CPF_M8_01

Matrix sensor

CapaForce© technology
Capacitive + Strain sensor

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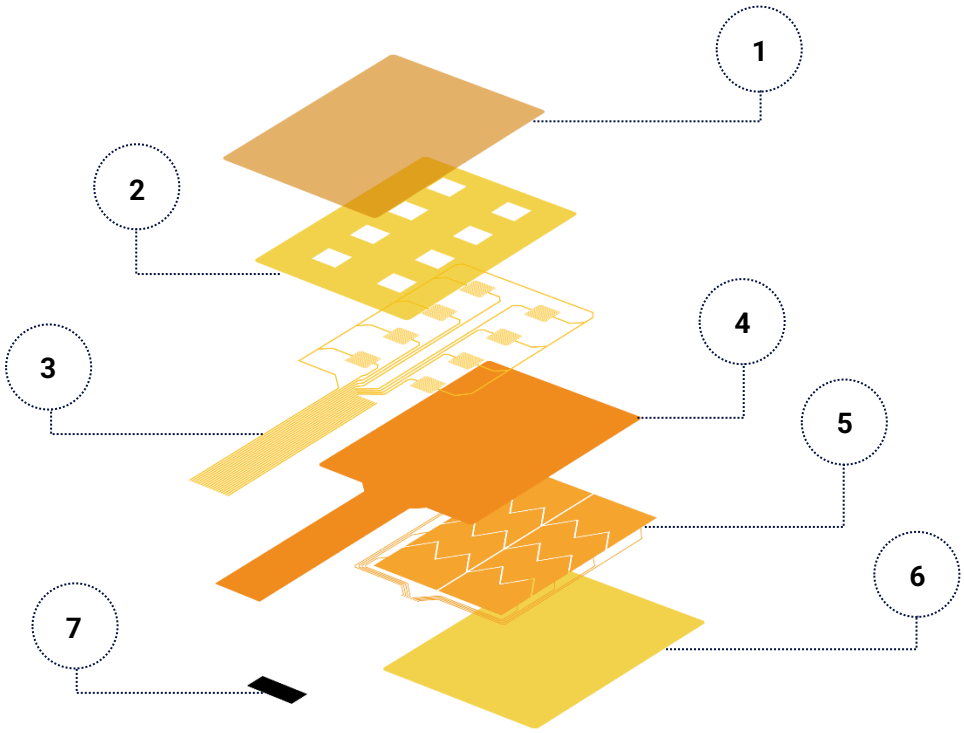
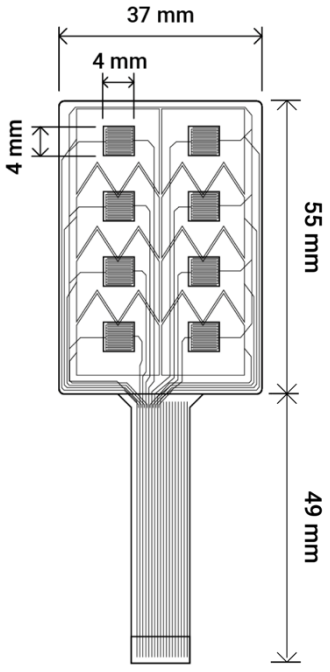
Matrix CapaForce© sensor





Item	Part	Description
1	Encapsulation layer	Polyimide + Adh - *126 µm*
2	Cover layer	Polyimide + Adh – *27.5 µm*
3	Strain electrode + Ink	Copper - *12 µm*
4	Substrate	Polyimide - *25 µm*
5	Capacitive electrode	Copper - *12 µm*
6	Cover layer	Polyimide + Adh – *27.5 µm*
7	Stiffener	Polyimide stiffener - *215 µm*

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Specifications

Typical Sensor Properties	Value	Note
Number of strain sensors	*8*	-
Gauge factor	*120*	-
Operating voltage	*1.8V - 5V*	-
Operating current	*10µA - 500µA*	-
Current consumption	*0.2mA - 0.5mA*	-
Nominal sensor resistance	*~ 5kOhm*	-
Lifetime durability	*10M cycles*	-

Environmental stability

Operating range	*-40°C +85°C*	
High temperature storage	*< +3%*	Change in resistance: 85°C for 96 hrs
	< -5%	Change in sensitivity: 85°C for 96 hrs
Low temperature storage	*< -10%*	Change in resistance: -80°C for 96 hrs
	< -3%	Change in sensitivity: -80°C for 96 hrs
High humidity storage	*< +5%*	Change in resistance: 85°C/85% RH for 500 hrs
Temperature cycling	*< 8%*	Change in resistance after 20 cycles +80°C/-40°C

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