**Display Features**

<table>
<thead>
<tr>
<th>Character Count</th>
<th>4 x 20</th>
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<tbody>
<tr>
<td>Appearance</td>
<td>White on Black</td>
</tr>
<tr>
<td>Logic Voltage</td>
<td>5V</td>
</tr>
<tr>
<td>Interface</td>
<td>Parallel</td>
</tr>
<tr>
<td>Font Set</td>
<td>English / Japanese / Cyrillic</td>
</tr>
<tr>
<td>Character Height</td>
<td>4.75</td>
</tr>
<tr>
<td>Module Size</td>
<td>98.00 x 60.00 x 10.00 mm</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-40°C ~ +80°C</td>
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</tbody>
</table>

* - For full design functionality, please use this specification in conjunction with the MCIC1302EUM specification.(Provided Separately)

**Display Accessories**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>MCCMDB-16SIL</td>
<td>LCD Interconnect board, can be driven from either a PC or a single Board computer with a USB output.</td>
</tr>
<tr>
<td>MCCBL1A16SILP-DILS-150</td>
<td>16 Way, Sual in-line to Dual in-line connector cable.</td>
</tr>
<tr>
<td>MCCBL1A16SILP-SILS-150</td>
<td>16 Way, Sual in-line to Single in-line connector cable.</td>
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**Optional Variants**

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Voltage</th>
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<td>Blue on Black</td>
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<tr>
<td>Red on Black</td>
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<td>Yellow on Black</td>
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<td>Green on Black</td>
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# Mechanical Specifications

<table>
<thead>
<tr>
<th></th>
<th>98.00 x 60.00 x 10.00 (Without Backlight)</th>
<th>W x H x D mm</th>
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</thead>
<tbody>
<tr>
<td><strong>Module Size</strong></td>
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</tr>
<tr>
<td><strong>Viewing Area</strong></td>
<td>77.00 x 25.20 W x H mm</td>
<td>Hole-to-Hole 93.00 x 55.00 W x H mm</td>
</tr>
<tr>
<td><strong>Character Size</strong></td>
<td>2.90 x 4.75 W x H mm</td>
<td>Character Pitch 3.54 x 5.40 W x H mm</td>
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<td><strong>Dot Size</strong></td>
<td>0.54 x 0.55 W x H mm</td>
<td>Dot Pitch 0.59 x 0.60 W x H mm</td>
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</table>

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

**SCALE 5/1**

---

**Specification**

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<td></td>
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<tr>
<td><strong>Date</strong></td>
<td>25/07/2017</td>
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</tr>
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## Pin layout

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<td>1</td>
<td>VSS</td>
<td>Ground</td>
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</tr>
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<td>2</td>
<td>VDD</td>
<td>Supply Voltage for Logic</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>NC</td>
<td>No Connection</td>
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</tr>
<tr>
<td>4</td>
<td>RS</td>
<td>H: Data L: Instruction Code</td>
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</tr>
<tr>
<td>5</td>
<td>RW</td>
<td>H: Read L: Write</td>
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</tr>
<tr>
<td>6</td>
<td>E</td>
<td>Chip Enable Signal</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>DB0</td>
<td>Data Bus Line</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>DB1</td>
<td>Data Bus Line</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>DB2</td>
<td>Data Bus Line</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>DB3</td>
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</tr>
<tr>
<td>11</td>
<td>DB4</td>
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</tr>
<tr>
<td>12</td>
<td>DB5</td>
<td>Data Bus Line</td>
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<td>13</td>
<td>DB6</td>
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<td>14</td>
<td>DB7</td>
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### Diagram

![Diagram of pin layout and address format](image)

### Address Format

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<th>DB7</th>
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<th>DB5</th>
<th>DB4</th>
<th>DB3</th>
<th>DB2</th>
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<th>DB0</th>
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<td>ADD6</td>
<td>ADD5</td>
<td>ADD4</td>
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**Display Position**

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<th>4</th>
<th>...</th>
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<th>17</th>
<th>18</th>
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<tbody>
<tr>
<td>DD RAM Address</td>
<td>00</td>
<td>01</td>
<td>02</td>
<td>03</td>
<td>...</td>
<td>...</td>
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### Specification

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<th>Euro/Jap/Cyrillic</th>
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### Font Map

