



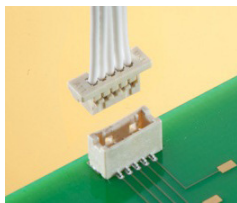
**The IllumiMate™ microminiature wire-to-board system offers the smallest sizes and widest variety of low-power voltage options and mating configurations of any similar system for applications such as LED TVs and PC monitors**

Molex's IllumiMate wire-to-board connector system addresses the needs of the fast-changing electronics industry by providing a single system with different mating and voltage configurations. This allows makers to design various models around a single connector type and footprint pattern.

The main difference between the IllumiMate 1.25mm and 1.00mm pitch versions is size and voltage requirements. The IllumiMate 1.0 family saves on average about 50% of space compared to IllumiMate 1.25. This was demanded by customers to meet thinner screen designs. The IllumiMate 1.0 family also offers lower voltage options than the IllumiMate 1.25 range to help achieve lower power consumption.

Both the IllumiMate 1.25 and 1.00mm families share certain key features such as: positive and friction locks for secure latching; guide ribs to facilitate mating and prevent housing movement; front solder tabs for strong PCB retention; and a dual-contact terminal design for electrical contact assurance.

The combination of small size and various circuit size and voltage options provide unique advantages and a single footprint design for any application that may include various models with different functionalities.



1.00mm pitch



1.25mm pitch

## Features and Benefits

Ultra-narrow width	Meets needs of thin-screen LED TVs and compact applications
Inner positive and friction locks	Ensures secure mating assurance and space savings
Dual-contact-terminal design	Enables added electrical contact assurance
Wide variety of mating and voltage/current configurations	Provides protection to terminal contact area
Fully-shrouded housing	Meets various design needs
LCP material	Withstands high-temperature environments

## Markets and Applications

### Consumer Electronics

- LED TV
- Mobile Games

### Personal Computers

- Desktop LED monitor
- Notebook
- Tablet



PC LED Monitor

### Medical

- Diagnostic equipment
- Radiology equipment



LED TV



Medical

## IllumiMate™ 1.00 and 1.25mm Pitch Wire-to- Board Connector System, SMT, Narrow Width, Positive Lock

### 1.00mm Pitch System

- 104127** Header, 4 and 5 Circuits
- 104128** Housing, 4 and 5 Circuits
- 104539** Female Terminal
- 104193** Right-Angle Header, 6 Circuits
- 104192** Housing, 6 Circuits
- 104596** Female Terminal
- 104127** Vertical Header, 6 Circuits
- 104128** Housing, 6 Circuits
- 104141** Vertical Header, 10 Circuits
- 104142** Housing, 10 Circuits

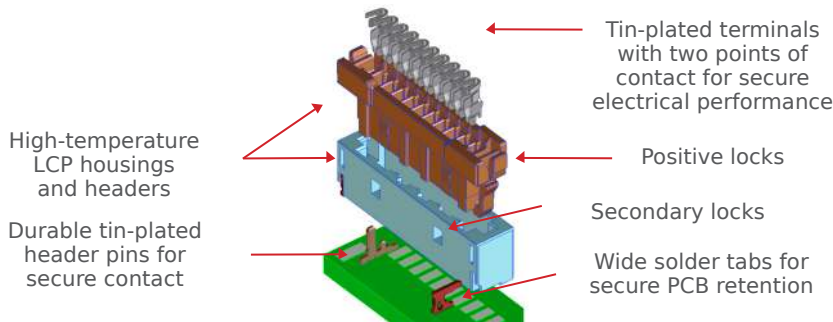
### 1.25mm Pitch System

- 104130** Vertical Header, 3 and 5 Circuits
- 104131** Housing, 3 and 5 Circuits
- 104539** Female Terminal
- 104099** Vertical Header, 10 Circuits
- 104105** Housing, 10 Circuits
- 104521** Female Terminal
- 502381** Female Terminal
- 104122** Vertical Header, 6 Circuits
- 104121** Housing, 6 Circuits
- 104521** Female Terminal
- 104086** Right-Angle Header, 4 Circuits
- 104085** Housing, 4 Circuits
- 104078** Right-Angle Header, 6 Circuits
- 104077** Housing, 6 Circuits
- 104505** Female Terminal
- 104091** Right-Angle Header, 5-25 Circuits
- 104092** Housing, 5-25 Circuits

