

A photograph of two men in business attire sitting at a desk, looking at a tablet. The image has a strong red overlay. The man on the left is wearing glasses and a dark suit. The man on the right is wearing a blue suit and is smiling. A glass of water is on the desk in the foreground.

TACTILE PRESSURE EXPERTS



SENSOR PRODUCTS INC.

About Sensor Products

New Jersey based Sensor Products Inc., established in 1990, is a world leader in the manufacture and distribution of tactile pressure sensing solutions. Their customized and off-the-shelf products are installed within all of the Fortune 500 industrial companies as well as thousands of smaller manufacturing firms. Their sensors are used in applications as diverse as tire testing to semiconductor manufacturing and from R&D labs to space missions. Additionally, Sensor Products provides in-house and on-site stress and pressure mapping analysis.

Key Propositions

- Turnkey Solution – We customize all aspects of our product (software and hardware) to your needs.
- Pricing – We will deliver precisely what you need. You won't be paying for extraneous features or functions. We will provide the best value (efficacy/price) in the industry.
- Custom Software – Developers are in-house and work closely with your programmers to ensure software does exactly as you need.



Tactilus **FREE FORM**[®]

Sensor Elements

Free Form Sensor Specifications

Sensor Description

Sensor Type	Pressure Sensitive Single Sensor
Typical applications	Infinitely variable resistive user interface devices
Number of active areas / cells	1

Manufacturing Tolerances

Thickness	0.25mm +/- 12 %
Total manufacturing tolerance	+/- 1.0 mm (or better on demand)

Base Materials

Topside substrate	Thermoplastic film
Laminating adhesive	Acrylic
Backside substrate	Thermoplastic film
Backing adhesive (upon request)	Acrylic

Operating Parameters

Standby resistance (no load)	$R_{nl} > 2M \Omega$
Typical activation resistance range	$2M \Omega > R_I > 2k \Omega$
for a pressure range of	0.5-100 N/cm ² (i.e. per cm ² of activated area)
Typical Conductor lead resistance	$\leq 25M \Omega$
Typical lifetime when used according to	> 1,000,000 cycles @ 1kg/cm ² and 1Hz
Typical sensor response time on single activation	2-3 ms (mechanical)
Current density	< 1 mA/cm ² (of activated area)
Parasitic capacitance	< 1 nF (very low capacitance on demand)
Power dissipation	< 1 mW/cm ² (of activated area)

Operating Conditions

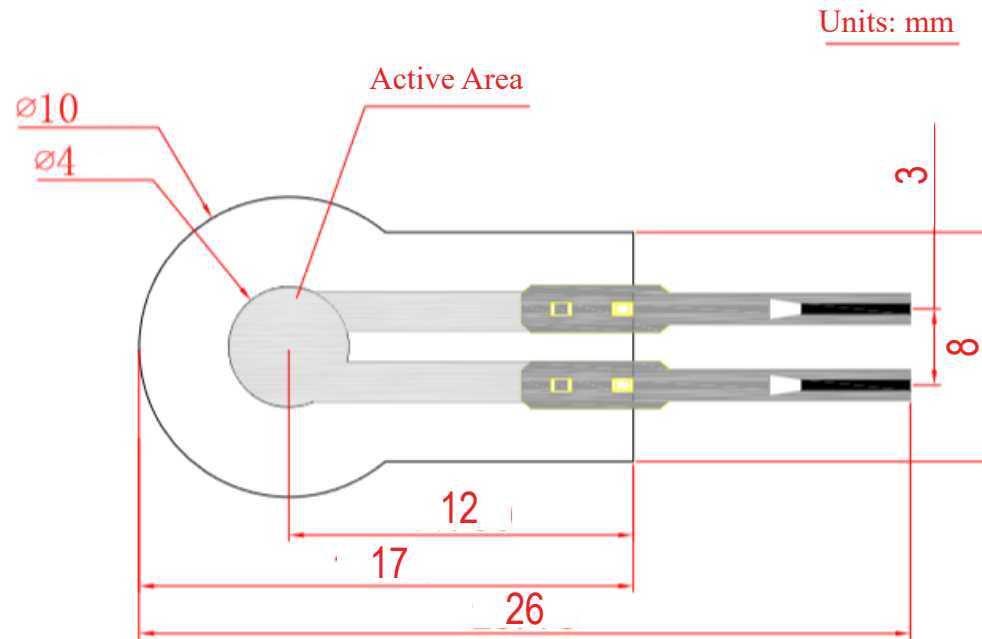
Nominal operating voltage	5 V, other driving voltages on demand. Use pulsed voltage (duty cycle < 1 %) for extended lifetime and heavy duty conditions
Operating temperature range	-4 to 140 °F (-20 to +60 °C)
Operating humidity range	$\leq 5\% \sim 90\%$

