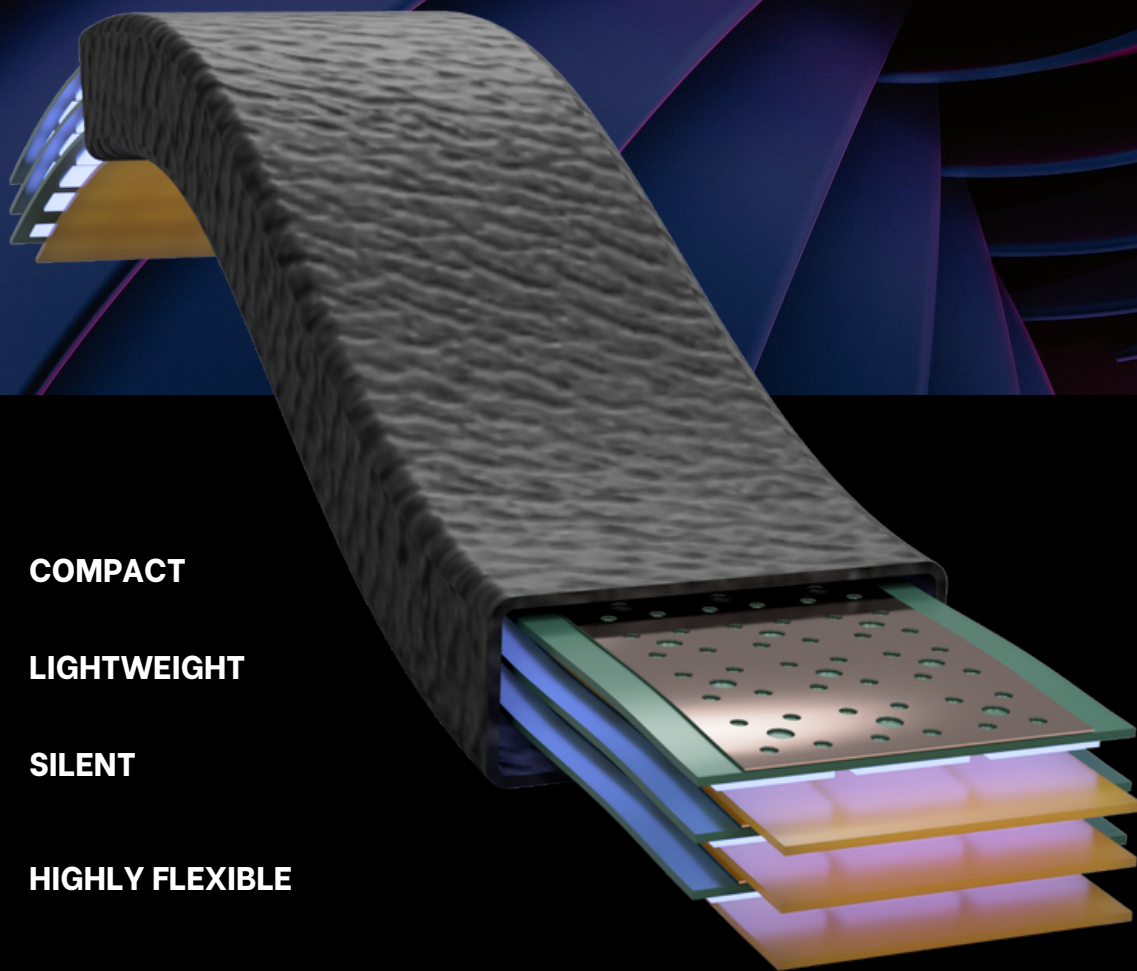


AURAFLEX

Artificial Muscle Platform

AURAFLEX is an actuator reinvented. Inspired by human muscle.



- ✓ COMPACT
- ✓ LIGHTWEIGHT
- ✓ SILENT
- ✓ HIGHLY FLEXIBLE
- ✓ MODULAR

AURAFLEX

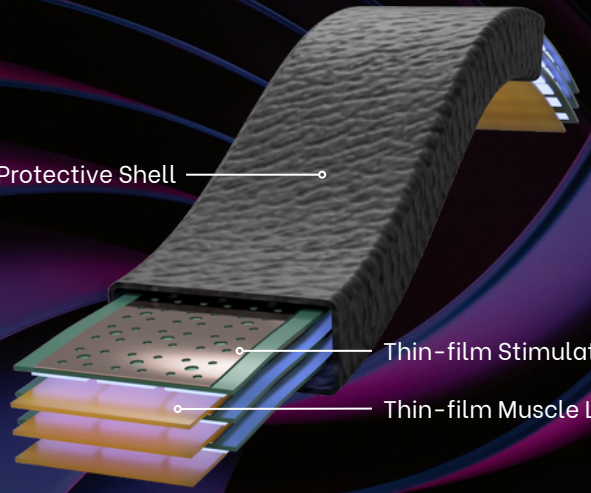
Artificial Muscle Platform

AURAFLEX is an actuator reinvented. Inspired by human muscle.

