



POGO Pin Connector Application introduce

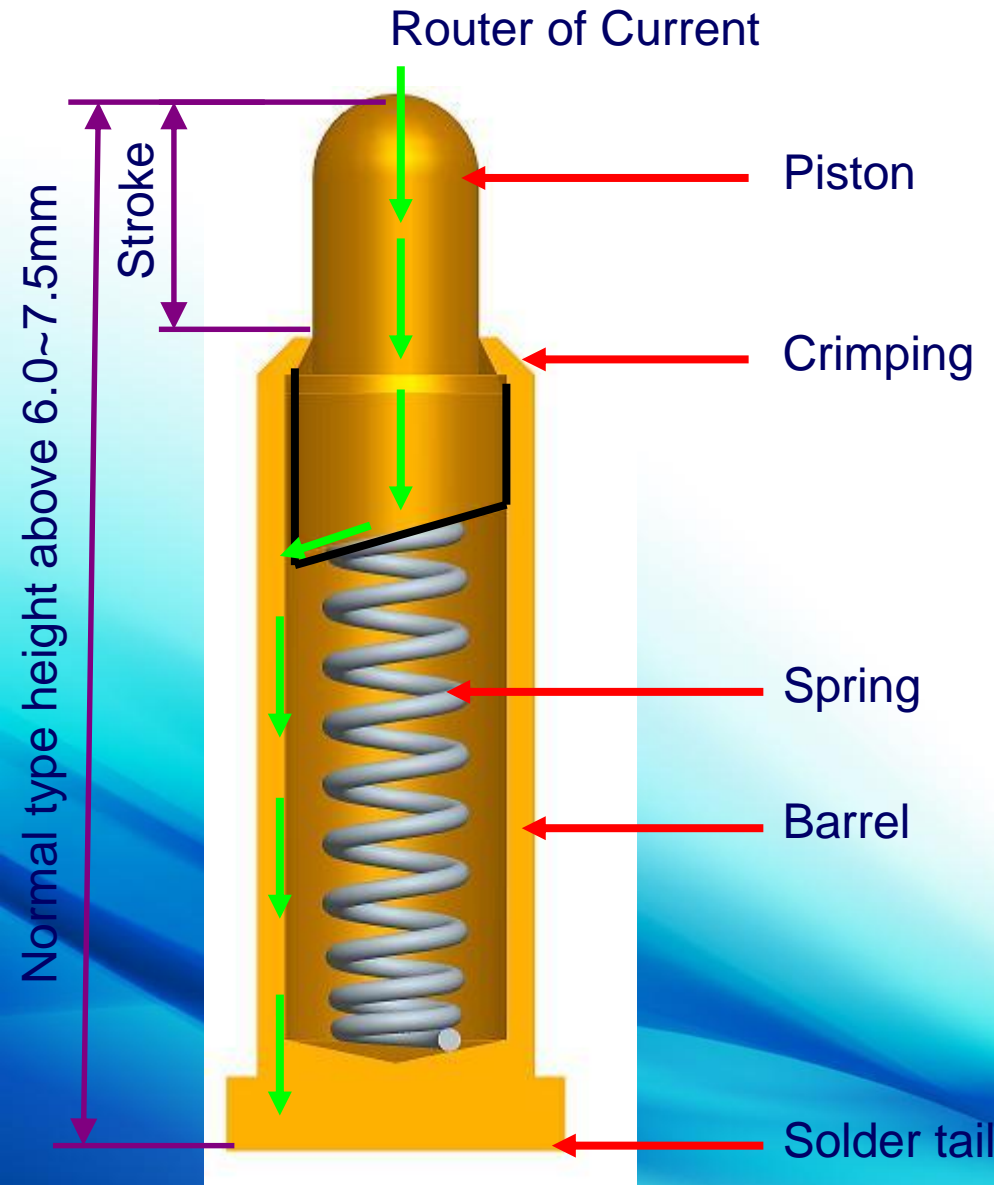


1. What is POGO Connector
2. POGO Pin structure
3. POGO Pin V.S Spring pin
4. CEN POGO Pin Conn Advantage
5. Standard product overview
6. What type pogo connector we can do
7. How to choose POGO Pin connector
8. CEN`s Reliability
9. CEN POGO Conn. Success story.
10. Conclusion



Pogo pin connector is a special type, In coming years, pogo pin connector is applied on Electronics device however consumer and commercial of worldwide own brand company. Such as N/B, Cell phone, Tablet PC, GPS and TV etc..., and because Microsoft Windows 8 system-"Surface", It's applied a POGO Pin connector to connect it's keyboard.





POGO Pin made by Piston, Barrel, Spring, It's connected with Piston and Barrel by Crimping and between them has a spring to become a Pogo pin.

