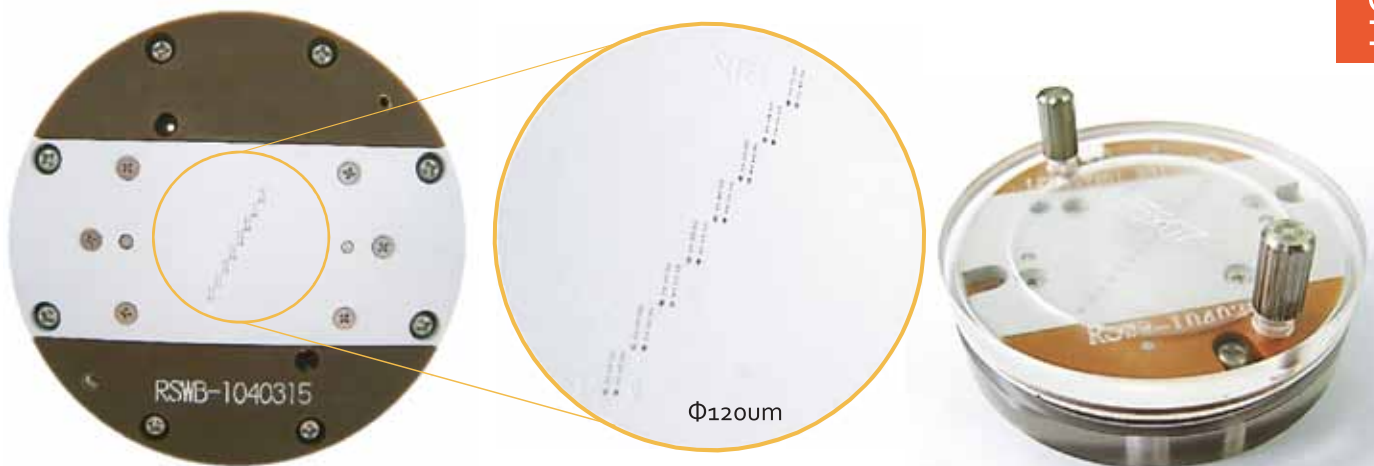


Wafer-level CSP Test

With the massive growth of WLCSP in the semiconductor market, C.C.P. has designed over 30 different kinds of probe heads to meet the demand of the market. A Pogo Pin design improves the durability of the probe head. Additionally, coplanarity errors induced by differently sized solder balls can be avoided by our Pogo Pins which have a working travel designed for 250um. C.C.P. offers a wide variety of head types to meet our client's needs.

Design Concept



8 ball, pitch 0.5mm

C.C.P. owns TSUGAMI CNC lathe to make quality to the best, hence we are capable to drill precise hole at accurate position. The tiniest hole size we can drill is $\Phi 60\mu\text{m}$.



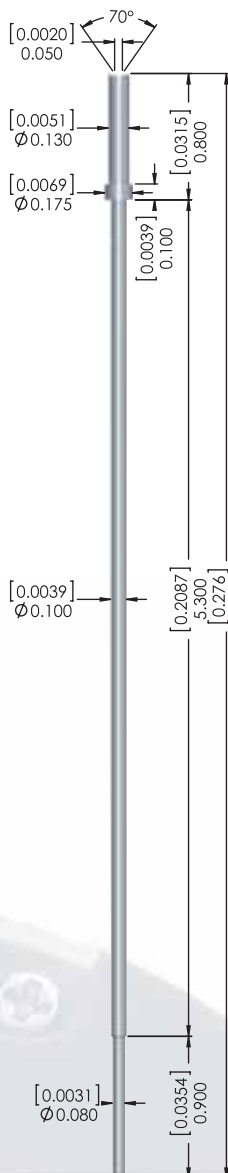
36 ball, pitch 0.4mm

| Probe Head | Specification |
|-------------------------|-----------------------------|
| Min. Pitch | 0.15mm |
| Max. Site Counts | 32 sites |
| Top Housing Material | Photoveel® / VESPEL®SCP5000 |
| Mounting Plate Material | Torlon® 5530 |
| Bottom Housing Material | VESPEL®SCP5000 |
| Life Time (Pin) | >300,000 |

Probe Specification

Unit:mm; []:in

PE3-010DS53-02A0



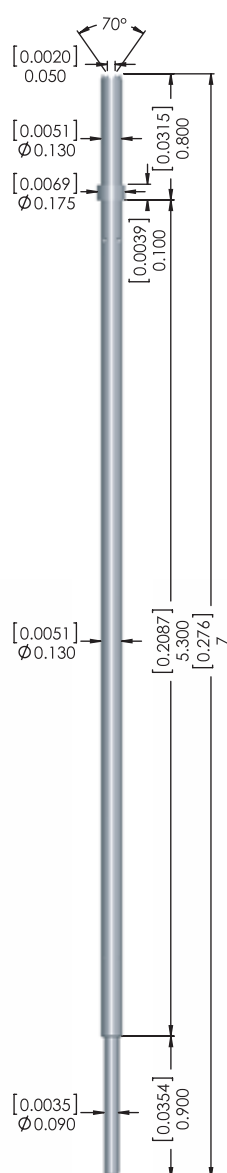
Material

Top Plunger
Pd alloy
Barrel
Ni alloy
Spring
SWP, Au plated
Bottom plunger
Pd alloy

Mechanical Spec.