Standard Test Criteria at Time of Delivery

Standby resistance	$R_{nl} > 1M \Omega$ @ RT and 5 VDC
Resistance upon activation	
Measuring device	500 g
Force probe surface material	Rubber pad
Thickness of pad	2 mm +/- 0.2 mm
Rubber hardness	65 Shore A (+/- 10 Shore A)

Tactilus **FREE FORM**® Sensor Elements

4 mm Round



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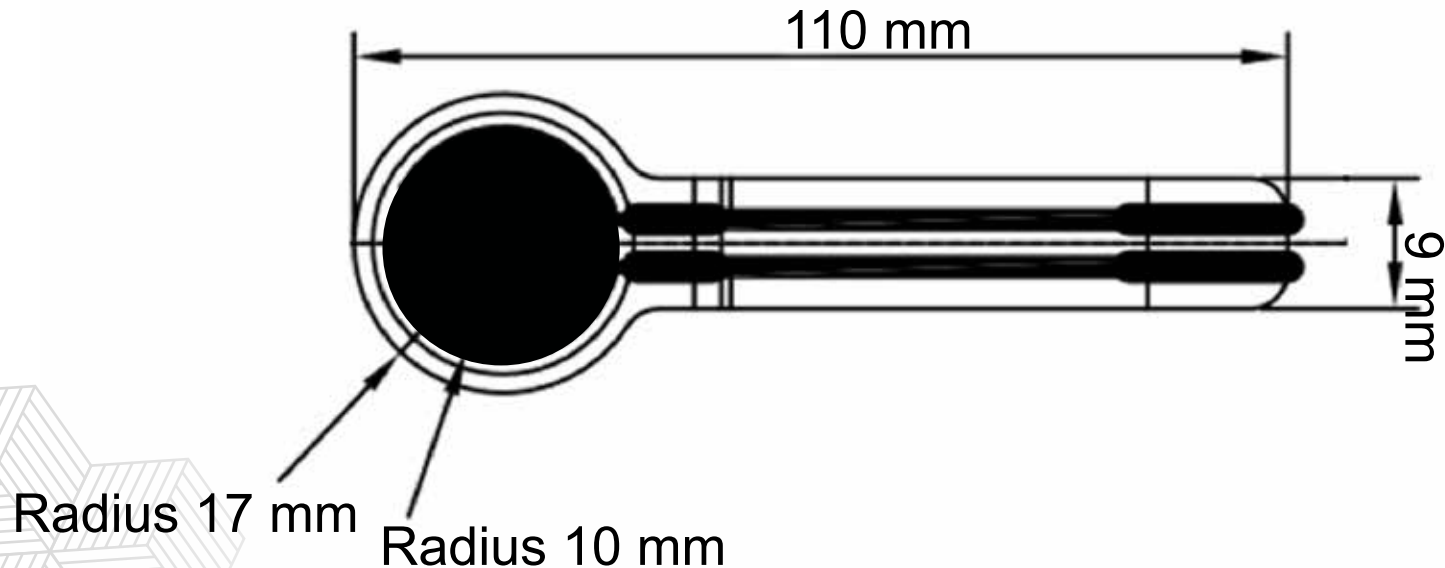
Active Area (Diameter): 4 mm