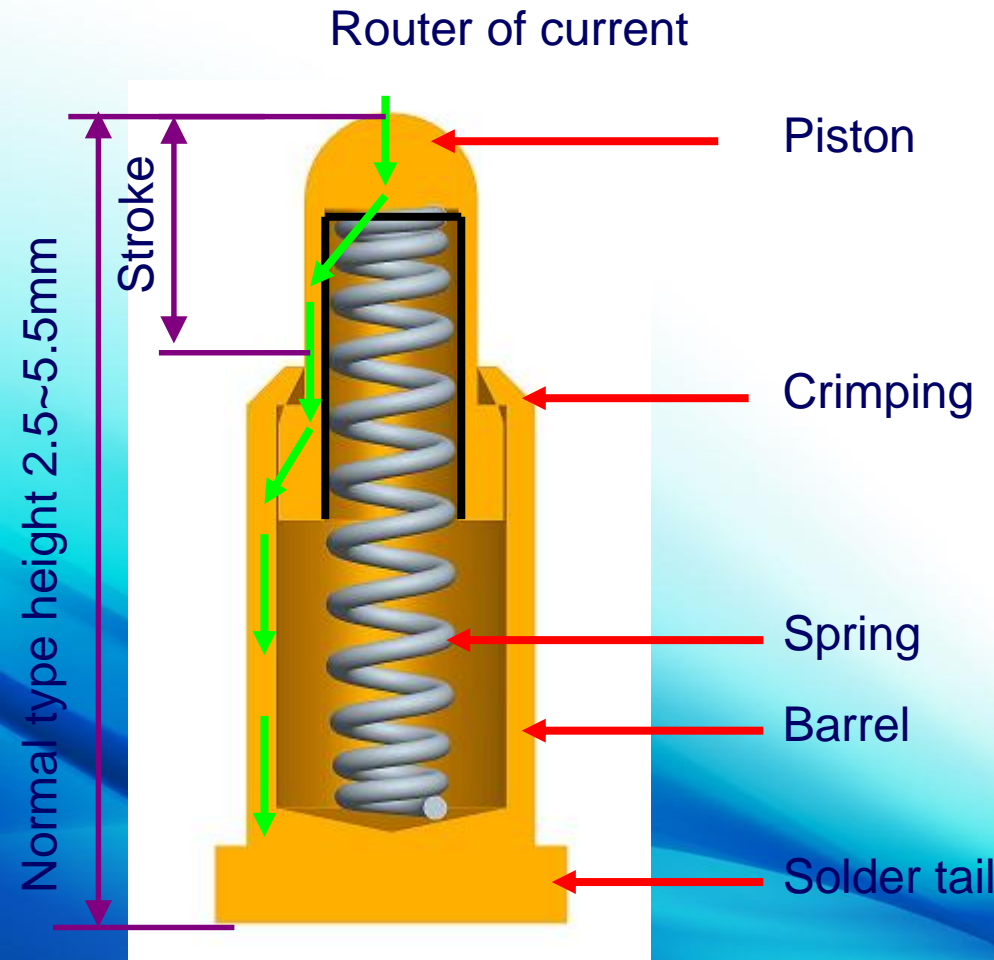
Pogo pin's slanted design is good helpful for current reliability at the connect inside the pogo pin.

Standard SPEC:

- Stroke: 1.0~2.2mm
- Force: 0.35~0.85N at ½ Stroke
- Current: 1~2A Max.
- Voltage: 250V
- Life Cycles: 10000 ~100000cycles
- Plating: 20u" Gold on Plunger
10u" Gold on Barrel