## Additional Product Features

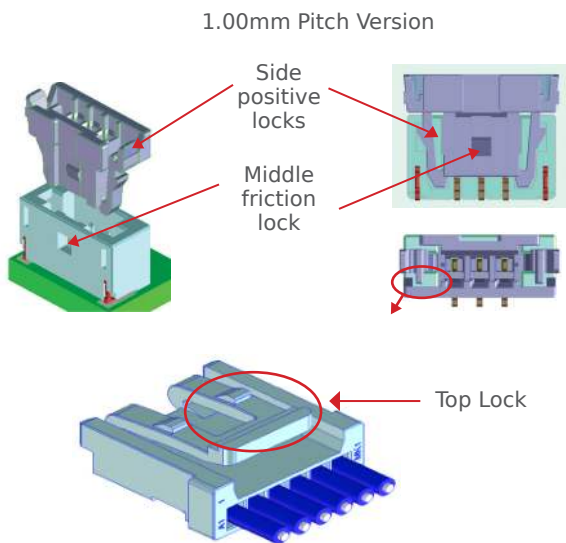
**IllumiMate™  
1.00 and 1.25mm  
Pitch Wire-to-  
Board Connector  
System, SMT,  
Narrow Width,  
Positive Lock**

### Robust Component Offering

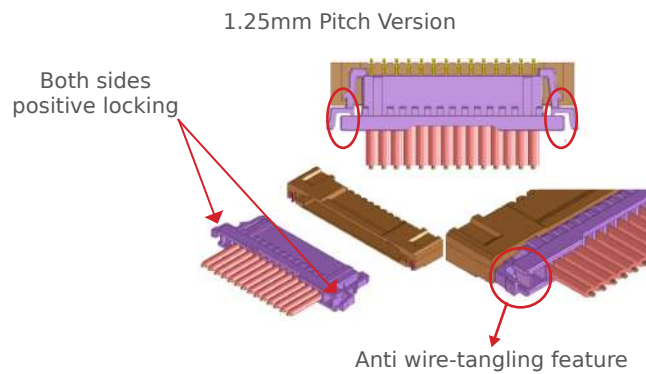


Both pitch versions offer similar component variations and features (1.00mm pitch version shown above)

### Secure Positive Locking

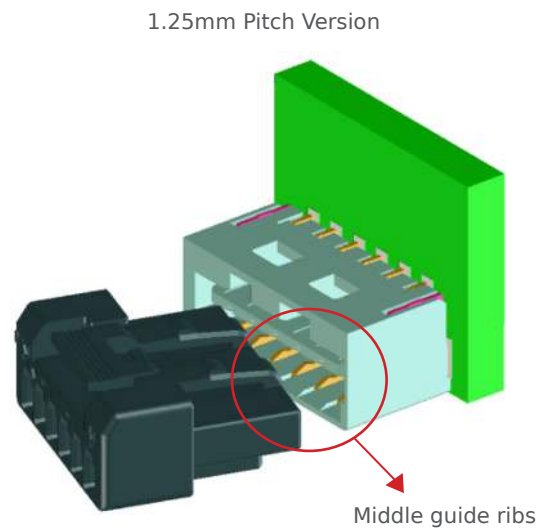
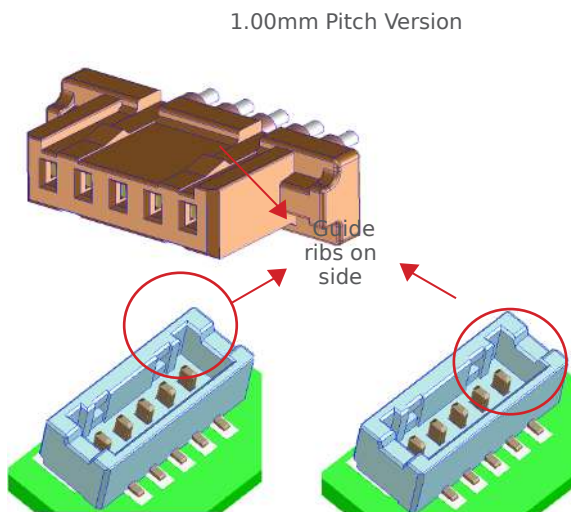


Right-angle six-circuit version



Both pitch versions offer similar locking features including side positive locks with anti wire-tangling feature and middle friction lock with window for visible mating assurance

### Polarization Guide Ribs



Polarization guide ribs on each version prevent improper mating, protect pins and prevent the connector from moving from side to side