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<th>LLHL</th>
<th>LLHH</th>
<th>LHLL</th>
<th>LHLH</th>
<th>LHHL</th>
<th>LHHH</th>
<th>HLLL</th>
<th>HLLH</th>
<th>HLHL</th>
<th>HLHH</th>
<th>HHLL</th>
<th>HHLH</th>
<th>HHHL</th>
<th>HHHH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower 4bit</td>
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<table>
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<tr>
<th>Module Specification</th>
<th>4 x 20</th>
<th>Euro/Jap/Cyrillic</th>
<th>OLED Module</th>
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<tbody>
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**Version:** 4  
**Date:** 25/07/2017  
**Revision**
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<th>LLHL</th>
<th>LLHH</th>
<th>LHLL</th>
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<th>HLLL</th>
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<th>HLHL</th>
<th>HLHH</th>
<th>HHLL</th>
<th>HHLH</th>
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MCOB42005A1V-EWP  | 4 x 20 | Euro/Jap/Cyrillic | OLED Module

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MCOB42005A1V-EWP  4 x 20  Euro/Jap/Cyrillic  OLED Module

Specification

Version: 4  Date: 25/07/2017

Revision
### Absolute Maximum Ratings

<table>
<thead>
<tr>
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<th>Symbol</th>
<th>Condition</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
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<td>5.3</td>
<td>V</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>TOP</td>
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<td>-40</td>
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<td>80</td>
<td>°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
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### Electronic Characteristics

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<th>Symbol</th>
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<th>Minimum</th>
<th>Typical</th>
<th>Maximum</th>
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<td>V</td>
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<tr>
<td>Input Low Voltage</td>
<td>VIL</td>
<td>---</td>
<td>0.80</td>
<td>---</td>
<td>0.20</td>
<td>V</td>
</tr>
<tr>
<td>Output High Voltage</td>
<td>VOH</td>
<td>IOH=-0.5mA</td>
<td>0.26</td>
<td>0.28</td>
<td>0.30</td>
<td>---</td>
</tr>
<tr>
<td>Output Low Voltage</td>
<td>VOL</td>
<td>IOL=0.5mA</td>
<td>0.30</td>
<td>0.32</td>
<td>0.34</td>
<td>---</td>
</tr>
<tr>
<td>Supply Voltage for Logic</td>
<td>VDD~VSS</td>
<td>---</td>
<td>4.80</td>
<td>5.00</td>
<td>5.30</td>
<td>V</td>
</tr>
<tr>
<td>cIE(x,Red)</td>
<td>---</td>
<td>x,y(CIE1931)</td>
<td>0.26</td>
<td>0.28</td>
<td>0.30</td>
<td>---</td>
</tr>
<tr>
<td>cIE(y,Red)</td>
<td>---</td>
<td>x,y(CIE1931)</td>
<td>0.30</td>
<td>0.32</td>
<td>0.34</td>
<td>---</td>
</tr>
<tr>
<td>50% Checkboard Operating Current</td>
<td>IDD</td>
<td>VDD=5V</td>
<td>190</td>
<td>220</td>
<td>230</td>
<td>mA</td>
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### OLED Characteristics

<table>
<thead>
<tr>
<th>Item</th>
<th>Symbol</th>
<th>Condition</th>
<th>Minimum</th>
<th>Typical</th>
<th>Maximum</th>
<th>Unit</th>
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<tbody>
<tr>
<td>Viewing Angle</td>
<td>(V)θ</td>
<td>---</td>
<td>160</td>
<td>---</td>
<td>---</td>
<td>Deg</td>
</tr>
<tr>
<td></td>
<td>(H)φ</td>
<td>---</td>
<td>160</td>
<td>---</td>
<td>---</td>
<td>Deg</td>
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<tr>
<td>Contrast Ratio</td>
<td>CR</td>
<td>Dark</td>
<td>2000:1</td>
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<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Response Time</td>
<td>T Rise</td>
<td>---</td>
<td>10</td>
<td>---</td>
<td>µs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>T Fall</td>
<td>---</td>
<td>10</td>
<td>---</td>
<td>µs</td>
<td></td>
</tr>
<tr>
<td>Display with 50% Checkboard Brightness</td>
<td></td>
<td></td>
<td>70</td>
<td>80</td>
<td>---</td>
<td>Nits</td>
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### OLED Life Time

<table>
<thead>
<tr>
<th>Item</th>
<th>Conditions</th>
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<th>Remark</th>
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</thead>
<tbody>
<tr>
<td>Operating Life Time</td>
<td>Ta=25°C. Initial checkboard brightness, 50%</td>
<td>50,000 Hours</td>
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</tbody>
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**Specification**

Version: 4

Date: 25/07/2017

Revision: 

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