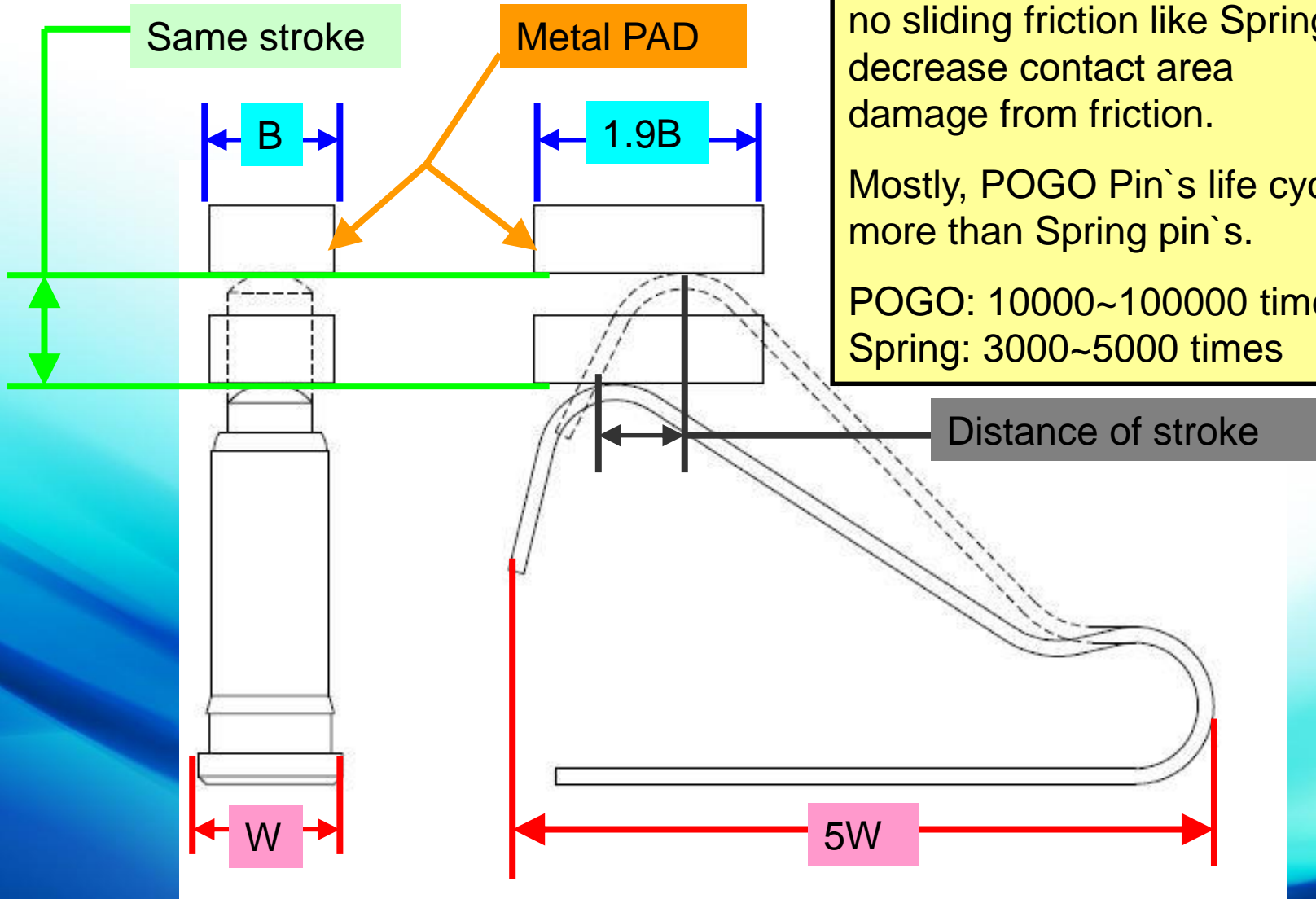


Hollow type POGO Pin design for low space. It has drilled a hole inner piston to hold spring, so it could make lower height pogo pin. But this design has a little bit problem of contact resistance, we only suggest apply it at low current or signal transmission.



Standard SPEC:

Stroke: 0.5~1.0mm
 Force: 0.35~0.85N at ½ Stroke
 Current: **1A Max.**
 Voltage: 250V
 Life Cycles: 10000 ~100000cycles
 Plating: 20u" Gold on Plunger
 10u" Gold on Barrel




Pogo pin`s advantage is reduced space in device design and it has no sliding friction like Spring pin, decrease contact area damage from friction.

Mostly, POGO Pin`s life cycles more than Spring pin`s.

POGO: 10000~100000 times
 Spring: 3000~5000 times

Notes:

1. Material:
 Housing: Thermoplastic UL 94V-0, Black
 Terminal: Copper Alloy
 Cap: Thermoplastic UL 94V-0, Black
2. Finish:
 Terminal: 20u" Min. Gold on Contact Area,
 10u" Min. Gold on Solder Tails, Both
 over 100u" Min. Nickel Under-plated Overall
3. Spring Pin Force: 0.6N ± 0.15N at Stroke 0.7mm
4. Stroke 1.4mm Max.
5. Order Information:

 T PE1-011 X 8-02 X 1

T: RoHS(for High Temperature)

Amount of Pins

- 2: 2 Pins
- s
- 9: 9 Pins
- A: 10 Pins
- s
- G: 16 Pins

Packing Option

- T: Tube
- 1: Tube + Cap
- 2: Reel + Cap

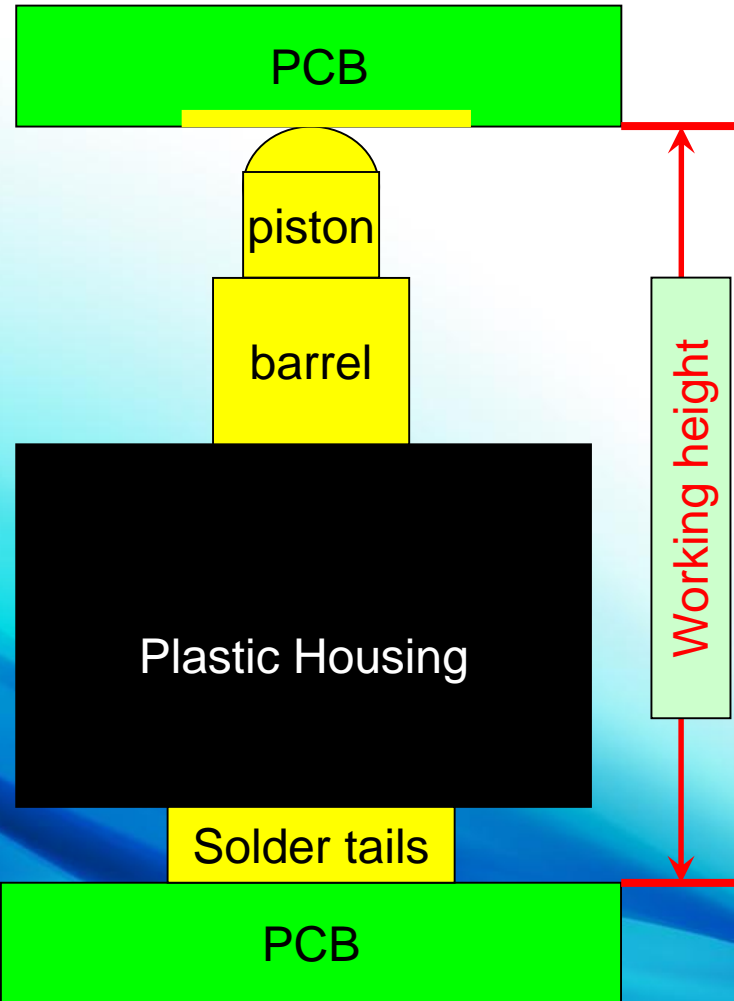
Piston plating

Barrel plating

Notice of spring force

Notice of full stroke

How to choose POGO Pin height



Pogo Pin stroke suggestion 0.5mm minimum
 The best suggestion is ½ stroke
 Do not over full stroke