Usable Pressure Range: 0-400 psi

Thickness: 0.14 mm

Tactilus **FREE FORM**® Sensor Elements

10 mm Round



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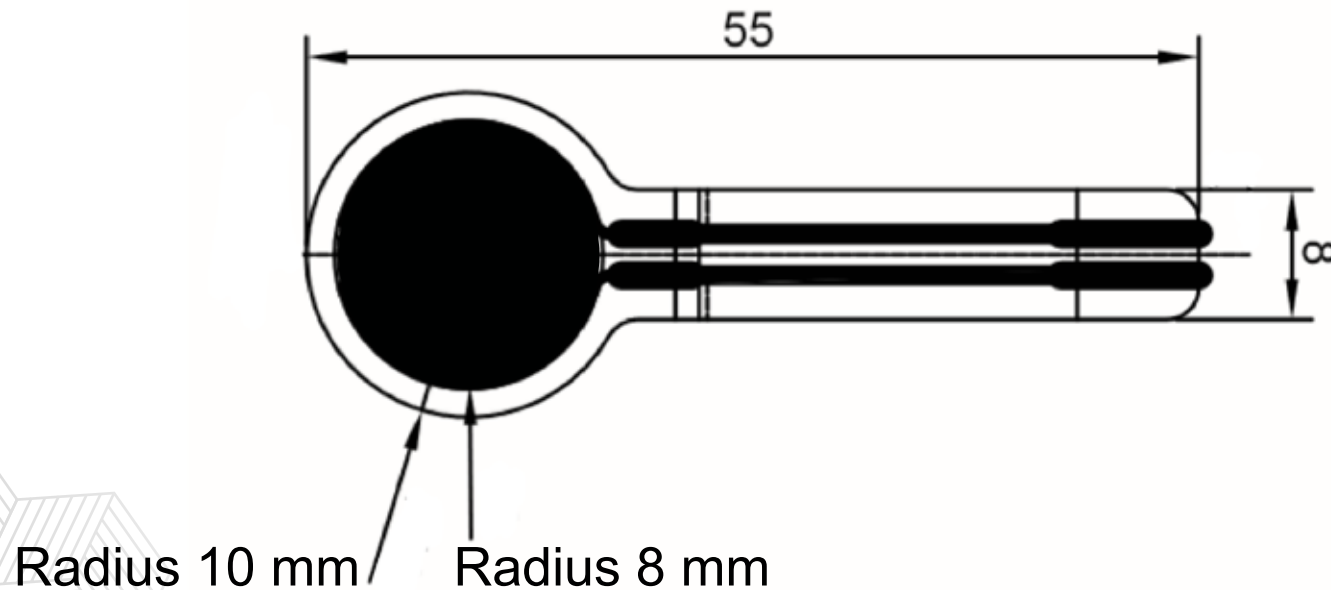
Active Area (Diameter): 10 mm

