



**Molex's Slim Type FFC/FPC connectors offer the lowest-profile and narrowest width of any similar version in the market for applications such as thin LED TVs.**

Molex's 0.50mm pitch Slim Type FFC/FPC connectors were developed for the industry's latest and thinnest LED TVs. The recent trend for LED TVs has been toward making the screen thinner while at the same time increasing functionality for more brilliant images. Molex calls this new line of connectors "Slim Type" because they are thin in both height and width. At 1.50mm height and 4.40mm width, this new series is the smallest of its kind today in the industry.

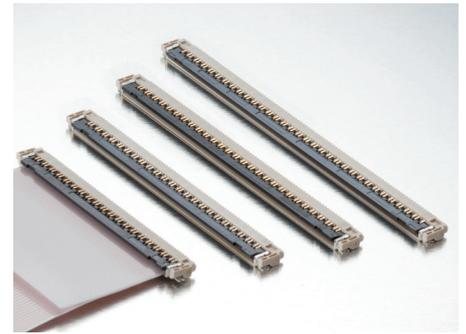
The original application for this series is in connecting the source board to the time control board on the LED panel side of a TV application. In this area, high circuit size connectors are needed to carry large signal capacity in order to achieve more dynamic screen quality. Molex's slim FPC design fits into these thinner LED TVs while leaving more space for increased functionality.

The series includes a robust actuator design that helps prevent damage caused by extensive testing, cycling or rough handling. This new zero insertion force (ZIF) series also includes a more durable type of contact material to provide added signal reliability. The high-temperature housing meets ROHS and low halogen environmental requirements. The series is available in four different circuit sizes ranging from 56 to 96, with the 56-circuit version footprint compatible with certain competitive versions.

For additional information visit: [www.molex.com/product/smt\\_ffc-fpc.html](http://www.molex.com/product/smt_ffc-fpc.html)

**FFC/FPC Connectors, 0.50mm Pitch, Front Flip, SMT, Bottom Contact, 1.50mm Height, Slim Type**

- 104112** 56-Circuits
- 104075** 68-Circuits
- 104114** 80-Circuits
- 104083** 96-Circuits



Slim Type 0.50mm Pitch FFC/FPC Connectors

**Features and Benefits**

Slim height and width	Space savings
56 to 96 circuit size range	Meets various pin-count needs of latest LED flat panel TVs
Gold-plated terminals	Reliable and durable signal contact
Low Halogen compliant	Meets global environmental standards
High temperature housing and actuator	Withstands high-temperature environments
Robust actuator design	Protects actuator against damage during testing and usage

**Applications**

**Flat Panel Displays**

- LED/3D TV Panel Source Board
- OLED TV Panel Source Board and Time Control Boards
- PDP Display Panels

**Other Markets**

- Automotive
- Medical



OLED TV



3D TV



LED TV

## Specifications

### REFERENCE INFORMATION

Packaging: Embossed  
 Use With: 0.30mm thick FPC  
 Designed In: mm  
 RoHS: Yes  
 Halogen Free: Yes

### ELECTRICAL

Voltage (max.): 50V  
 Current (max.): 0.5A  
 Contact Resistance:  
 40 milliohms max.  
 Dielectric Withstanding Voltage:  
 250V AC for 1 minute  
 Insulation Resistance:  
 50 Megohms min.

### MECHANICAL

Durability (min.): 20

### PHYSICAL

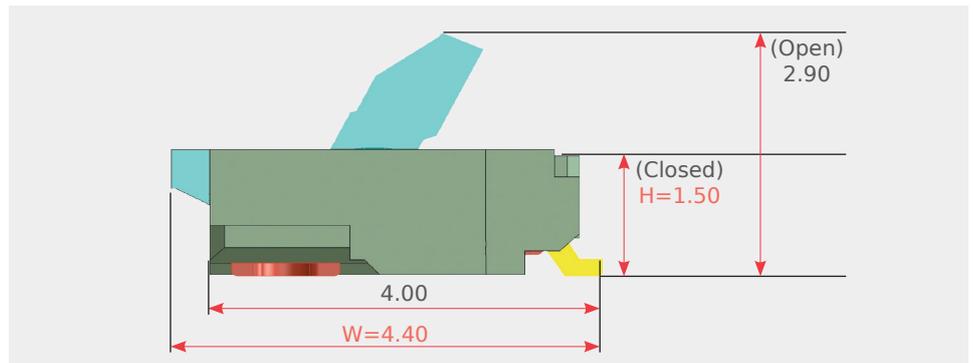
Housing: Glass-filled LCP, Natural  
 Actuator: Glass-filled PPS, Black  
 Flammability: UL 94V-0  
 Contact: Phosphor Bronze  
 Plating:  
 Contact Area — Gold  
 Solder Tail Area — Gold  
 Underplating — Nickel  
 Temperature: -25 - +85°C

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 Bottom Contact,  
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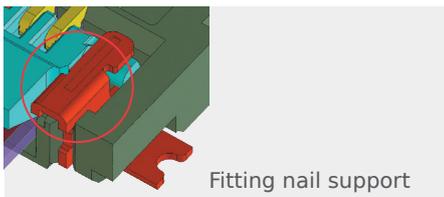
## Additional Product Features

### Dimensional Overview



Dimensions in mm

### Robust Actuator Features



Fitting nail support



Main terminal support



Sub-terminal support

Several support features built into the connector design help provide protection to the actuator. Especially in large circuit sizes, the actuator can be damaged from rough handling or repeated testing. These support features help ensure consistent performance over repeat cycling.

## Ordering Information

### Connector

Order No.	Circuits	Height	Width
104112-5617	56	1.50	4.40
104075-6817	68		
104114-8017	80		
104083-9617	96		

Dimensions in mm

[www.molex.com/product/smt\\_ffc-fpc.html](http://www.molex.com/product/smt_ffc-fpc.html)