Working height calculate:

- Largest working height:
Height of Pogo - minimum 0.5mm
- The best suggest:
Height of Pogo – The best suggestion ½ Stoke
- Do not over full stroke:
Height of Pogo - Full stoke

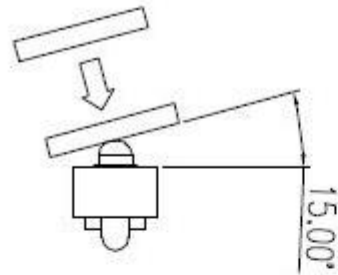
Ex-sample:

Height of POGO =10mm, Full stroke = 3mm

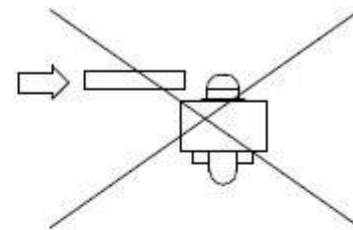
This pogo can be apply in working height at 9.5mm~7mm, The best position is 8.5mm



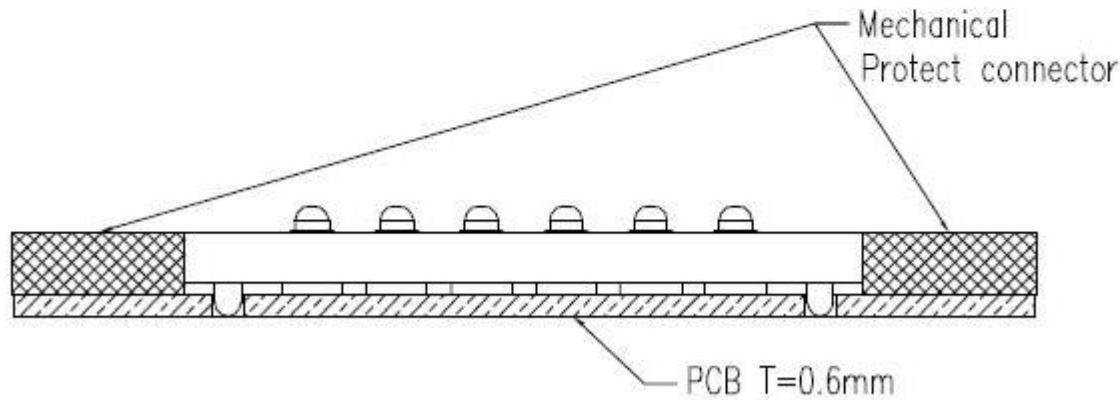
Design recommend



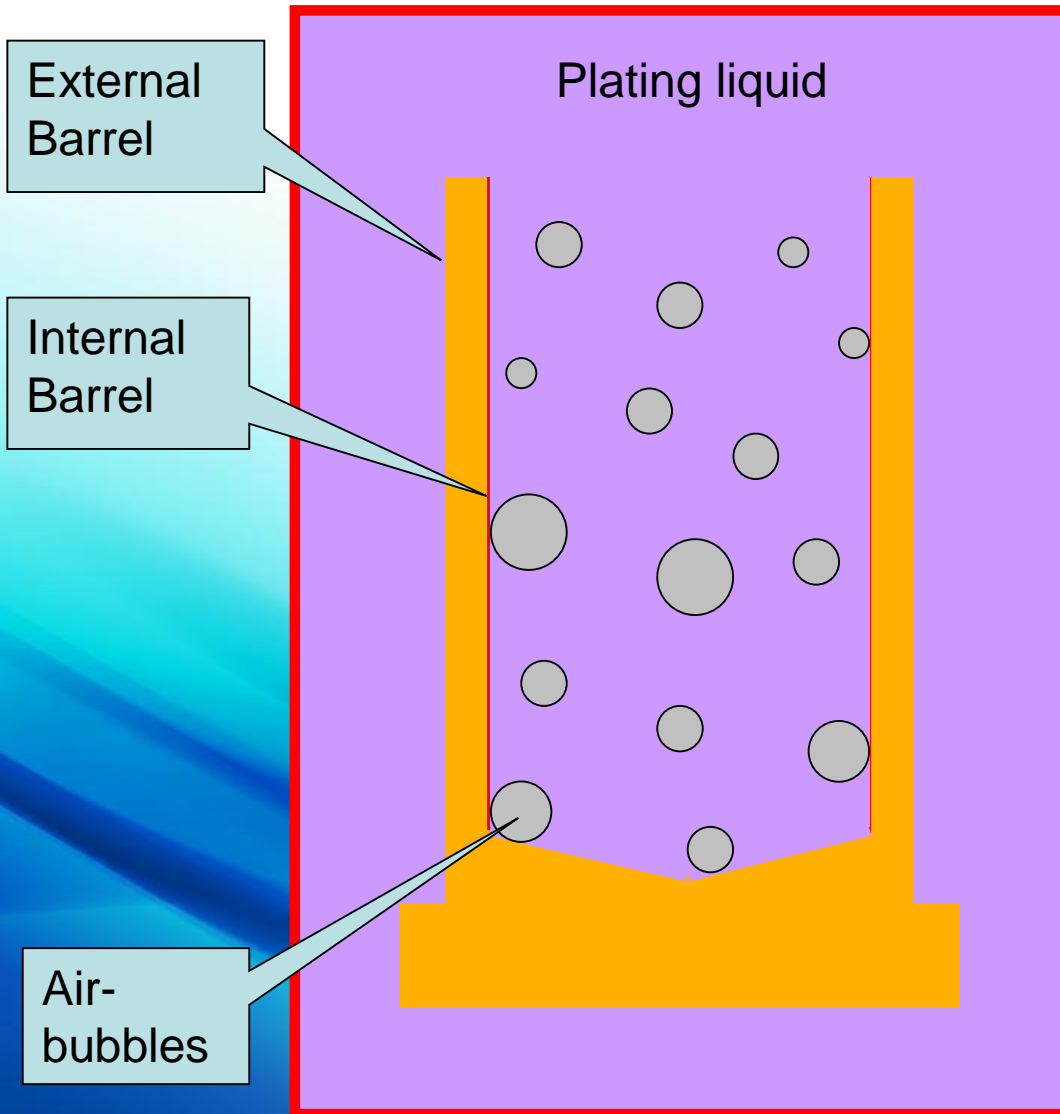
Do not less than 15 degree to mating pogo pin