Usable Pressure Range: 0-100 psi

Thickness: 0.19 mm

Tactilus **FREE FORM**[®] Sensor Elements

15 mm Round

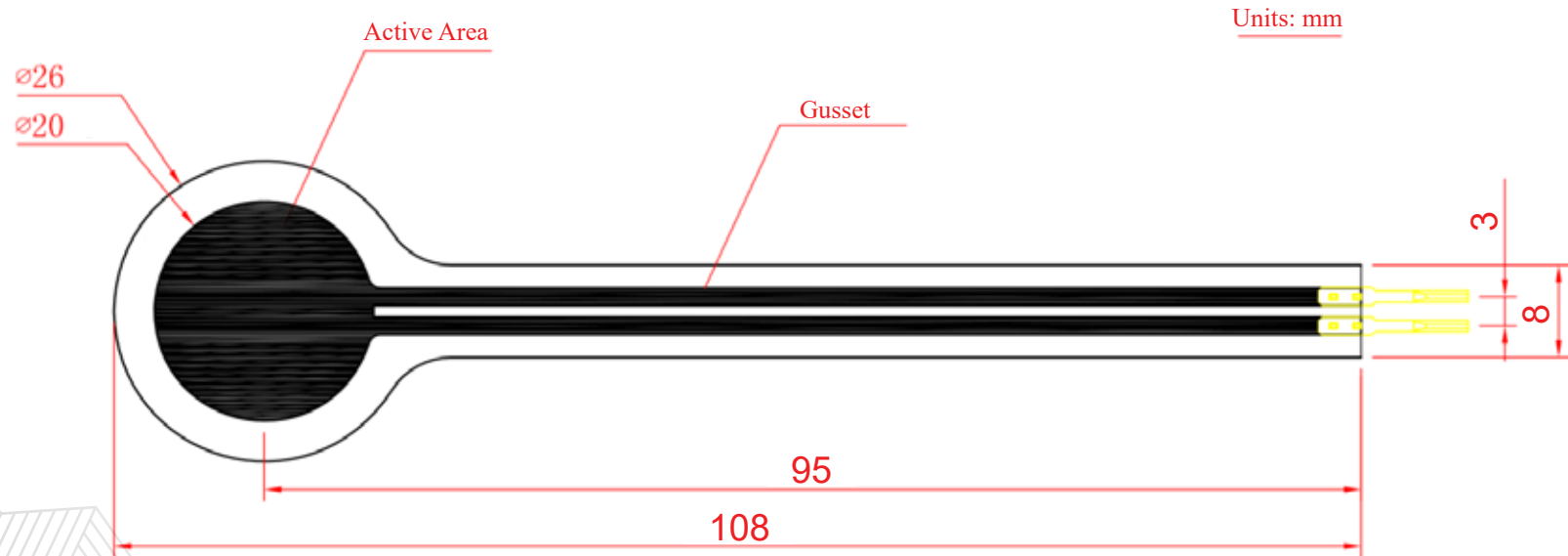


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Active Area (Diameter): 15 mm
Usable Pressure Range: 0-30 psi
Thickness: 0.22 mm

