

Palladium Nickel, a proven, technologically advanced plating material, provides space-saving, power and signal Picoflex® headers and connectors with superior wear resistance, ductility and thermal stability and lessens the impact to customers of rising precious metal commodity prices

The Picoflex® family is a versatile, high-density 1.27mm wire-to-board connection system designed for power and signal ribbon-cable applications where space is at a premium. Picoflex headers and connectors provide highly reliable connections with high-retention forces in a diverse range of applications including solar, weighing systems, vehicle infotainment, computer peripherals, telecommunications and portable heart monitors.

To lessen the impact to the customer of market-driven precious-metal price increases, Molex is launching Picoflex headers and a connector plated with Palladium Nickel (PdNi) and a gold (Au) flash.

Palladium Nickel is a durable, technologically advanced plating material. In today's economic climate, PdNi-plated connectors are being widely adopted as a replacement for gold-plated versions, owing to the superior deposit characteristics of PdNi over gold and lower, more stable raw material costs.

Picoflex headers with PdNi+Au flash plating have successfully passed all mechanical, electrical and environmental testing and are being offered in addition to already existing tin- and gold-plated options. For additional information visit: www.molex.com/product/ribbon/picoflex.html

Picoflex® Palladium Nickel (PdNi) + Gold (Au) Flash Plated Connector and Headers

- 90325 Low Profile, Vertical, Through-hole Header
- 90779 Low Profile, High Temperature, Vertical, Through-hole Header
- 90814 Vertical SMT Header
- 90816 Vertical Latched SMT Header
- 90327 Low Profile, IDT Connector

FEATURES AND BENEFITS

- Palladium Nickel (PdNi) plating
 - Harder than most gold deposits; excellent wear resistance properties
 - Greater resistance to corrosion; non-oxidizing
- Gold (Au) flash
 - Provides lubrication and surface wear resistance
 - Aesthetics; connectors are visually the same as gold plated versions

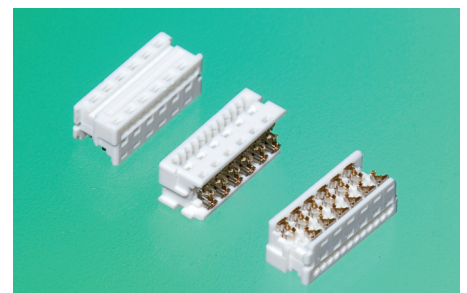
Picoflex® Headers and Connectors



Picoflex® Header and Cable Assembly



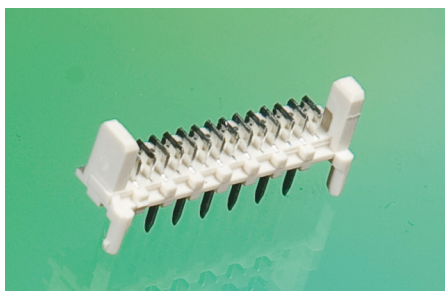
Series 90816



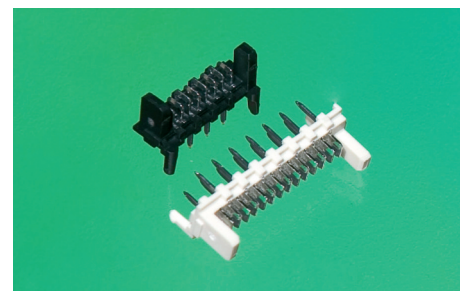
Series 90327



Series 90814



Series 90779



Series 90325

SPECIFICATIONS

Plating structure for Gold (Au) Versions

<p>Gold (1.27 microns) Lubrication, conductivity, wear resistance, corrosion resistance</p>
<p>Nickel (1.27 microns) Migration & Environmental barrier</p>
<p>Base Metal (Copper Alloy) Mechanical strength, elongation</p>

Plating structure for PdNi+Au Flash Versions

<p>Gold (0.05 microns) Lubrication, conductivity, wear resistance, corrosion resistance</p>
<p>PdNi (1.00 microns) Wear resistance, corrosion resistance</p>
<p>Nickel (1.27 microns) Migration & Environmental barrier</p>
<p>Base Metal (Copper Alloy) Mechanical strength, elongation</p>

1.05
microns
plating
material

Less Gold (Au) required to achieve same or better properties and less plating material required overall (1.27microns Au vs. 1.05 microns PdNi +Au flash)