Do not to mating pogo pin from sideway



Design Recommended



In the plating of blind hold process, The internal of barrel because lot of Air-bubbles make Gold can't plate on it in that bubbles area. We process by vacuum plating to exclude all the Air-bubbles in water. To ensure we can get good plating inner barrel side.

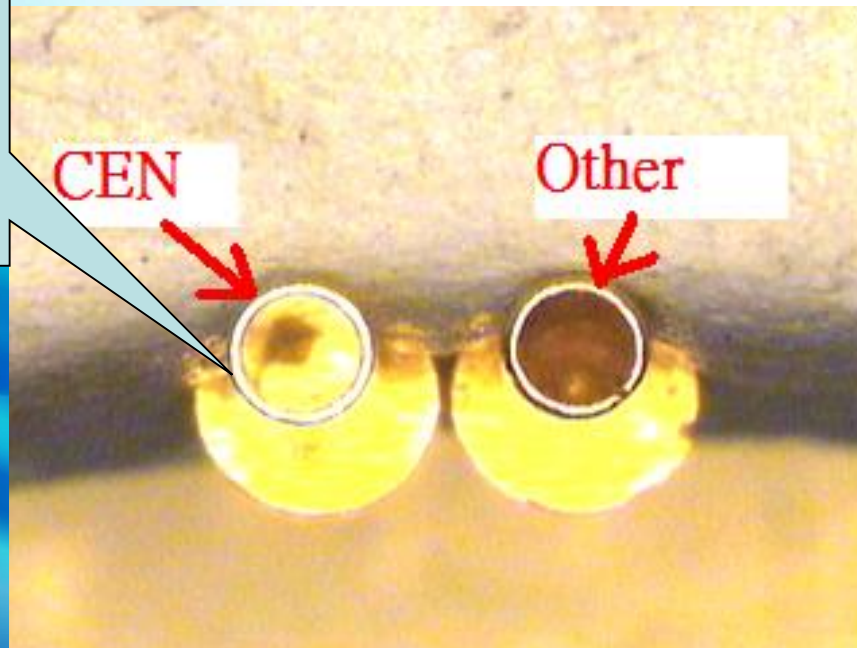
Strengths

- * Good Quality
- * Quality control
- * Middle price
- * In time service
- * Quickly reply