Tactilus **FREE FORM**[®] Sensor Elements

19 mm Round

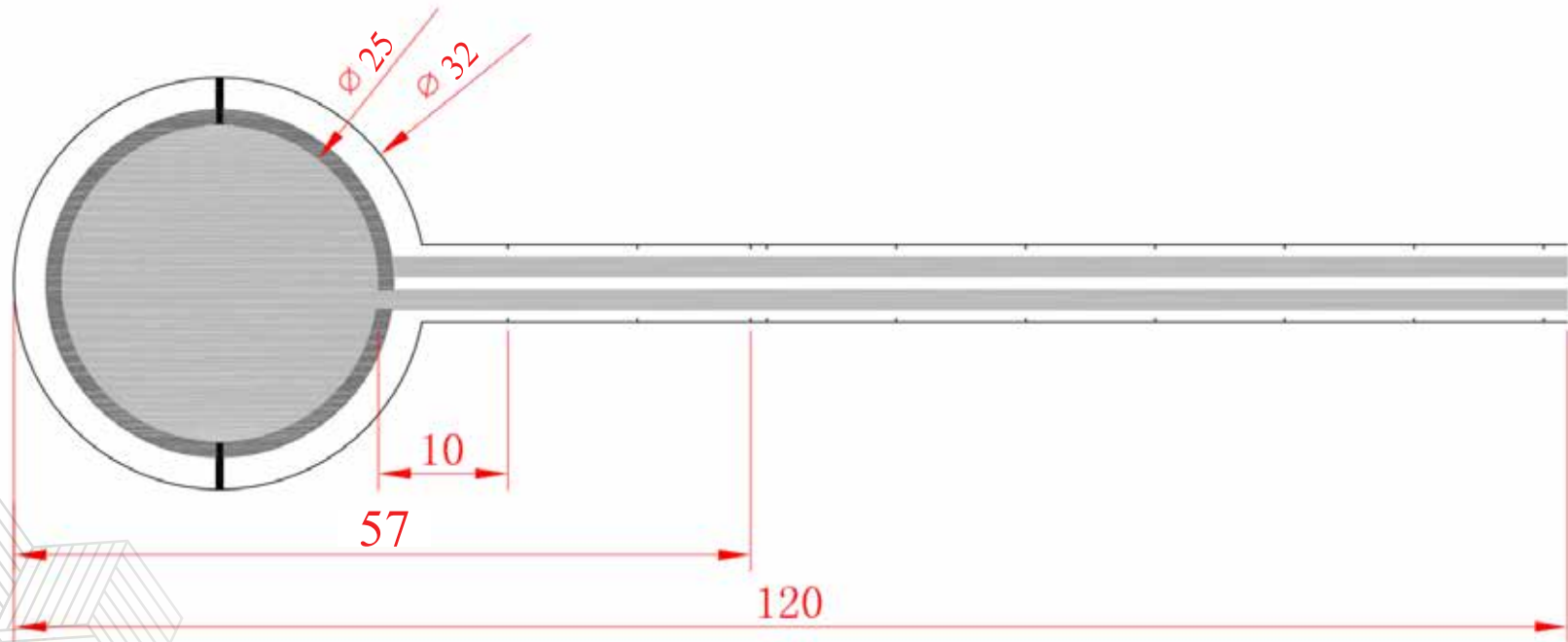


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Active Area (Diameter): 19 mm
Usable Pressure Range: 0-200 psi
Thickness: 0.19 mm

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25 mm Round



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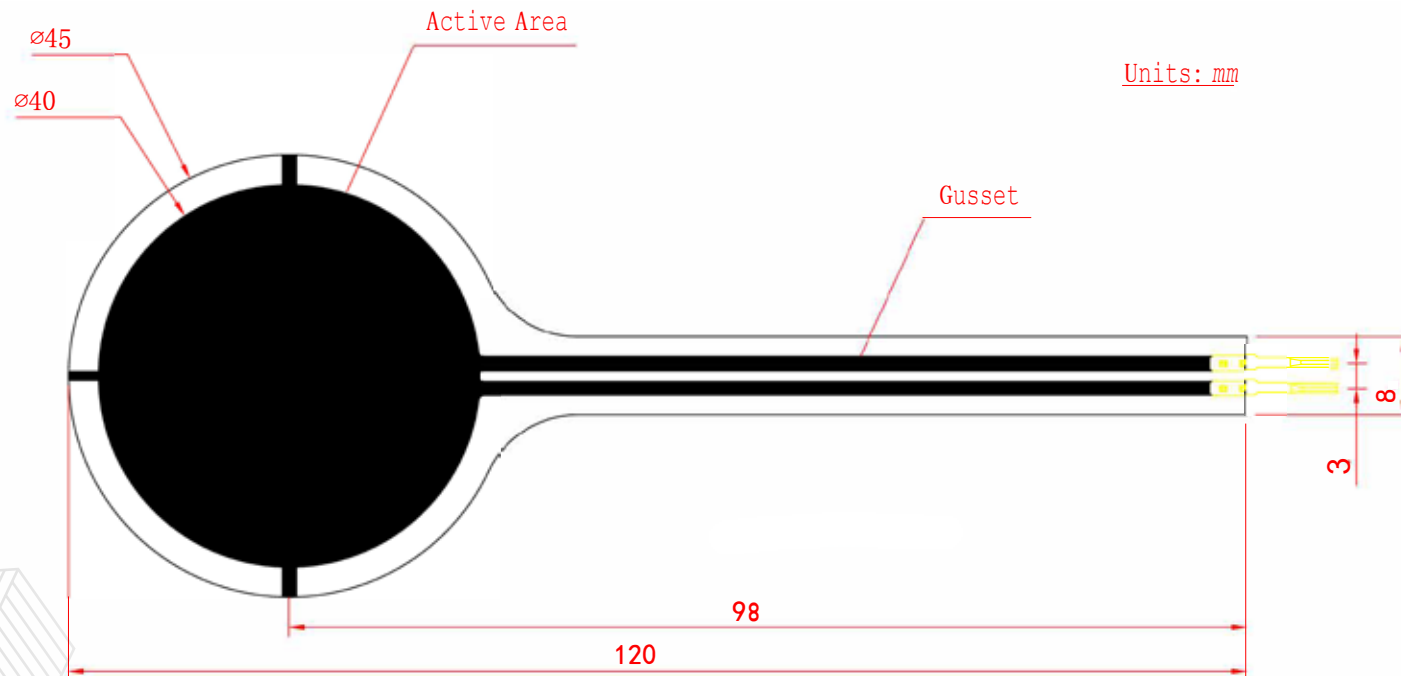
Active Area (Diameter): 25 mm