MARKETS AND APPLICATIONS

- Industrial
 - Solar
 - Weighing Systems
 - Heating Systems
 - Security Devices
 - Access Controls
 - Industrial Lighting
 - Advertising Displays
 - Power Supplies
- Automotive
 - Car Stereo Systems
 - Navigation Systems
 - In Car Entertainment
 - Dashboard Applications
 - Air-conditioning Units
- Medical
 - Portable Heart Monitor
 - Patient Monitor
 - Blood Analyser
 - Testers
- Multimedia
 - CD Players
 - LCD Projector
 - Satellite Receivers
 - Televisions and Set Top Boxes
- Others
 - Office Equipment
 - Vending Machines
 - Smart Card Readers
 - Home Appliance
- Used across all markets where signal and power connections are required
- Target Accounts/ Customers
 - Distribution (Accounts for approx 75% of Molex business)
 - OEM



Security Systems



Medical Equipment



Vehicle Infotainment



Vending Machines



Office Equipment



Solar Applications

GENERAL SPECIFICATIONS

Reference Information
 Designed In: Millimeters
 RoHS: Yes
 Halogen Free: Yes

Electrical
 Voltage (max.): 250V DC
 Current (max.): 1.2A
 Contact Resistance: 15 milliohms max.
 Dielectric Withstanding Voltage: 750V rms
 Insulation Resistance: 1000 Megohms min.

Mechanical
 Contact Insertion Force:
 Tin (Sn) – 1.7N max.
 Gold (Au)/PdNi+Au flash – 1.1N max.
 Contact Retention to Housing: 7N
 Insertion Force to PCB: N/A
 Mating Force:
 Tin (Sn) – 1.7N max.
 Gold (Au)/PdNi+Au flash – 1.1N max.
 Unmating Force: Tin (Sn) – 0.25N
 Gold (Au)/ PdNi+Au flash – 0.25N

Physical
 Contact: Brass
 Plating: See Table Page 2
 Contact Area — Palladium Nickel (PdNi) with a gold (Au) flash
 Solder Tail Area — Tin (Sn) or Nickel (Ni)
 Underplating — Nickel (Ni),
 PCB Thickness:
 1.60±0.14mm
 Operating Temperature: -40 to +105°C

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- 90814 Vertical SMT Header
- 90816 Vertical Latched SMT Header
- 90327 Low Profile, IDT Connector

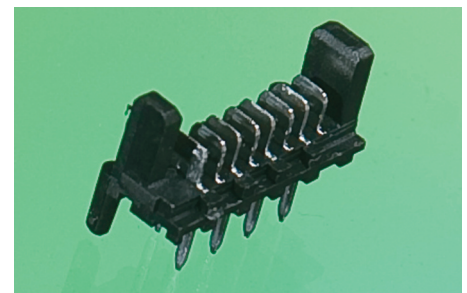
SPECIFICATIONS

Reference Information
 Packaging: Bag or Tube
 UL File No.: E29179
 CSA File No.: LR19980-181
 Glow Wire Compliant: No

Mechanical
 Durability: PdNi+Au flash – 100 cycles

Physical
 Housing: Polyester PBT 15% glass-filled to UL 94V-0, Black

90325 Low Profile, Vertical, Through-hole Header



ORDERING INFORMATION

Plating	Circuit Size	Bag	Circuit Size	Bag
1.00um PdNi + 0.05um Au	4	90325-4004	16	90325-4016
	6	90325-4006	18	90325-4018
	8	90325-4008	20	90325-4020
	10	90325-4010	22	90325-4022
	12	90325-4012	24	90325-4024
	14	90325-4014	26	90325-4026

Tin (Sn) and/or Gold (Au) plated options available. View Section G, MX10 Catalogue for ordering information

SPECIFICATIONS

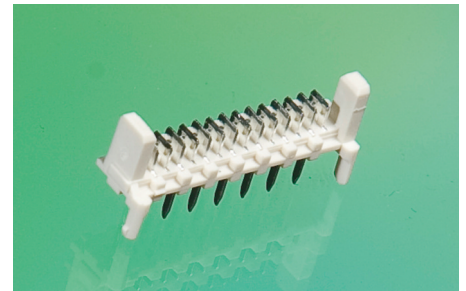
Reference Information
 Packaging: Bag or Tube
 UL File No.: N/A
 Glow Wire Compliant: Yes

Mechanical
 Durability : PdNi+Au flash – 100 cycles

Physical
 Housing: Nylon 46, Glass filled UL 94 V-0
 Natural (White)

90779

Low Profile, High Temperature, Vertical, Through-Hole Header



ORDERING INFORMATION

Plating	Circuit Size	Bag
1.00um PdNi + 0.05um Au	4	90779-5001
	6	90779-5002
	8	90779-5003
	10	90779-5004
	12	90779-5005
	14	90779-5006
	16	90779-5007
	18	90779-5008
	20	90779-5010
	22	90779-5011
	24	90779-5012
	26	90779-5013

Tin (Sn) and/or Gold (Au) plated options available. View Section G, MX10 Catalogue for ordering information

