

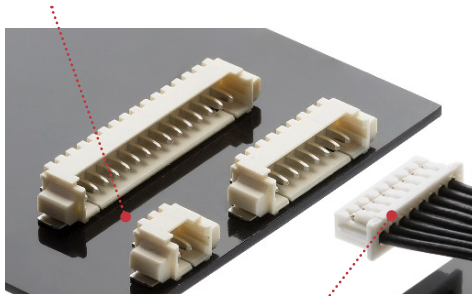
# PicoBlade Connector System

**molex**

**High-performance PicoBlade Wire-to-Board and Wire-to-Wire Connectors feature both tin- and gold-plated versions for superior flexibility, reliability and durability across a wide variety of applications and industries**

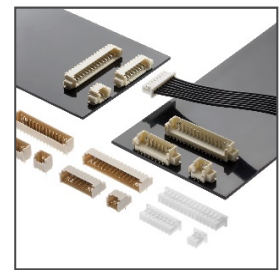
## Features and Advantages

**Compact and small 1.25mm pitch**  
**W-to-W/W-to-B connectors**  
 Provides space savings



**Friction lock**  
 Provides secure mating retention

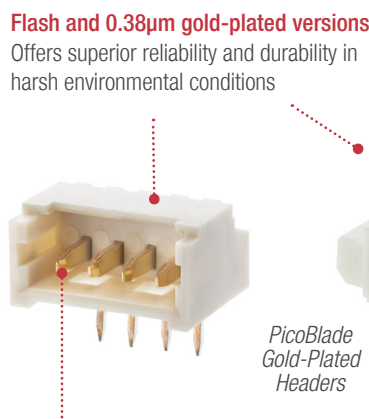
**W-to-B and W-to-W solutions with through-hole and SMT headers in tin- and gold-plated versions, straight and right-angle orientations**  
 Offers design flexibility



PicoBlade 1.25mm connectors with Straight and Right-Angle Headers



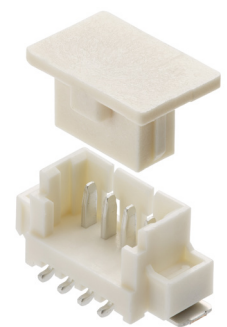
*PicoBlade Gold-Plated Terminal*



*PicoBlade Gold-Plated Headers*

**Two-point contact design**  
 Assures a reliable electrical connection under low-current, low-voltage and high-vibration conditions

**Flash and 0.38µm gold-plated versions**  
 Offers superior reliability and durability in harsh environmental conditions



**Optional vacuum caps for SMT headers**  
 Allows high-volume placement using industry-standard pick up nozzles  
 \*Tin plated only

## Markets and Applications

### Automotive

- In-vehicle comfort and infotainment
- Body control modules
- Shifters
- Steering wheels
- Instrument clusters
- Combination switches

### Industrial

- Smart meters
- Security systems
- Drones
- Electric test equipment

### Data Communications

- Servers

### Healthcare

- Hearing aids
- Medical monitors

### Consumer

- Smart TVs
- Set top boxes
- Air conditioners
- White goods
- Gaming machines
- Laser/Inkjet printers
- Computer screens



Automotive



Smart TV



Air Conditioners



Drone

# PicoBlade Connector System



## Specifications

### REFERENCE INFORMATION

Packaging: Reel (Terminal); Embossed (SMT Header Assembly); Tray (Through-Hole Header Assembly), Bag (Receptacle Housing)  
Designed In: Millimeters  
RoHS: Yes

### PHYSICAL

Housing:  
Receptacle – PBT (51021)  
Header – PA66 (53047/53048 /through hole), PA46 (53261/53398 /SMT)

Contact: Phosphor, Bronze for crimp terminal, through-hole header and SMT header  
Plating:  
Contact Area — Gold plated 0.38µm for crimp terminal, through-hole header and SMT headers — Tin plated for crimp terminal, through-hole header and SMT header  
Underplating — Nickel for Gold-plated crimp terminals, headers and Tin-plated 53261/53398 SMT headers  
Operating Temperatures: -40 to +105°C (53398/53261/53048 gold-plated version) -40 to +85°C (53047/53048 tin-plated version)

### MECHANICAL

Crimp Terminal Insertion Force (max.): 4.9N  
Crimp Terminal Retention to Housing (min.): 4.9N  
Mating Force(1st): 19.6N (2 Circuit)  
Unmating Force (1st): 2.8N (2 Circuit)  
Durability: 30 Cycles

### ELECTRICAL

Voltage (max.): 125V  
Current (max.): 2.5A at 2 Circuit/26 AWG  
Contact Resistance (max.): 20 milliohms  
Dielectric Withstanding Voltage: 250V AC  
Insulation Resistance (min.): 100 Megaohms

\*Crimp terminal(Female), WTW terminal(Male), Header pin and Header nail.

Wire Size	Wire-to-Board			Wire-to-Wire		
	Housing + Terminal (female)	MATES TO	PCB Header	Housing + Terminal (female)	MATES TO	Housing + Terminal (male)
	51021 + 50058 50079	MATES TO	53261 53048	51021 + 50058 50079	MATES TO	51047 + 50125 50133
	2-circuit	8-circuit	15-circuit	2-circuit	6-circuit	10-circuit
26AWG	2.5A	1.5A	1.0A	2.5A	2.0A	1.0A
28AWG	2.0A	1.5A	1.0A	2.0A	1.5A	1.0A
30AWG	1.5A	1.0A	1.0A	1.5A	1.0A	1.0A
32AWG	1.5A	1.0A	0.8A	1.3A	1.0A	0.8A

(1) Values are for REFERENCE ONLY.

(2) Current deratings are based on not exceeding 30°C temperature rise.

(3) Temperature Rise is measured in barrel area of crimp terminal.

(4) PCB trace design can greatly affect temperature rise results.

(5) Data is for all circuits powered.

[www.molex.com/product/picoblade.html](http://www.molex.com/product/picoblade.html)

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