

MC11605A12W-VNMLR	1 x 16	5mm Character Height	VA Module
Specification			
Version: 1		Date: 29/09/2016	
Revision			

Display Features			
Resolution	1 x 16		
Appearance	Red on Black		
Logic Voltage	5V		
Interface	Parallel		
Font Set	English / Japanese		
Display Mode	Transmissive		
Character Height	6.56 mm		
LC Type	VATN		
Module Size	80.00 x 36.00 x 13.50		
Operating Temperature	-20°C ~ +70°C		
Construction	COB		
LED Backlight	Red	Box Quantity	Weight / Display
		---	---

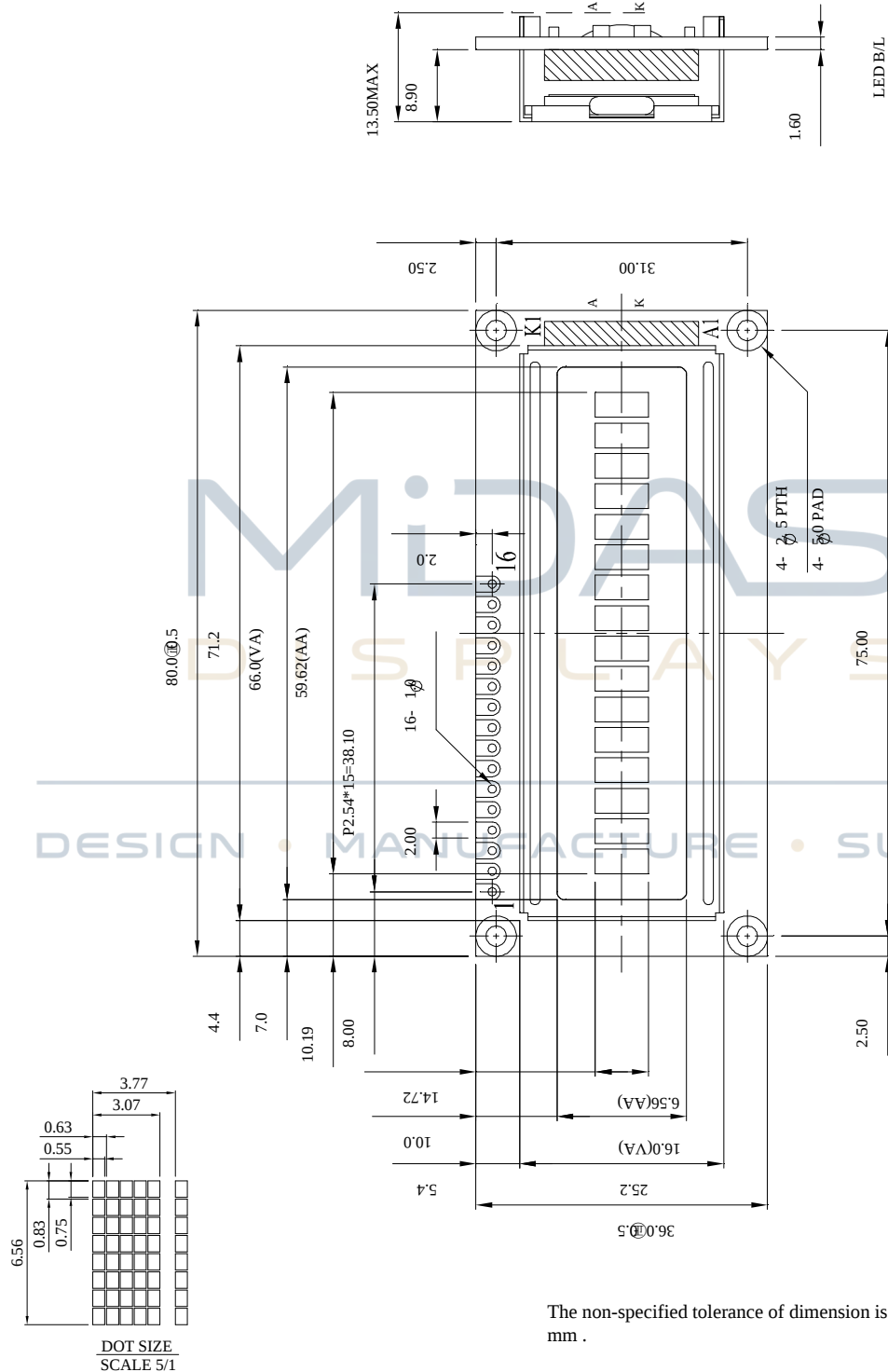
* - For full design functionality, please use this specification in conjunction with the RW1063 specification. (Provided Separately)

Display Accessories	
Part Number	Description
MCCMDB-16SIL	LCD Interconnect board, can be driven from either a PC or a single Board computer with a USB output.
MCCBL1A16SILP-DILS-150	16 Way, Single in-line to Dual in-line connector cable.
MCCBL1A16SILP-SILS-150	16 Way, Single in-line to single in-line connector cable.