Recommended travel
0.55mm
Full travel
0.85mm
Spring force
6g±20%@0.55mm
Operating Temp.
-15°C~125°C

PE3-013DS53-01F0



Material

Top Plunger
Pd alloy
Barrel
Ni alloy
Spring
SWP, Au plated
Bottom plunger
Pd alloy

Mechanical Spec.

Recommended travel
0.55mm
Full travel
0.85mm
Spring force
7g±20%@0.55mm
Operating Temp.
-15°C~125°C

Electrical Spec.

Pitch: 0.3mm Socket Material: Peek 1000



Current rating 0.2A continuous
Contact Resistance <500mΩ(AVG)
Characteristic impedance 91.77 Ω
Insertion loss -1dB@3.76GHz
Return loss -20dB@0.72GHz
Time delay 34.87 psec
Loop inductance 3.2 nH
Capacitance 0.38 pF

Electrical Spec.

Pitch: 0.3mm Socket Material: Peek 1000

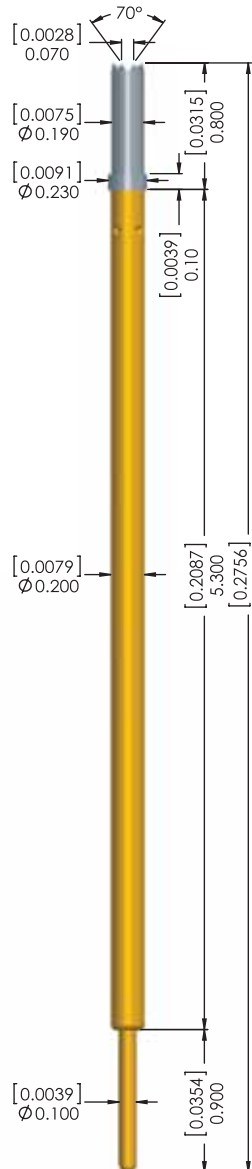


Current rating 0.4A continuous
Contact Resistance <500mΩ(AVG)
Characteristic impedance 91.3 Ω
Insertion loss -1dB@1.47GHz
Return loss -20dB@0.43GHz
Time delay 42.9 psec
Loop inductance 3.92 nH
Capacitance 0.47 pF

Probe Specification

Unit:mm; []:in

PE3-020DS53-01A0



Material

Top Plunger
Pd alloy
Barrel
PhBz , Au plated
Spring
SWP , Au plated
Bottom plunger
BeCu , Au plated

Mechanical Spec.

Recommended travel
0.55mm
Full travel
0.90mm
Spring force
25g±20%@0.55mm
Operating Temp.
-15°C~125°C

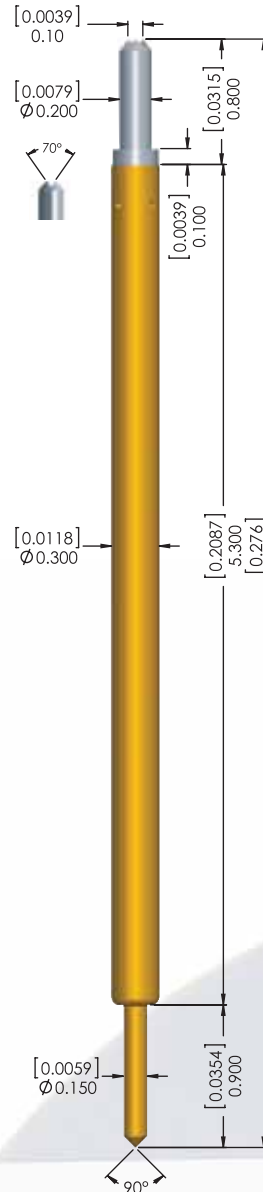
Electrical Spec.

Pitch: 0.4mm Socket Material: Peek 1000

Current rating 0.6A continuous
Contact Resistance <300mΩ(AVG)
Characteristic impedance 66.62 Ω
Insertion loss -1dB>20GHz
Return loss -20dB@1.84GHz
Time delay 37.97 psec
Loop inductance 2.32 nH
Capacitance 0.57 pF



PE3-030EF53-01A0



Material

Top Plunger
Pd alloy
Barrel
PhBz , Au plated
Spring
SWP , Au plated
Bottom plunger
BeCu , Au plated

Mechanical Spec.

Recommended travel
0.55mm
Full travel
0.90mm
Spring force
25g±20%@0.55mm
Operating Temp.
-15°C~125°C

Electrical Spec.

Pitch: 0.4mm Socket Material: Peek 1000

Current rating 1A continuous
Contact Resistance <175mΩ(AVG)
Characteristic impedance 42.3 Ω
Insertion loss -1dB>20GHz
Return loss -20dB@ 3GHz
Time delay 34.7 psec
Loop inductance 1.47nH
Capacitance 0.82pF

