

Designed to meet the needs of thin-screen LED TVs, Molex's new IllumiMate™ family of wire-to-board connectors offers the narrowest width of any similar connector system, along with cost and performance advantages.

LED TVs are one of the hottest new items in the Consumer Electronics world. The technology is so new that consumers are still learning what it is. Simply put, an LED TV is actually an LCD TV. The difference is an LED TV uses light-emitting diodes (LEDs) for backlighting, whereas original-generation LCD TVs use CCFL (cold cathode fluorescent) backlighting. The advantages of LED vs. CCFL backlighting include better resolution, a slimmer design and lower power consumption.

The LED lights for an LED TV can be located on a bus-bar across the middle of the screen or, as in some of the newest models, on the edge of the panel in order to avoid shadowing. When placed on the edge, space savings becomes more critical in order to achieve popular narrow screen designs.

Molex introduced its IllumiMate™ system to some of the world's leading LED TV makers to meet their needs for a narrow-width low-power connector for LED-to-main-board applications. Another requirement was a positive lock to ensure secure mating.

Molex's IllumiMate family provides the narrowest width of any competing wire-to-board product for LED TV applications. IllumiMate also offers the most robust positive locking design. The main competing version has an inner-lock friction design that is difficult to unmate. Molex addressed this issue with its dual-positive-lock design that includes locking windows for insertion visibility and a user-friendly latch.

Other key features of the IllumiMate family include a dual-contact terminal design for secure electrical contact, wide solder tabs for secure PCB retention, and polarizing ribs between circuits in the header that facilitate mating and protect contacts. The manufacturing techniques used to produce IllumiMate also provide cost advantages over competition. In addition, the connectors are also halogen-free to meet global environmental requirements.

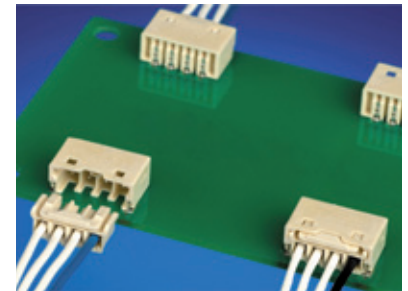
The four-circuit version of IllumiMate covered in this release is the first of several lines that will be introduced under the IllumiMate name. All of them share certain key characteristics with some distinguishing features to meet various applications.

IllumiMate™ 2.00mm (.079") Pitch Wire-to-Board Connector System, Narrow Width, Four Circuits, SMT, Positive Lock

104046 Right Angle Header

104047 Housing

104466 Terminal



IllumiMate™ 2.00mm pitch, four-circuit SMT connector system

FEATURES AND BENEFITS

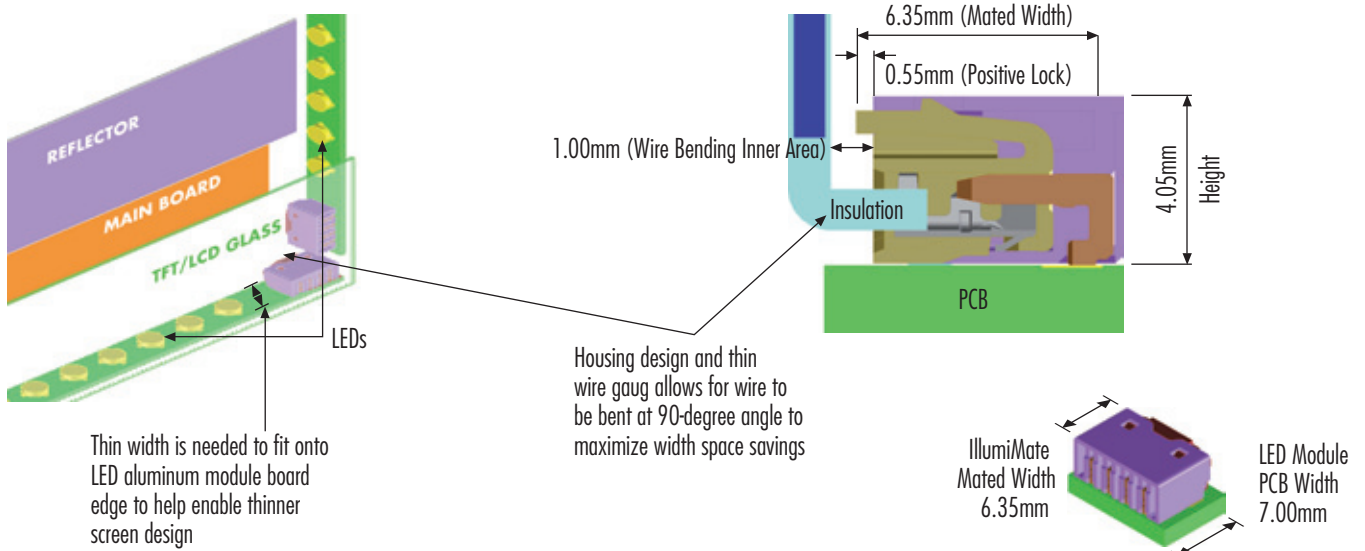
Features

- Ultra-narrow mated width (6.35mm)
- Inner dual-positive-lock design
- LCP material
- Dual contact terminal design
- Polarizing ribs inside header
- Fully shrouded housing

Benefits

- Meets needs of thin-screen LED TVs and other compact applications
- Space savings and secure mating retention
- Withstands high-temperature environments
- Added electrical contact assurance
- Facilitate mating and provide pin protection
- Provides protection to terminal contact area

ADDITIONAL PRODUCT FEATURES



SPECIFICATIONS

Reference Information

- Packaging: Header (Embossed tape); Housing (Bag); Terminal (Reel)
- UL File No.: E29179
- Designed In: mm
- RoHS: Yes
- Halogen Free: Yes
- Glow Wire Compliant: No

Electrical

- Voltage (max.): 250V AC (rms)/DC
- Current (max.): 1.0A max.
- Contact Resistance: 20 milliohms max.
- Dielectric Withstanding Voltage: 1500V AC
- Insulation Resistance: 1,000 Megohms min.

Mechanical

- Contact Insertion Force: 1.0 kg.f max.
- Contact Retention to Housing: 1.0 kg.f min.
- PCB Retention Force: 5.0 kg.f min.
- Durability (min.): 30 cycles

Physical

- Housing: Glass-filled LCP, Natural color
- Contact: Phosphor Bronze
- Plating:
 - Contact Area — Tin
 - Solder Tail Area — Tin
 - Underplating — Nickel
- Operating Temperature: -25 to +130 °C

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MARKETS AND APPLICATIONS

- LED TVs
- LED 3D TVs
- Edge-lit LED BLU TVs
- LCD Panels
- Plasma Display Panels
- Any application requiring space savings in width dimension area



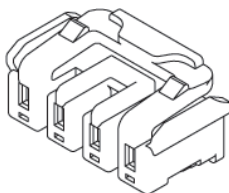
ORDERING INFORMATION

Crimp Terminal



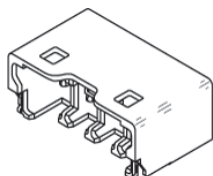
Order No.	Plating	Wire Gauge	Insulation Diameter
104466-8002	Tin	AWG #28-30	1.00mm max.

Housing



Order No.	Circuit Size
104047-0490	4

Right Angle SMT Header



Order No.	Circuit Size
104046-0417	4

molex

www.molex.com/link/illuminate.html