

MCOB21605B1V-EWP	2 x 16	Euro/Jap/Cyrillic	OLED Module
Specification			
Version: 1	Date: 16/05/2017		
Revision			

Display Features			
Character Count	2 x 16		
Appearance	White on Black		
Logic Voltage	5V		
Interface	Parallel		
Font Set	English / European / Cyrillic		
Character Height	5.55 mm		
Module Size	85.00 x 36.00 x 10.00 mm		
Operating Temperature	-40°C ~ +80°C		
Construction	COB	Box Quantity	Weight / Display
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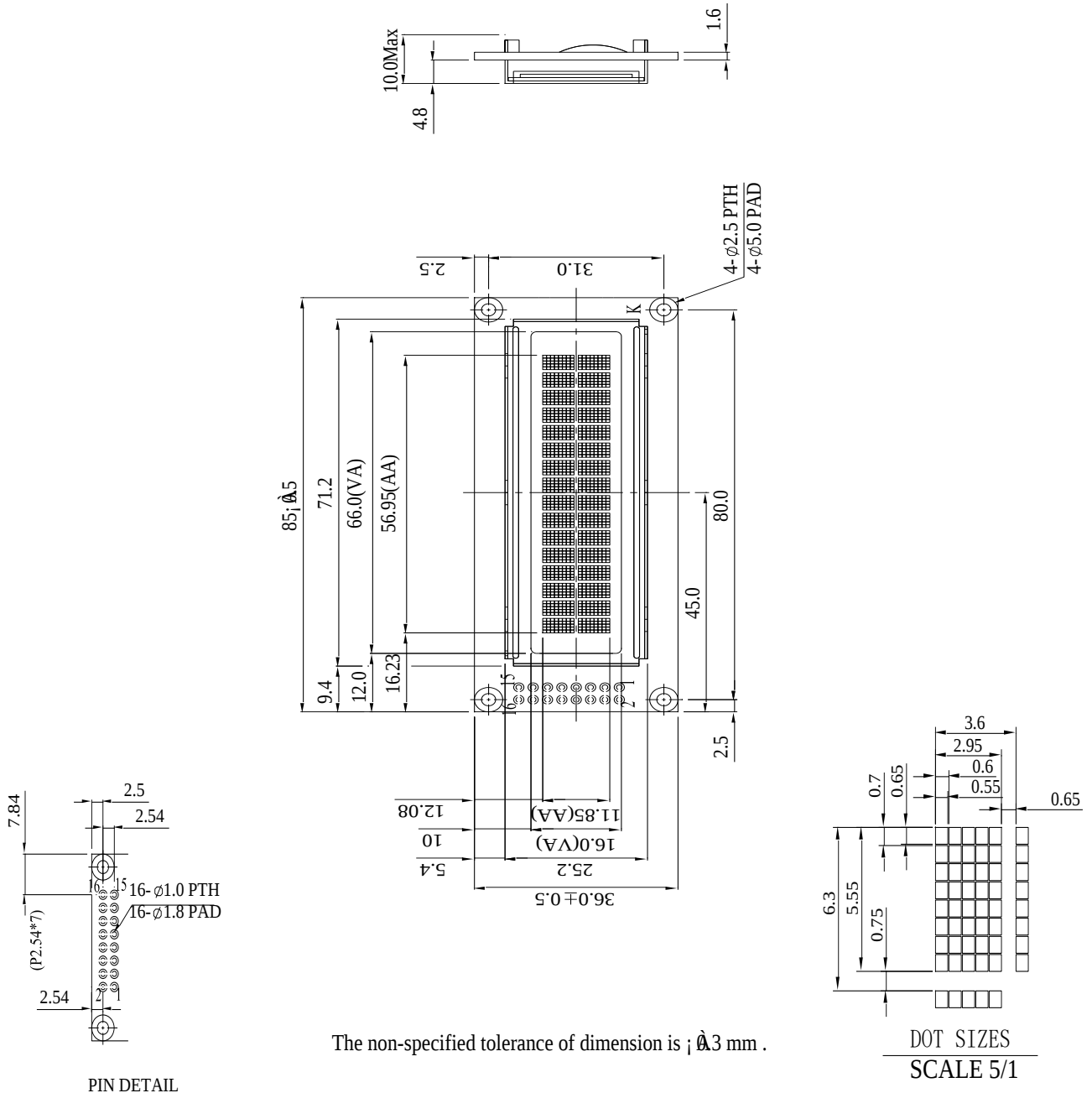
* - For full design functionality, please use this specification in conjunction with the MS0010 specification. (Provided Separately)

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.
MCCBL1A16DILP-DILS-150	16 Way, Dual in-line to Dual in-line connector cable.