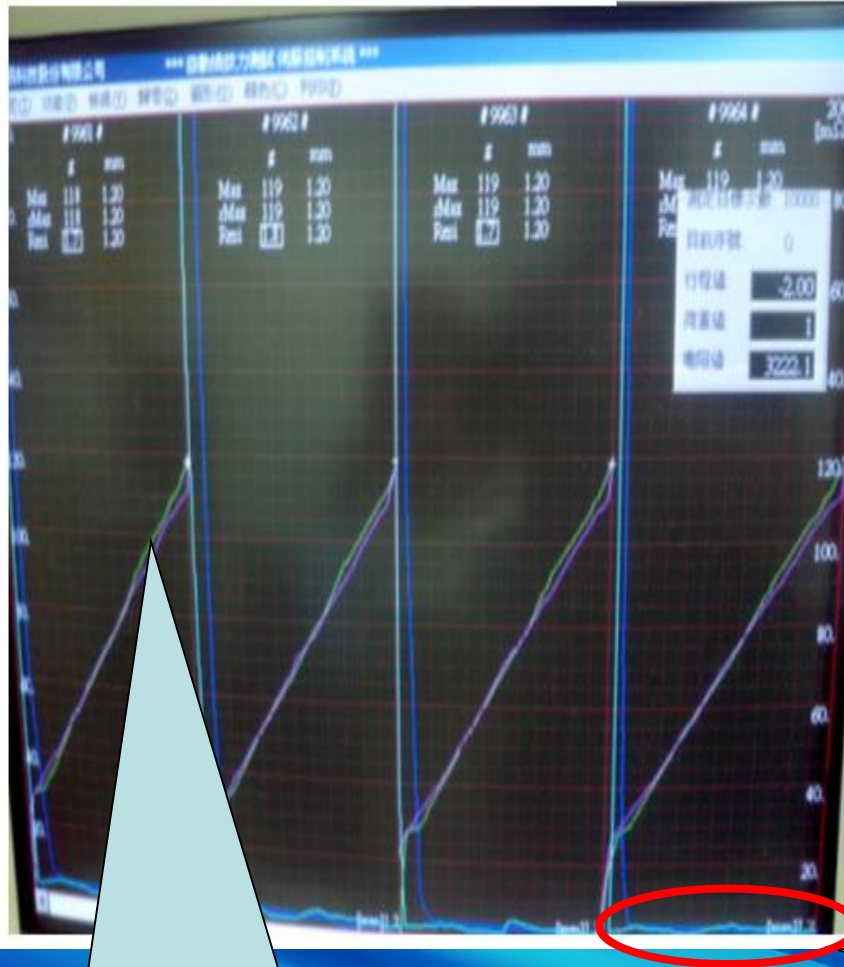
Weaknesses

- * Can't follow poor quality to reduce cost.
- * Preliminary POGO design will take a little bit time to test for good quality.

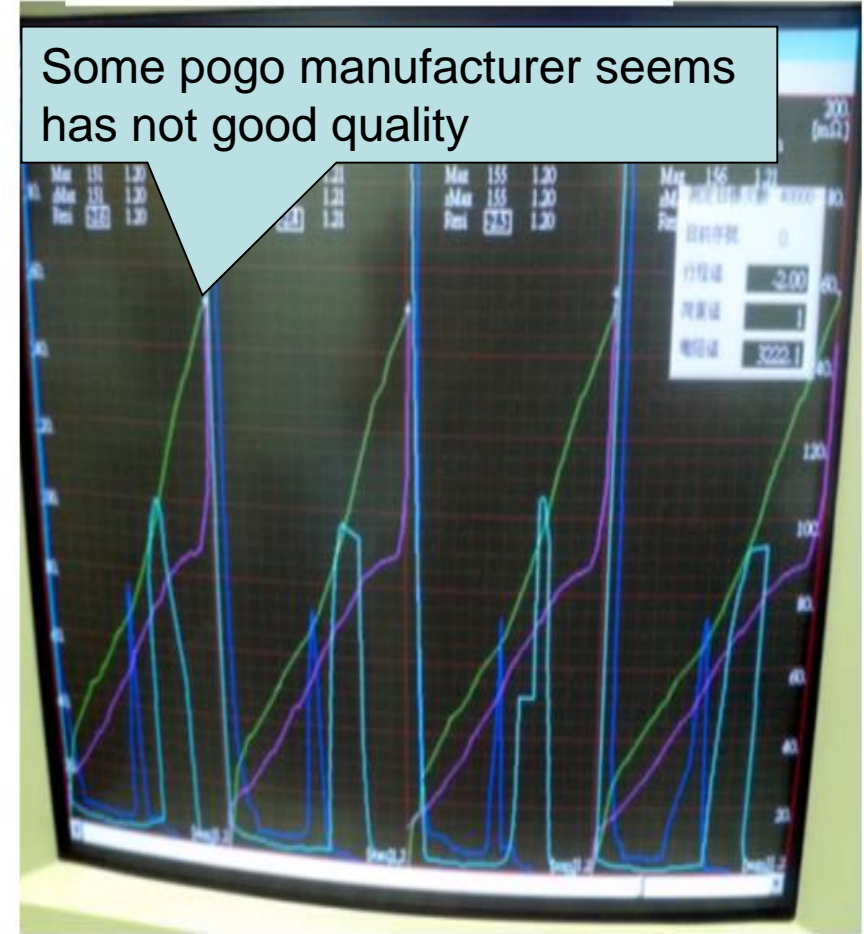
We focus on plating inner barrel, to make sure our product has good performance



CEN's POGO test curve



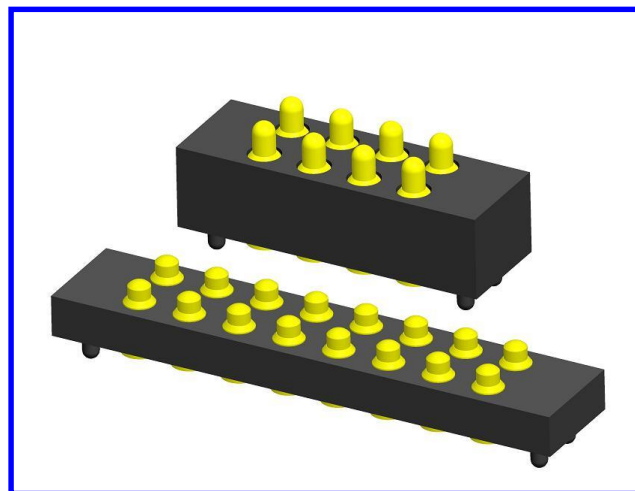
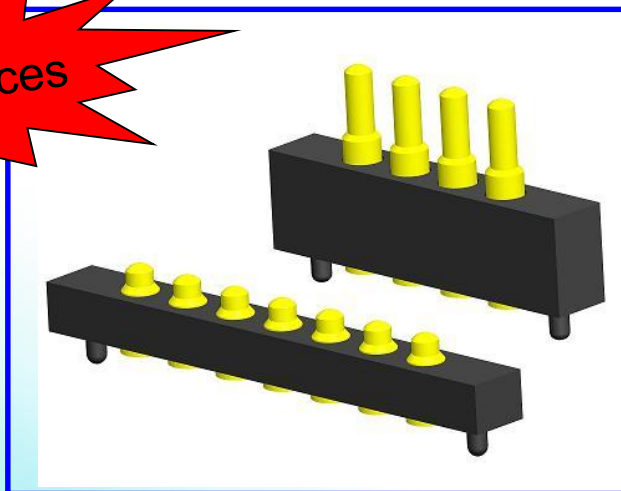
Other's POGO manufacturer test curve



