molex®

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.

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

FEATURES AND BENEFITS

Features

- Board-to-board, wire-to-board and terminator options
- Positive side latches on crimp housing
- Dual-contact wire-to-board and board-to-board terminal design
- Mating guide features on PCB connectors
- Shrouded contacts

Benefits

- Meets needs of LED TVs and lighting equipment that use interconnecting LED panels
- Space savings and easy mating/unmating
- Ensures reliable electrical contact
- Help facilitate mating and provide smooth insertion
- Protects contact area
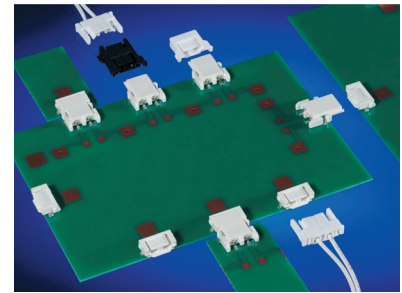
Flexi-Mate™ 3.70mm pitch, Board-to-Board and Wire-to-Board System
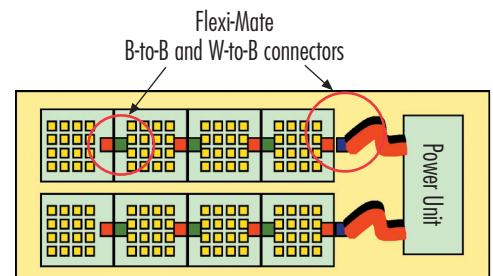
ADDITIONAL PRODUCT FEATURES
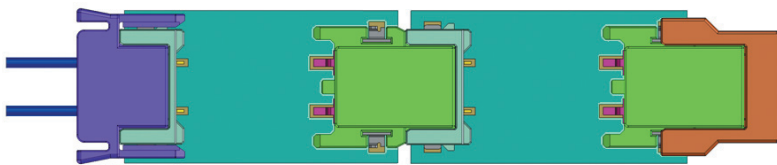
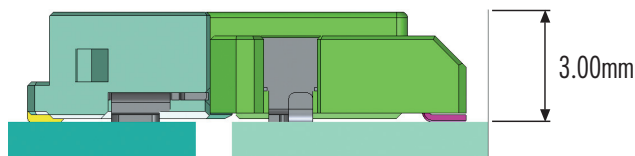503473-0200/
503471-0200

Wire-to-Board

503469-0200/
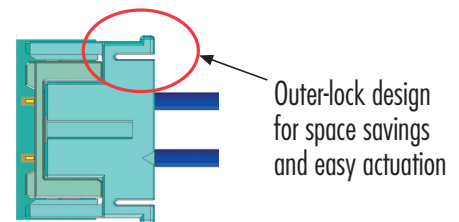503471-0200

Board-to-Board

503469-0200/
503474-0200

Terminator Receptacle

Flexi-Mate
B-to-B and W-to-B connectors

Power Unit

LED application example

3.00mm

Low-profile design

Outer-lock design for space savings and easy actuation

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

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
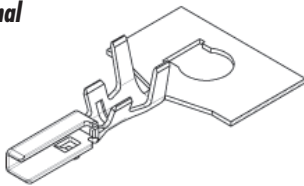503473 Crimp Housing
503485 Crimp Terminal

MARKETS AND APPLICATIONS

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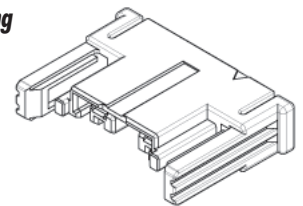- Any application requiring space savings in width dimension area
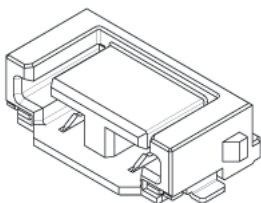
ORDERING INFORMATION

Crimp Terminal

Order No.	Plating	Wire Gauge	Insulation Diameter
503485-0000	Tin	AWG #26-28	0.93-1.14mm (.037-.045")

Crimp Housing

Order No.	Circuit Size
503473-0200	2

Right Angle PCB Receptacle

Order No.	Circuit Size
503471-0200	2

Right Angle PCB Plug
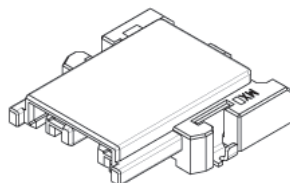
Order No.	Circuit Size
503469-0200	2

Terminator Receptacle
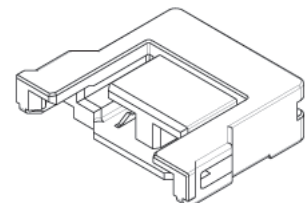
Order No.	Circuit Size
503474-0200	2

molex®

www.molex.com/link/fleximate.html