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|----------------------|--------|-------------------|-------------|
| MCOB11605AV-ERP | 1 x 16 | Euro/Jap/Cyrillic | OLED Module |
| Specification | | | |
| Version: 1 | | Date: 16/05/2017 | |
| Revision | | | |
| | | | |

| Display Features | |  | | | |
|-----------------------|-------------------------------|--|-----|--------------|------------------|
| Character Count | 1 x 16 | | | Box Quantity | Weight / Display |
| Appearance | Red on Black | | | | |
| Logic Voltage | 5V | | | | |
| Interface | Parallel | | | | |
| Font Set | English / European / Cyrillic | | | | |
| Character Height | 6.35 mm | | | | |
| Module Size | 80.00 x 36.00 x 10.00 mm | | | | |
| Operating Temperature | -40°C ~ +80°C | | | | |
| Construction | COB | --- | --- | | |

* - For full design functionality, please use this specification in conjunction with the MS0010 specification. (Provided Separately)

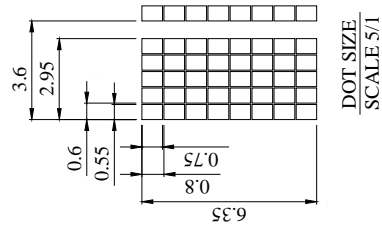
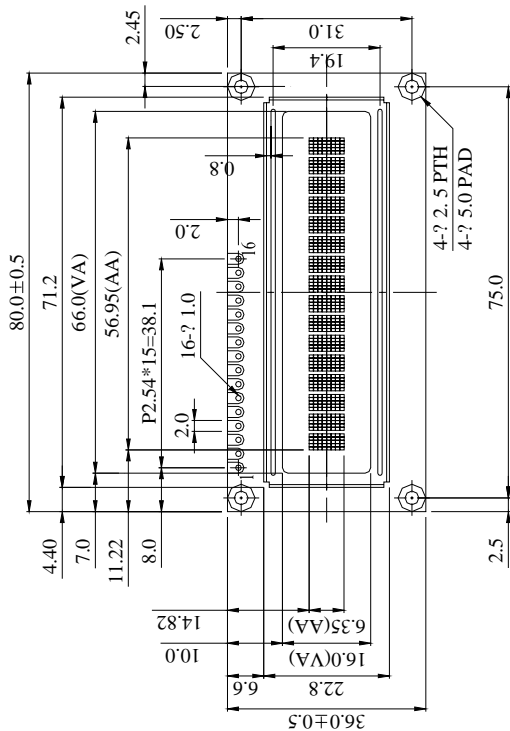
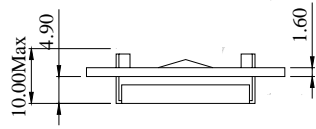
| Display Accessories | |
|------------------------|--|
| Part Number | Description |
| MCCMDB-16SIL | LCD Interconnect board, can be driven from either a PC or a single Board computer with a USB output. |
| MCCBL1A16SILP-DILS-150 | 16 Way, Single in-line to Dual in-line connector cable. |
| MCCBL1A16SILP-SILS-150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

| Optional Variants | |
|-------------------|---------|
| Appearance | Voltage |
| Yellow on Black | |
| White on Black | |
| Blue on Black | |
| Green on Black | |

Mechanical Specifications

| | | | | | |
|----------------|---|----------|-----------------|---------------|--------------|
| Module Size | 80.00 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 | 75.00 x 31.00 | W x H mm |
| Character Size | 2.95 x 6.35 | W x H mm | Character Pitch | 3.60 x 6.35 | W x H mm |
| Dot Size | 0.55 x 0.75 | W x H mm | Dot Pitch | 0.60 x 0.80 | W x H mm |

| PIN NO. | SYMBOL |
|---------|-----------------|
| 1 | V _{SS} |
| 2 | V _{DD} |
| 3 | NC |
| 4 | RS |
| 5 | R/W |
| 6 | E |
| 7 | DB0 |
| 8 | DB1 |
| 9 | DB2 |
| 10 | DB3 |
| 11 | DB4 |
| 12 | DB5 |
| 13 | DB6 |
| 14 | DB7 |
| 15 | NC |
| 16 | NC |

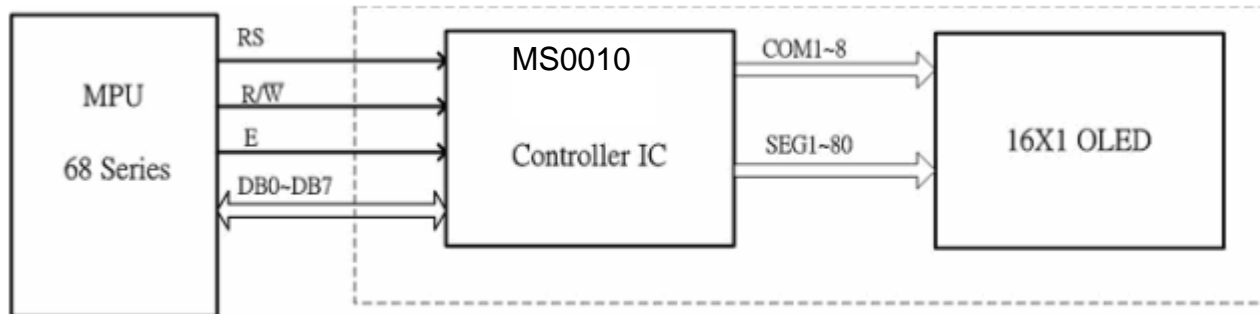


The non-specified tolerance of dimension is ± 0.3 mm .

DOT SIZE
SCALE 5/1

| | | | |
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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 |
| CA=10000000b | CA=10000001b | CA=10000010b | CA=10000011b | | | CA=10001100b | CA=10001101b | CA=10001110b | CA=10001111b |

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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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| 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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| Upper 4bit Lower 4bit | LLLL | LLHH | 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 Maximums Ratings | | | | | |
|---------------------------|--------|---------|---------|---------|------|
| Item | Symbol | Minimum | Typical | Maximum | Unit |
| Input Voltage | VI | -0.30 | --- | VDD | V |
| 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 | 16 | 18 | 22 | 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(Red) | | (CIE1931) | 0.63 | 0.67 | 0.71 | --- |
| CIEy(Red) | | (CIE1931) | 0.29 | 0.33 | 0.37 | --- |

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

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