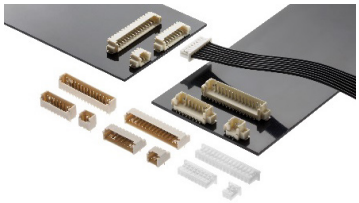
DATASHEET

PicoBlade Connector System ›

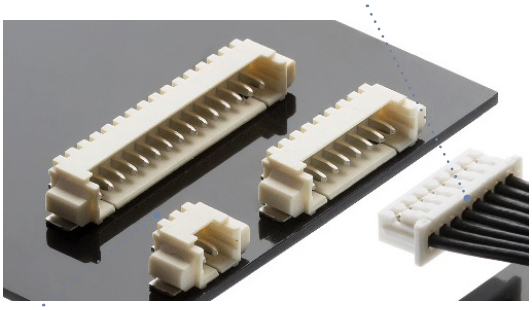


PicoBlade 1.25mm connectors with Straight and Right-Angle Headers

New SMT header vacuum caps (7 to 15 circuit) and Gold Plated versions have been added to Molex's PicoBlade Wire-to-Board Connector, a best seller with two header options, affording superior reliability and durability across a wide variety of applications and industries.

FEATURES AND ADVANTAGES

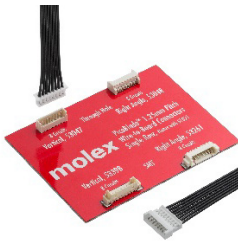
Friction lock
Provides secure mating retention



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

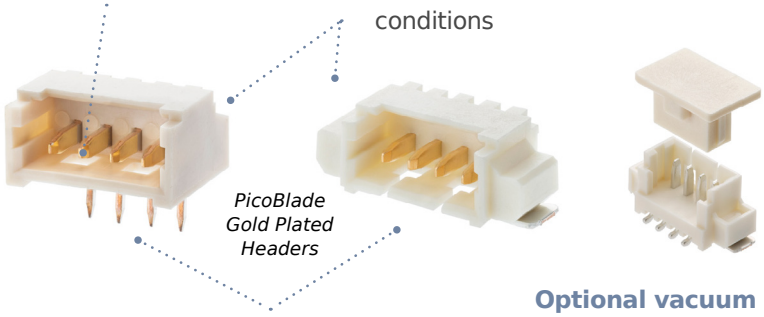
PicoBlade Gold Plated Terminal and Header

W-to-B and W-to-W solutions with through-hole and SMT headers in straight and right-angle orientations
Offers design flexibility



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

Gold Plated versions
Offers superior reliability and durability in harsh environmental conditions



PicoBlade Gold Plated Headers

SMT and through-hole options for right-angle headers
Offers design flexibility

Optional vacuum caps for SMT headers (2 to 15 circuits)
Allows high-volume placement using industry-standard pick

MARKETS AND APPLICATIONS

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

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

Industrial
Smart meters
Security systems
Drones
Electric test equipment

Data Communications
Servers

Healthcare
Hearing aids
Medical monitors

Automotive

Smart TV

Air Conditioners

Drone

DATASHEET

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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 in flash 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)
-40 to +85˚C (53047/53048)

MECHANICAL

Crimp Terminal Insertion Force (max.): 4.9N
Crimp Terminal Retention to Housing (min.): 4.9N
Mating Force(1st): 19.6N (2 Circuit W to B)
24.5N (2 Circuit W to W)
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

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	53398 53261 53047 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	2.0A
28AWG	2.0A	1.5A	1.0A	2.0A	1.5A	1.5A
30AWG	1.5A	1.0A	1.0A	1.5A	1.0A	1.0A
32AWG	1.5A	1.0A	0.8A	1.3A	1.0A	1.0A

(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.

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PicoBlade Connector System ›

ORDERING INFORMATION

Series/ Part No.	Component	Circuits	Plating	Description	Color
50058-8001/8100	Crimp Terminal, Female	-	Tin	28 to 32 AWG	-
50079-8001/8100		-		26 to 28 AWG	-
50125-8000/8100	Crimp Terminal, male	-	Tin	Wire-to-Wire, 26 to 28 AWG	-
50133-8000/8100		-		Wire-to-Wire, 28 to 32 AWG	-
51021-xx00	Housing	2 to 15 and 17	-	Wire-to-Wire/Wire-to-Board	Natural
51047-xx00	Plug Housing	2 to 10	Tin	Wire-to-Wire	
53047-xx10	Header	2 to 15		Through hole, Vertical	
53048-xx10		2 to 15		Through hole, Right-Angle	
53261-xx71		2 to 15 and 17	Tin	SMT, Right-Angle	
53398-xx71		2 to 15	Tin	SMT, Vertical	
53398-xx67	Header with vacuum cap	2 to 6	-	SMT, Vertical	

*For 53398, optional vacuum cap : 2 to 6 Circuit/Natural
*Please contact Molex for available color in circuit size

www.molex.com/product/picoblade.html

Order No. 987651-3691 Rev. 6 APN/0k/GF/2022.10