The 1.00mm pitch version has guide ribs located on the housing ends, while the 1.25mm pitch version has them more towards the middle

## Dimensional and Specification Comparison

### Dimensional Comparison of Molex IllumiMate™ 1.00mm and 1.25mm Pitch Versions

Type	Circuit	Mated Height Comparison (mm)					
		Molex IllumiMate 1.00mm Pitch			Molex IllumiMate 1.25 Pitch		
		H	W	L	H	W	L
Right Angle	14/15 Circuits*	3.40	6.75	20.30	4.35	8.00	22.25
Vertical	5	4.90	2.90	7.04	5.90	2.90	9.80
	10	5.90	2.90	13.65	7.80	4.30	16.0

\*Note: 14 circuit version dimensions shown for IllumiMate 1.0 versus 15-circuit for IllumiMate 1.25

The IllumiMate 1.0 family offers space savings in height, width and length up to 50% for most mated pairs versus IllumiMate 1.25

### Specification Comparison of Molex IllumiMate™ 1.00mm and 1.25mm Pitch Versions

Specification	IllumiMate 1.0	IllumiMate 1.25
Sub Families	5	5
Circuit sizes (Vertical)	4, 5, 6, 10	3, 5, 10
Circuit sizes (Right Angle)	6	4, 5, 6, 10, 15, 20, 25
Current options	1.0A, 1.5A	1.0A, 1.5A
Voltage options	60V, 100V, 150V	200V, 300V
Wire Gauge (AWG)	30, 32	26-32

The IllumiMate 1.0 family offers the same amperage options as the IllumiMate 1.25 family, but different options in other areas such as voltage, circuit sizes and wire gauge

## Specifications/Ordering Information

### REFERENCE INFORMATION

Packaging: Headers (Tray); Housings (Bag); Terminals (Reel)  
 Designed In: mm  
 RoHS Compliant: Yes  
 Low Halogen: Yes

### ELECTRICAL

Current: 1.0A, 1.5A (See ordering information for further details)  
 Voltage: (See ordering Information)  
 Contact Resistance: 20 milliohms Max.  
 Dielectric Withstanding Voltage: (See ordering information)

### MECHANICAL

Durability: 30 cycles

### PHYSICAL

Terminal: Phosphor Bronze  
 Housing/Header: LCP, glass-filled  
 Header Pin: Phosphor Bronze  
 Plating: Tin  
 Operating Temperature: -25 to 130°C

**IllumiMate™**  
**1.00 and 1.25mm**  
**Pitch Wire-to-**  
**Board Connector**  
**System, SMT,**  
**Narrow Width,**  
**Positive Lock**

### 1.00mm Pitch Type Ordering Information

Order No.			Wire Range	Circuit Size	Configuration	Plating	Current	Voltage	Dielectric Withstanding Voltage
Header	Housing	Terminal							
104127-0410	104128-0400	104539-8002	30, 32 AWG	4	Vertical	Tin	1.0A	60V	600V AC
104127-0510	104128-0500		30, 32 AWG	5					
104127-0620	104128-0610	104539-8002	30, 32 AWG	6	Vertical		1.0A	100V	900V AC
104193-0610	104192-0600	104596-8003	30, 32 AWG	6	Right Angle		1.0A	100V	900V AC
104141-1010	104142-1000	104539-8002	30, 32 AWG	10	Vertical		1.5A	150V	900V AC

### 1.25mm Pitch Type Ordering Information

Order No.			Wire Range	Circuit Size	Configuration	Plating	Current	Voltage	Dielectric Withstanding Voltage
Header	Housing	Terminal							
104130-0310	104131-0300	104539-8102	28, 30, 32 AWG	3	Vertical	Tin	1.0A	300V	1,200V AC
104130-0510	104131-0500			5					
104099-1017	104105-1000	104521-6001	26, 28, 32 AWG	10	Right Angle		1.5A	200V	1,000V AC
		502381-0000	26, 28 AWG						
104086-0410	104085-0400	104505-8003	28 AWG	4	Right Angle		1.0A	200V	900V AC
104078-0610	104077-0600			6					
104091-0520	104092-0500	104521-6001	26, 28, 32 AWG	5	Right Angle	1.5A	200V	1,000V AC	
104091-1020	104092-1000			10					
104091-1520	104092-1500			15					
104091-2020	104092-2000			20					
104091-2520	104092-2500			25					