Optional Variants		
Fonts	Appearance	Voltage
	Blue on Black Green on Black White on Black Yellow on Black	

Mechanical Specifications

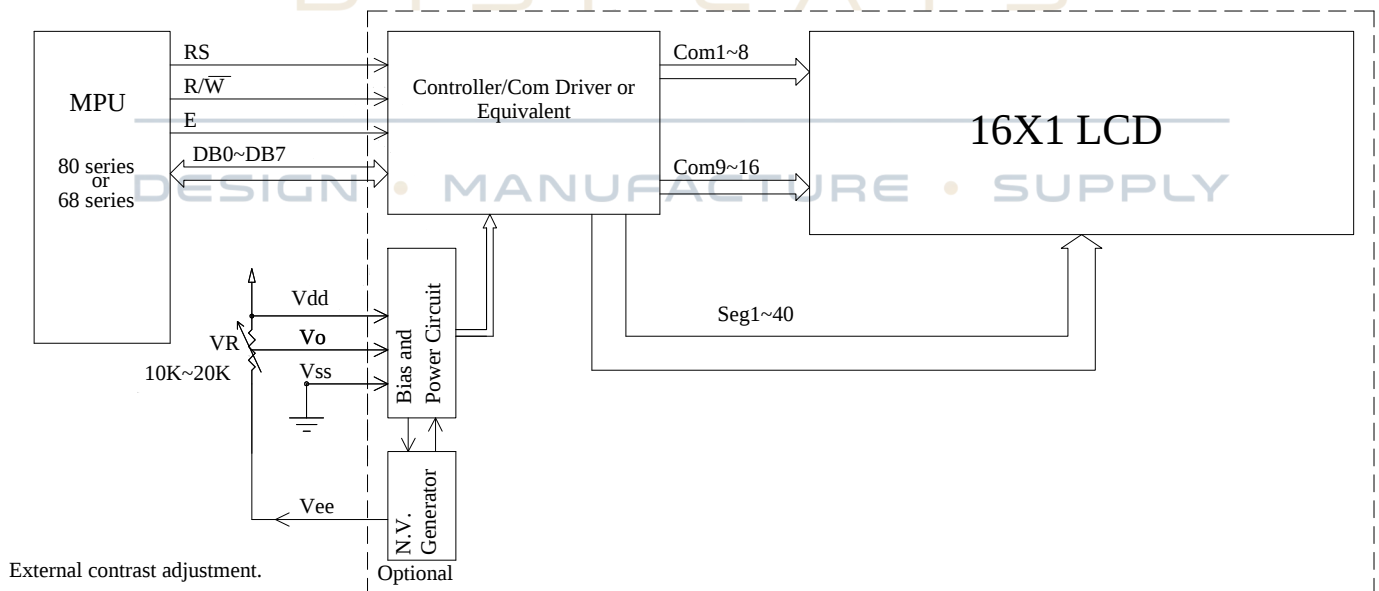
Module Size	80.00 x 36.00 x 13.50 (With Backlight)				W x H x D mm
Viewing Area	66.00 x 16.00	W x H mm	Hole-to-Hole	75 x 31.00	W x H mm
Character Size	3.07 x 6.56	W x H mm	Character Pitch	3.77 x 6.56	W x H mm
Dot Size	0.55 x 0.75	W x H mm	Dot Pitch	0.63 x 0.83	W x H mm



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Pin Layout

PI	SYMBOL	DESCRIPTION	REMARKS
1	Vss	GND	
2	Vdd	Power supply for LCM	
3	V0	Contrast Adjust	
4	RS	Register Select Signal	
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	Vee	Negative Voltage Output	
16	K	LED -	



Character located 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 DDRAM
 DDRAM address 00 01 02 03 04 05 06 07 40 41 42 43 44 45 46 47

2-line display mode.

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Font Map

Upper 4bit Lower 4bit	LLLL	LL LH	LL HL	LL HH	LH LL	LH LH	LH HL	LH HH	HLLL	HLLH	HLHL	HLHH	HHLL	HH LH	HH HL	HH HH
LLLL	CG RAM (1)															
LL LH	(2)															
LL HL	(3)															
LL HH	(4)															
LH LL	(5)															
LH LH	(6)															
LH HL	(7)															
LH HH	(8)															
HLLL	(1)															
HLLH	(2)															
HLHL	(3)															
HLHH	(4)															
HHLL	(5)															
HHLH	(6)															
HHHL	(7)															
HHHH	(8)															

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Absolute Maximums Ratings					
Item	Symbol	Minimum	Typical	Maximum	Unit
Power Supply (Logic)	V _{dd}	-0.3	---	5.5	V
Power Supply (LCD)	V ₀	V _{ss} -0.3	---	V _{ss} +7.0	V
Input Voltage	V _{in}	-0.3	---	V _{dd} +0.3	V
Operating Temperature	T _{OP}	-20°C	---	70°C	°C
Storage temperature	T _{ST}	-30°C	---	80°C	°C

Electronic Characteristics						
Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Input Voltage High	V _{IH}	---	2.50	---	V _{DD}	V
Input Voltage Low	V _{IL}	---	-0.30	---	0.60	V
Output Voltage High	V _{OH}	---	3.90	---	---	V
Output Voltage Low	V _{OL}	---	---	---	0.40	V
Supply Voltage Logic	V _{DD} ~ V _{SS}	---	4.50	5.00	5.50	V
Supply Voltage LCD	V _{DD} ~ V ₀	T _a =25°C	6.20	6.50	6.80	V
Supply Current	I _{DD}	V _{DD} =5.0V	1.00	1.50	2.50	mA

LCD Characteristics						
For STN/FSTN LCD Panel Types						
Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Viewing Angle	Φ2 – Φ1	CR ≥ 10	---	60	---	ψ=180°
	Θ	---	---			
Contrast Ratio	CR	---	10	---	---	---
Response Time (Rise)	TR	---	---	300	350	ms
Response Time (Fall)	TF	---	---	300	350	ms

DESIGN • MANUFACTURE • SUPPLY

LED Characteristics						
Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Supply Current	I _{LED}	V=5.0V	---	45	60	mA
Supply Voltage	V	---	4.90	5.00	5.10	V
Reverse Voltage	V _R	---	---	---	5	V
Luminance (Without LCD)	I _V	I _{LED} =45mA	240	300	---	Cd/m ²
Wave Length	λ _P	I _{LED} =45mA	620	625	630	nm
LED Life Time	---	I _{LED} =45mA	---	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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