Designed to meet the backlighting needs of LED TVs and room lighting applications, Molex’s new Flexi-Mate™ family of connectors is the first of its kind on the market to provide a full range of both board-to-board and wire-to-board solutions.

Molex’s Flexi-Mate design was chosen above other designs because it met the needs for flexibility and space savings. The Flexi-Mate system includes board-to-board connectors that are used to snap together small panels containing LED lights. The system also includes a wire-to-board option to connect the LED boards to the main power board; a terminating connector is also available that is used as a type of shorting device to complete an open-loop signal.

The system is flexible in the sense that it provides designers several different interconnect options. The 3.00mm (.118”) mated height also meets the needs of TV and room lighting units that continue to strive for thinner designs.

Other key features of the Flexi-Mate family include a dual-contact terminal design for secure electrical contact, space-saving positive side locks for wire-to-board connections, and guide features that help facilitate mating and protect terminals during mating and unmating.

### FEATURES AND BENEFITS

<table>
<thead>
<tr>
<th>Features</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Board-to-board, wire-to-board and terminator options</td>
<td>• Meets needs of LED TVs and lighting equipment that use interconnecting LED panels</td>
</tr>
<tr>
<td>• Positive side latches on crimp housing</td>
<td>• Space savings and easy mating/unmating</td>
</tr>
<tr>
<td>• Dual-contact wire-to-board and board-to-board terminal design</td>
<td>• Ensures reliable electrical contact</td>
</tr>
<tr>
<td>• Mating guide features on PCB connectors</td>
<td>• Help facilitate mating and provide smooth insertion</td>
</tr>
<tr>
<td>• Shrouded contacts</td>
<td>• Protects contact area</td>
</tr>
</tbody>
</table>

### ADDITIONAL PRODUCT FEATURES

- **503473-0200*/503471-0200** Wire-to-Board
- **503469-0200*/503471-0200** Board-to-Board
- **503469-0200*/503474-0200** Terminator Receptacle

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*Flexi-Mate™ 3.70mm (.146”) Pitch Board-to-Board and Wire-to-Board Connector System, Two Circuits*

- 503471 PCB Receptacle
- 503469 PCB Plug
- 503474 Terminator Receptacle
- 503473 Crimp Housing
- 503485 Crimp Terminal

[Diagram of Flexi-Mate System]

*Flexi-Mate™ 3.70mm pitch, Board-to-Board and Wire-to-Board System*

[Diagram of LED application example]
SPECIFICATIONS

Reference Information
• Packaging: Header (Embossed tape);
  Housing (Bag); Terminal (Reel)
• Designed In: mm
• RoHS: Yes
• Halogen Free: Contact regional Product Manager
• Glow Wire Compliant: No

Electrical
• Voltage (max.): 500V
• Current (max.): 2.0A max.
• Contact Resistance: 40 milliohms max.
• Dielectric Withstanding Voltage: 1500V AC
• Insulation Resistance: 1,000 Megohms min.

Mechanical
• Durability (min.):
  503471/503469: 15 cycles
  503471/503473: 15 cycles
  503469/503474: 5 cycles

Physical
• Housing: 503471/503469
  (Glass-filled Polyamide), White
  503474/503473 (Polyester), White
• Flammability: UL 94V-0
• Contact: Phosphor Bronze
• Plating:
  Contact Area — Tin
  Solder Tail Area — Tin
  Underplating — Nickel
• Operating Temperature: -40 to +85 °C

MARKETS AND APPLICATIONS

• LED TVs
• LED 3D TVs
• Edge-lit LED BLU TVs
• LCD panels
• Track lighting for rooms
• Any application requiring space savings in
  width dimension area

ORDERING INFORMATION

Crimp Terminal

<table>
<thead>
<tr>
<th>Order No.</th>
<th>Plating</th>
<th>Wire Gauge</th>
<th>Insulation Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>503485-0800</td>
<td>Tin</td>
<td>AWG #28-28</td>
<td>0.93-1.14mm (.037-.045”)</td>
</tr>
</tbody>
</table>

Crimp Housing

<table>
<thead>
<tr>
<th>Order No.</th>
<th>Circuit Size</th>
</tr>
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<tbody>
<tr>
<td>503473-0200</td>
<td>2</td>
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</tbody>
</table>

Right Angle PCB Receptacle

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<thead>
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Right Angle PCB Plug

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<td>2</td>
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</table>

Terminator Receptacle

<table>
<thead>
<tr>
<th>Order No.</th>
<th>Circuit Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>503474-0200</td>
<td>2</td>
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</table>

www.molex.com/link/fl eximate.html

Flexi-Mate™ 3.70mm (.146”) Pitch Board-to-
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