Force curve as green and purple line, it's very smooth and stable

Contact resistance curve as blue line, after 0.2mm stroke will under 5mΩ and stable.

Over 150 choices

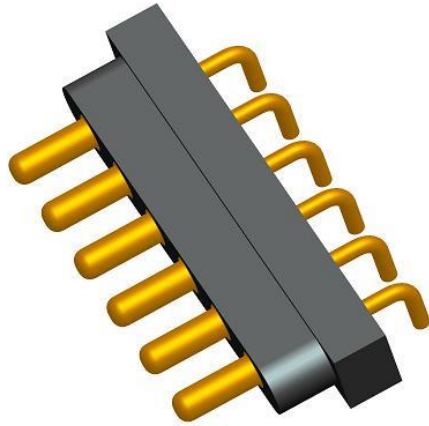


Type	Single row type	Dual row type
Pitch	2.54mm	2.54 x 2.54mm
Amount of pins	2~16Pins	4~32Pins
Pin height	3.5, 4.25, 4.5, 5.0, 5.5, 6.0, 6.5, 7.0, 7.5mm	3.5, 4.25, 4.5, 5.0, 5.5, 6.0, 6.5, 7.0, 7.5mm
Housing height	2.0, 2.8, 2.95, 4.0, 4.5, 4.8mm	2.0, 2.8, 2.95, 4.0, 4.5, 4.8mm
Stroke	1.0~2.2mm	1.0~2.2mm

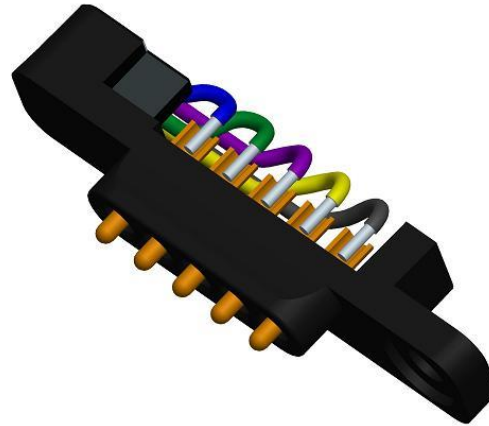
CEN have lot of experience in customized connector.
We can provide the best solution and service for our customer.