Usable Pressure Range: 0-200 psi

Thickness: 0.25 mm

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40 mm Round

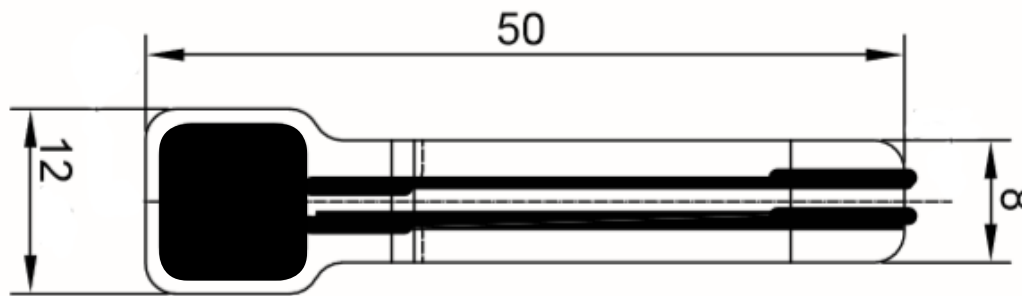


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Active Area (Diameter): 40 mm
Usable Pressure Range: 0-50 psi
Thickness: 0.25 mm

Tactilus **FREE FORM**[®] Sensor Elements

8mm x 8mm Square



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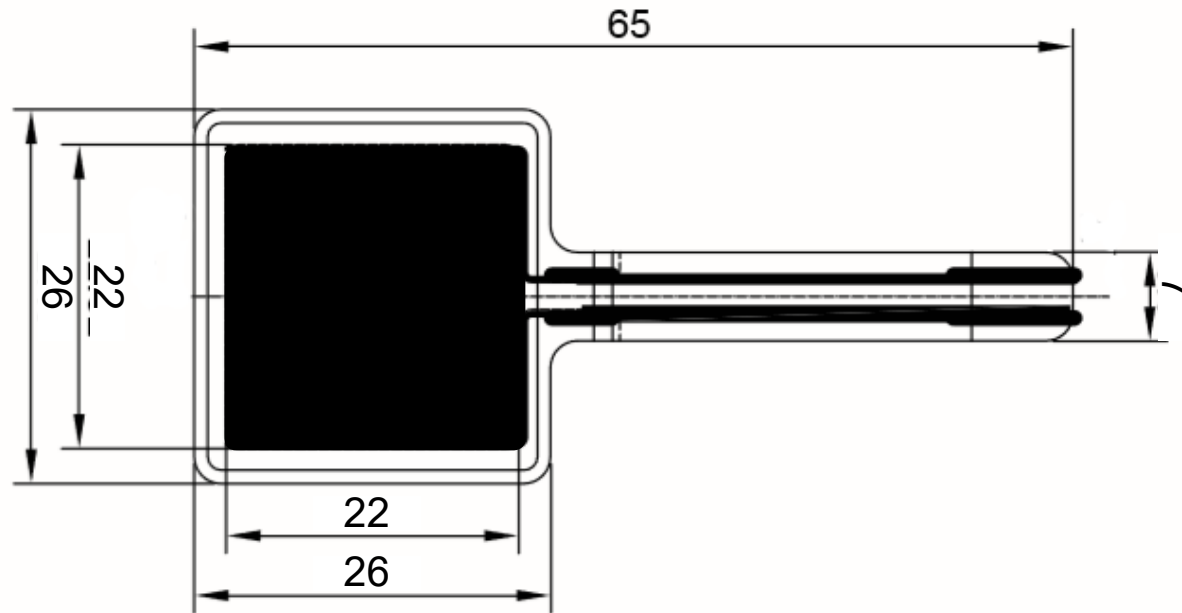
Active Area (Diameter): 8 mm x 8mm

