	---	---	5	V
Luminance (Without LCD)	IV	I _{LED} =64mA	440	550	---	Cd/m ²
---	---	---	---	---	---	---
LED Life Time	---	I _{LED} =64mA	---	50K	---	Hour

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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