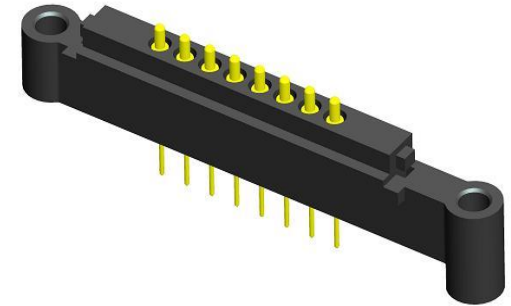
Right angle type



Cable solder type



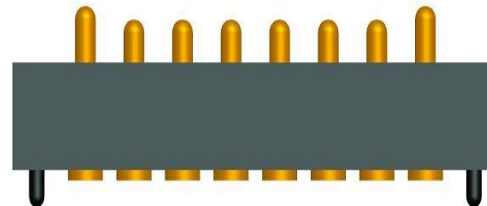
DIP type



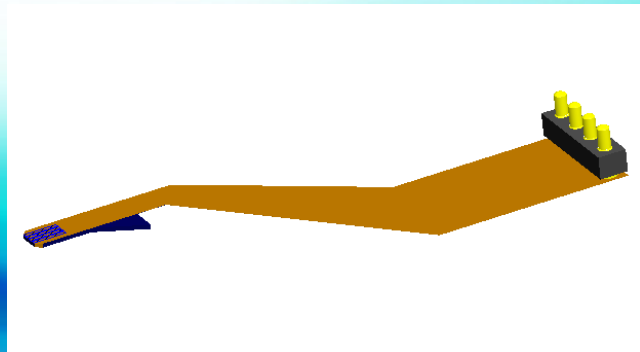
Longer stroke design

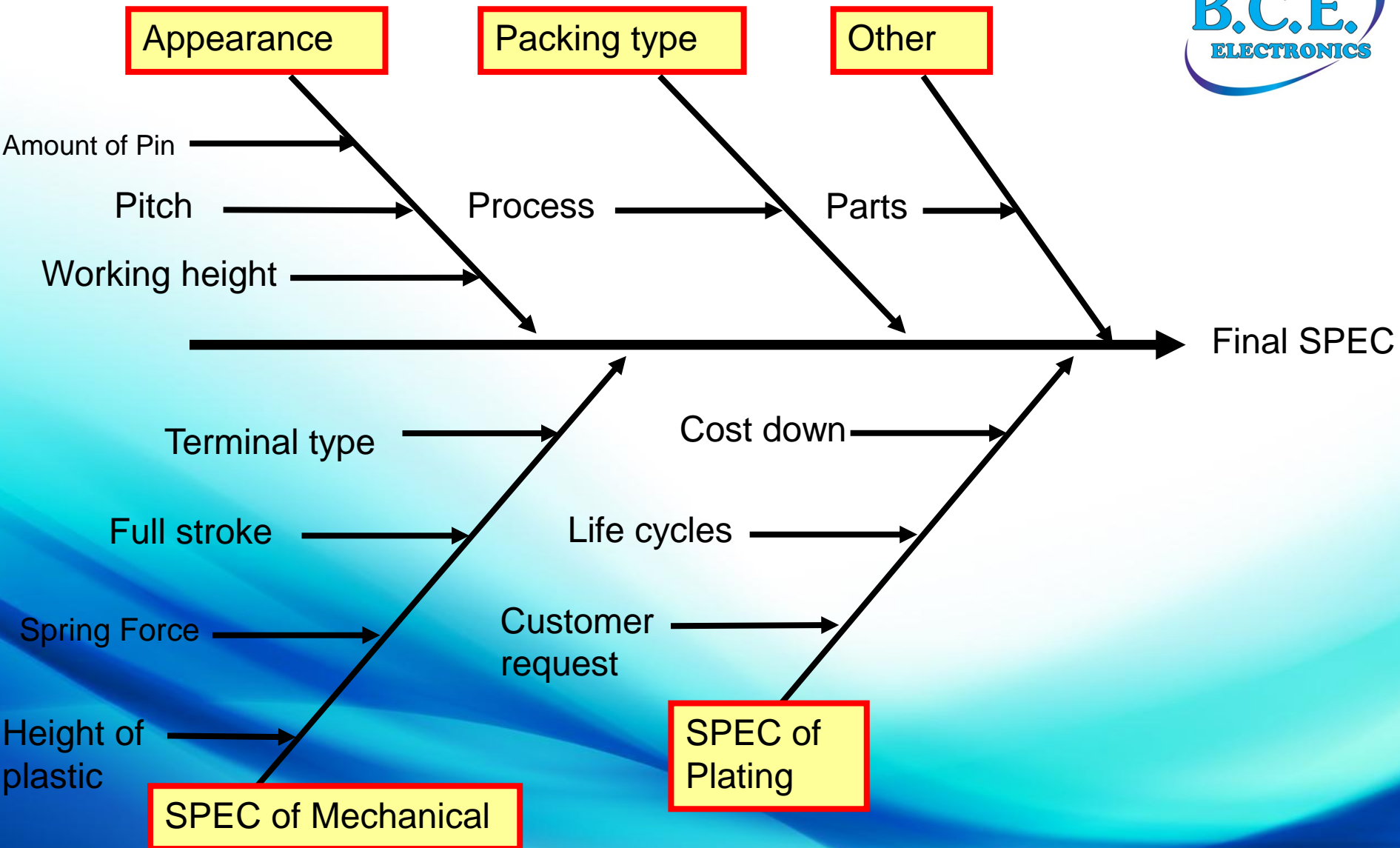


Ground pin choice



Multi-material type:
FPC 、PCB etc...





CEN-Link has tested our products to make sure they are reliable.

temperature & humidity



Salt spray



Steam aging



High-temperature oven



IR REFLOW



Force & Life & Resistant testing



Hazardous substances analyzer



X-RAY



Micro-ohm meter



Raise temperature



Withstanding Voltage testing



2D measurement machine



Medical Tablet



CEN P/N:
TPE1-02032-X0XX

Medical Tablet



CEN P/N:
TPR1-01110-70XX

Rugged Handheld Device



CEN P/N:
TPR1-01110-70XX

Rugged & Medical Tablet

Medical Data Terminal Gladius G0710

Rugged & Medical-grade Mechanical Design



IP54



Anti-vibration
Shock: 10G/11 ms
Transit Drop: 4 feet drop

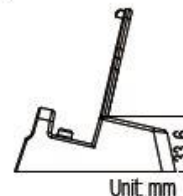
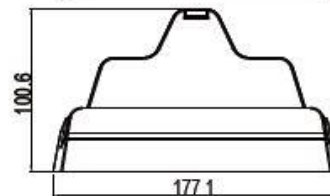
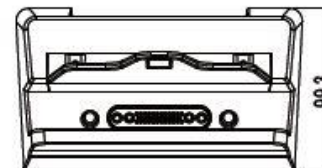


CEN P/N:
TPE0-02735-12T6

Industry Tablet



CEN P/N:
TPE0-02735-12T6



Handheld PC



CEN P/N:
TPE0-02735-12T6

CEN-Link was established in 1981, we started to sell pogo pin connector over 17 years from 1995.

The pogo pin technology comes from Switzerland manufactory, as we know Switzerland has lot of precision industry and famous worldwide. We are stronger in connector design with Switzerland pogo pin technology, and we can provide our customer “Timely service” and ”quickly feedback”, even more competitive price. Finally, we are looking forward to see any opportunities for cooperation with you.



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Thank you