Usable Pressure Range: 0-200 psi

Thickness: 0.22 mm

Tactilus **FREE FORM**[®] Sensor Elements

22 mm x 22 mm Square



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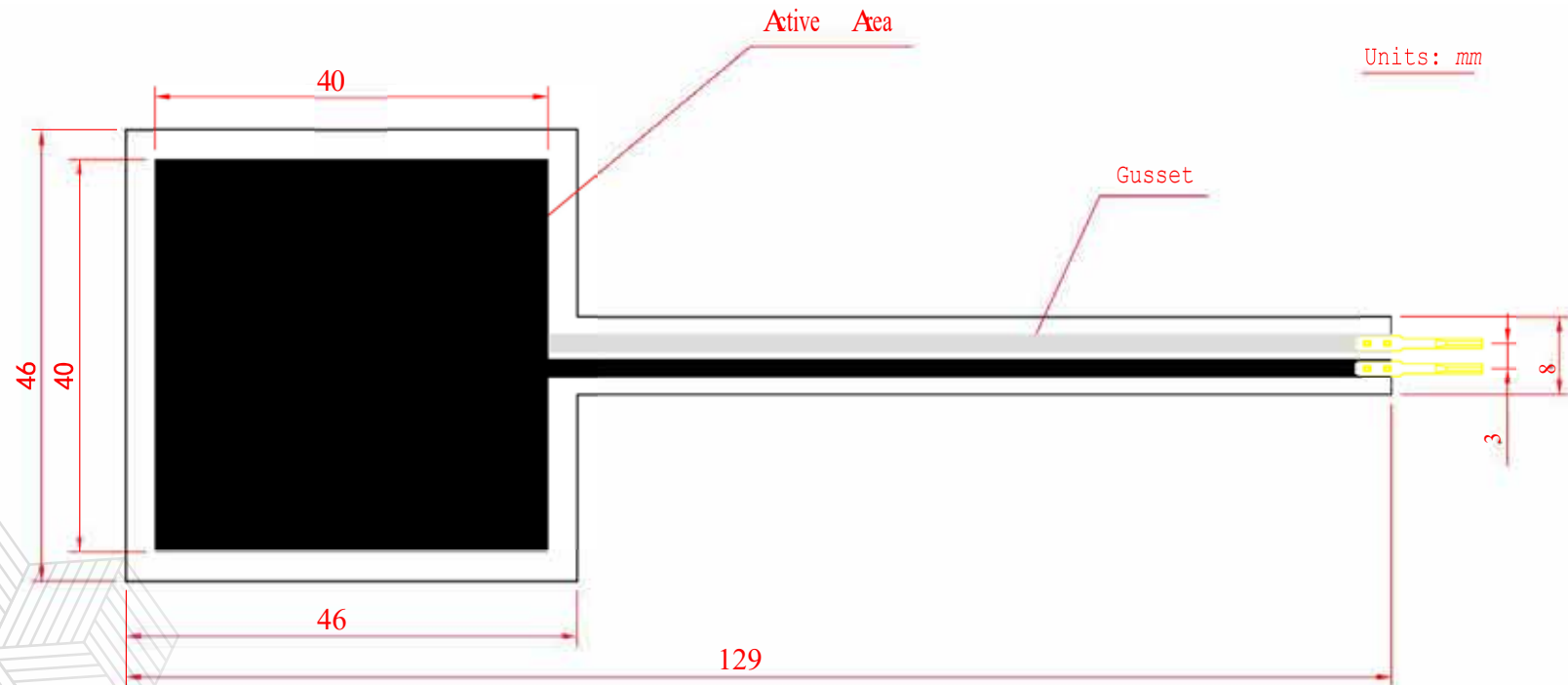
Active Area (Diameter): 22 mm x 22 mm

Usable Pressure Range: 0-200 psi

Thickness: 0.25 mm

Tactilus **FREE FORM**® Sensor Elements

40 mm x 40 mm Square



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Active Area (Diameter): 40 mm x 40 mm

Usable Pressure Range: 0-50 psi

Thickness: 0.25 mm



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