Optional Variants	
Appearance	Voltage
Blue on Black Red on Black Green on Black	

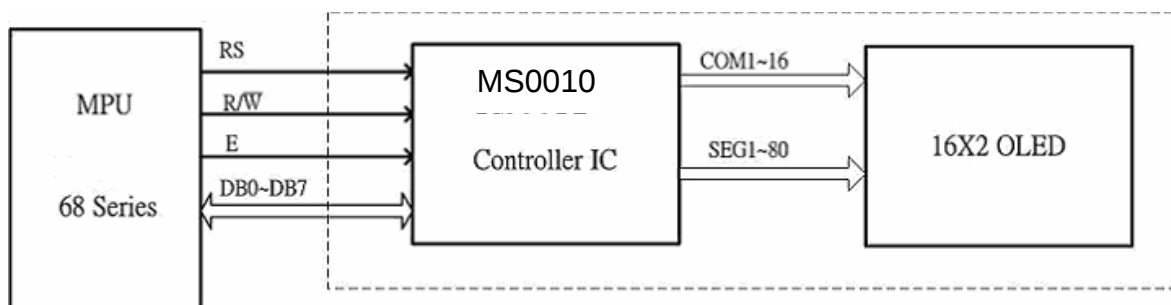
Mechanical Specifications

Module Size	85.00 x 36.00 x 10.00 (With Backlight)				W x H x D mm
Viewing Area	66.00 x 16.00	W x H mm	Hole-to-Hole	31.20 x 30.00	W x H mm
Character Size	2.95 x 5.55	W x H mm	Character Pitch	3.60 x 6.30	W x H mm
Dot Size	0.55 x 0.65	W x H mm	Dot Pitch	0.60 x 0.70	W x H mm



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Pin layout			
Pin	Symbol	Description	Remarks
1	VSS	Ground	
2	VDD	Supply Voltage for Logic	5V
3	NC	No Connection	
4	RS	H: Data L: Instruction Code	H/L
5	R/W	H: Read(MPU-->Module) L: Write(MPU-->Module)	H/L
6	E	Chip Enable Signal	H, H -->L
7	DB0	Data Bus Line	H/L
8	DB1	Data Bus Line	H/L
9	DB2	Data Bus Line	H/L
10	DB3	Data Bus Line	H/L
11	DB4	Data Bus Line	H/L
12	DB5	Data Bus Line	H/L
13	DB6	Data Bus Line	H/L
14	DB7	Data Bus Line	H/L
15	NC	No Connection	
16	NC	No Connection	



Address Format	DB7	DB6	DB5	DB4	DB3	DB2	DB1	DB0
CA (Character Address)	1	ADD6	ADD5	ADD4	ADD3	ADD2	ADD1	ADD0

1	2	3	4			13	14	15	16
CA10000000	CA10000001	CA10000010	CA10000011			CA10001100	CA10001101	CA10001110	CA10001111
CA11000000	CA11000001	CA11000010	CA11000011			CA11001100	CA11001101	CA11001110	CA11001111

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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)															
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Upper 4bit Lower 4bit		LLLL	LLH	LLHL	LLHH	LHLL	LHLH	LHHL	LHHH	HLLL	HLLH	HLHL	HLHH	HHLL	HHLH	HHHL	HHHH
LLLL	CG RAM (1)																
LLH	(2)																
LLHL	(3)																
LLHH	(4)																
LHLL	(5)																
LHLH	(6)																
LHHL	(7)																
LHHH	(8)																
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Upper 4bit Lower 4bit	LLLL	LLHH	LLHL	LLHH	LHLL	LHLH	LHHL	LHHH	HLLL	HLLH	HLHL	HLHH	HHLL	HHLH	HHHL	HHHH
LLLL	CG RAM (1)															
LLHH	(2)															
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Absolute Maximums Ratings					
Item	Symbol	Minimum	Typical	Maximum	Unit
Supply Voltage for Logic	V0	-0.30	---	5.30	V
Operating Temperature	Vopr	-40	---	80	°C
Storage Temperature	Vstg	-40	---	80	°C

Electronic Characteristics						
Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Input High Voltage	VIH	---	0.80	---	VDD	V
Input Low Voltage	VIL	---	GND	---	0.20	V
Output High Voltage	VOH	IOH=-0.5mA	0.80	---	VDD	V
Output Low Voltage	VOL	IOL=0.5mA	GND	---	0.20	V
Supply Voltage for Logic	VDD~VSS	---	4.80	5.00	5.30	V
50% Checkboard Operating Current.	IDD	VDD=5V	30	35	42	mA

OLED Characteristics						
Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Viewing Angle	(V)θ	---	160	---	---	Deg
	(H)φ	---	160	---	---	Deg
Contrast Ratio	CR	Dark	2000:1	---	---	---
Response Time	T Rise	---	---	10	---	μs
	T Fall	---	---	10	---	μs
Display with 50% Checkboard Brightness			50	60	---	cd/m ²
CIEx(White)		(CIE1931)	0.26	0.28	0.30	---
CIEy(White)		(CIE1931)	0.30	0.32	0.34	---

OLED Life Time			
Item	Conditions	Typical	Remark
Operating Life Time	Ta=25°C. Initial checkboard brightness, 50%.	50,000 Hours	---

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