Thin-film Protective Shell

Thin-film Stimulator

Thin-film Muscle Layer



TRADITIONAL Actuators

- ✗ BULKY and HEAVY
- ✗ EXPENSIVE
- ✗ NOISY
- ✗ RIGID & INFLEXIBLE



AURAFLEX Actuators

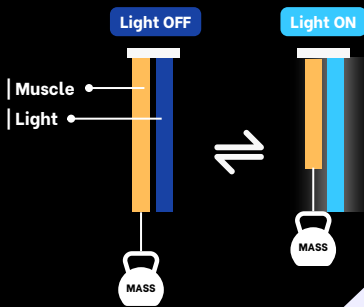


- ✓ COMPACT thin film components
- ✓ LIGHTWEIGHT minimal metal parts
- ✓ SILENT no vibration, pumps, compressors
- ✓ HIGHLY FLEXIBLE <10mm bending radius

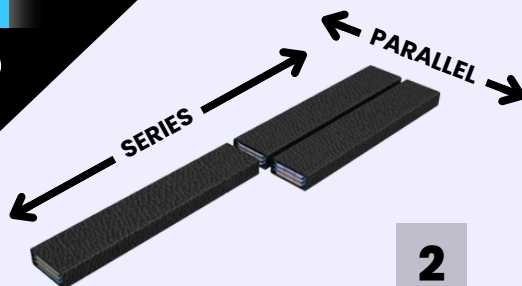
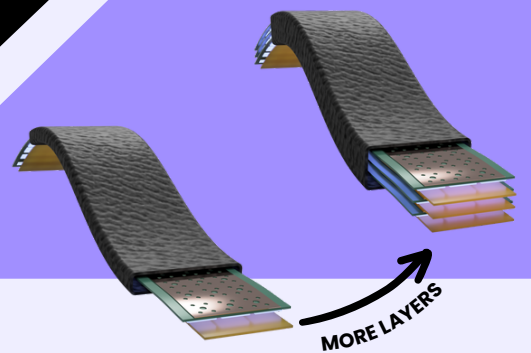
AURAFLEX Technology

How it works

AURAFLEX Muscle absorbs light energy and converts it to a mechanical contraction, and returns to its original state when light is turned off. Watch how AURAFLEX Actuates on our website.



MODULAR SYSTEM



AURAFLEX is a modular actuation system where the actuation properties can be varied by:

- 1 Increasing the number of muscle layers within a module
- 2 Combining multiple modules in series and parallel

To achieve greater maximum load capacities, greater power outputs and/or increased displacement.

ACTUATION MODES

AURAFLEX Artificial Muscle Platform

Delivering motion in a slimmer package



LINEAR

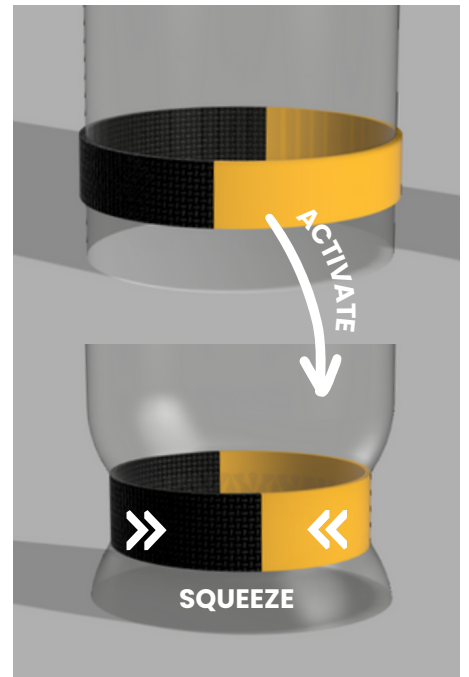
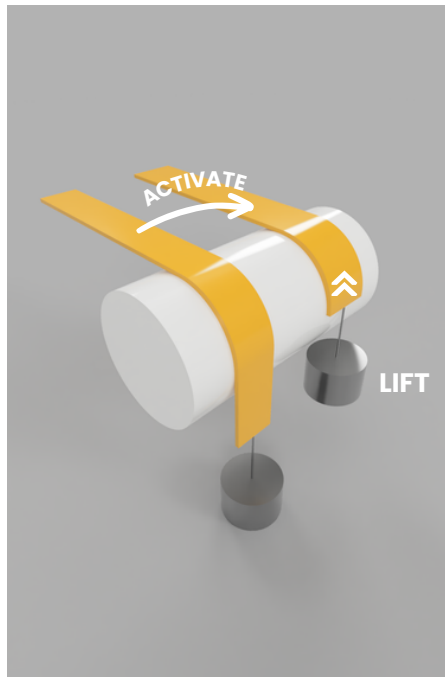
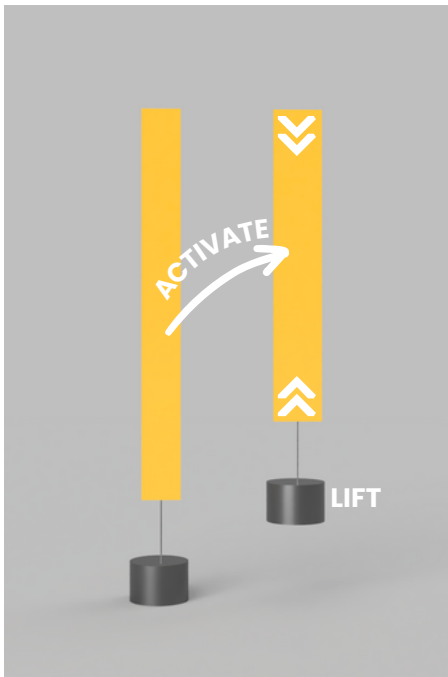
With simpler and less components to actuate, AURAFLEX can deliver linear actuation in a compact form factor and yet remain lightweight allowing for a wide range of applications.