SPECIFICATIONS

Reference Information
 Packaging: Tube or Blister Pack Reel
 UL Approved: Yes
 Glow Wire Compliant: No

Mechanical
 Durability : PdNi+Au flash – 100 cycles

Physical
 Housing: Natural 30% glass-filled nylon,
 UL 94V-0

90814

Vertical SMT Header



ORDERING INFORMATION

Replace X with the combination of PCB peg option and polarizing side post height:

Plating	Circuit Size	Order No. Tube	Order No. Reel
1.00um PdNi + 0.05um Au	4	90814-7X04	90814-7X04
	6	90814-7X06	90814-7X06
	8	90814-7X08	90814-7X08
	10	90814-7X10	90814-7X10
	12	90814-7X12	90814-7X12
	14	90814-7X14	90814-7X14
	16	90814-7X16	90814-7X16
	18	90814-7X18	90814-7X18
	20	90814-7X20	90814-7X20
	22	90814-7X22	90814-7X22
	24	90814-7X24	90814-7X24
	26	90814-7X26	90814-7X26

(Reel) X =	PCB Pegs	Polarizing Side Post Height
2	Yes	6.40mm
5	No	
7	No	4.10mm
9	Yes	

(Tube) X =	PCB Pegs	Polarizing Side Post Height
0	Yes	6.40mm
3	No	
6	No	4.10mm
8	Yes	

Tin (Sn) and/or Gold (Au) plated options available. View Section G, MX10 Catalogue for ordering information

SPECIFICATIONS

Reference Information

Packaging: Tube or Blister Pack Reel
UL File No.: N/A
Glow Wire Compliant: No

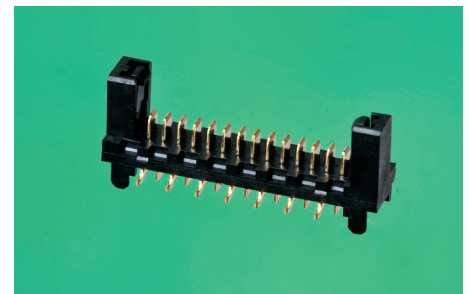
Physical

Housing: Black 30% glass filled polyphthalamide

Mechanical

Durability (min.): PdNi+Au flash – 5 cycles (using extraction tool) due to latches

90816 Vertical Latched SMT Header



ORDERING INFORMATION

Plating	Circuit Size	With PCB Pegs Tube	With PCB Pegs Reel	Without PCB Pegs Tube	Without PCB Pegs Reel
1.00um PdNi + 0.05um Au	4	90816-5004	N/A	90816-5304	
	6	90816-5006	90816-5206	90816-5306	90816-5506
	8	90816-5008	90816-5208	90816-5308	90816-5508
	10	90816-5010	90816-5210	90816-5310	90816-5510
	12	90816-5012	90816-5212	90816-5312	90816-5512
	14	90816-5014	90816-5214	90816-5314	90816-5514
	16	90816-5016	90816-5216	90816-5316	90816-5516
	18	90816-5018	90816-5218	90816-5318	90816-5518
	20	90816-5020	90816-5220	90816-5320	90816-5520
	22	90816-5022	90816-5222	90816-5322	90816-5522
	24	90816-5024	90816-5224	90816-5324	90816-5524
	26	90816-5026	90816-5226	90816-5326	90816-5526

Tin (Sn) and/or Gold (Au) plated options available. View Section G, MX10 Catalogue for ordering information

SPECIFICATIONS

Reference Information

Packaging: Bag
Reel option available - contact Molex
UL File No.: E29179
Glow Wire Compliant: No

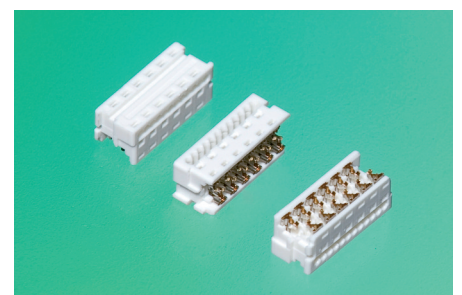
Mechanical

Durability: PdNi+Au flash – 100 cycles

Physical

Housing: Black 30% glass filled polyphthalamide
Solder Tail: No

90327 Low Profile, IDT Connector



ORDERING INFORMATION

Plating	Circuit Size	Bag
1.00um PdNi with 0.05um Au	4	90327-5304
	6	90327-5306
	8	90327-5308
	10	90327-5310
	12	90327-5312
	14	90327-5314
	16	90327-5316
	18	90327-5318
	20	90327-5320
	22	90327-5322
	24	90327-5324
	26	90327-5326

Tin (Sn) and/or Gold (Au) plated options available. View Section G, MX10 Catalogue for ordering information