CURVED

AURAFLEX is constructed using flexible components, each with a tight bending radius resulting in very high flexibility allowing it to conform around sharp bends. Ideal for soft robotic applications, wearable devices and more.

CONCENTRIC

AURAFLEX can be wrapped around objects to induce a concentric actuation to compress, squeeze or induce pressure without the bulk (or noise) of traditional pneumatic systems.



 **LOW-PROFILE**

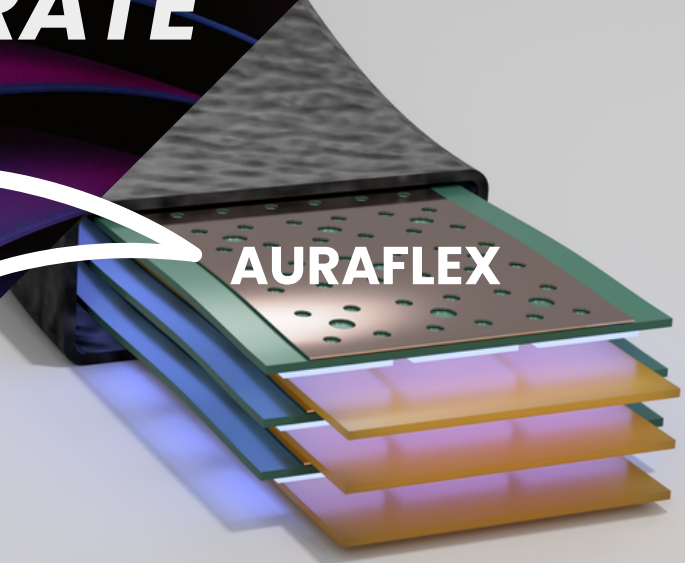
 **HIGHLY FLEXIBLE**

 **LIGHTWEIGHT**

Get in touch for your custom AURAFLEX solutions!

MADE TO INTEGRATE

INTO WEARABLES
& SOFT ROBOTICS



AURAFLEX ACTUATION MODES

LINEAR



CURVED



CONCENTRIC



AURAFLEX APPLICATIONS



POWERED ACTIVEWEAR

Integrate AURAFLEX and provide powered active assistance or resistance while maintaining a sleek and comfortable user experience.



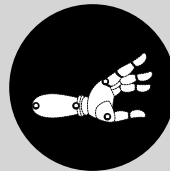
ADAPTIVE FIT CLOTHING

AURAFLEX as a low-profile artificial muscle can enable the next generation of garments that self-tailor or self-adjust to any shape.



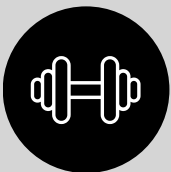
ACTIVE COMPRESSION

Integrate AURAFLEX into compression garments for portable active and dynamic compression capabilities.



HUMANOID ROBOTICS

Flexible, low-profile, compliant, silent and high strain capabilities up to 30%. Integrate AURAFLEX artificial muscles to power your humanoid robotics.



RESISTIVE WEARABLES

Artificial muscles, for building muscles. AURAFLEX Muscles can restrict movement enabling true powered active resistance training.



ROBOTIC ARMS & END EFFECTORS

With AURAFLEX, transform your robotic systems into sleek, lightweight and compact versions.

WE ARE LAUNCHING

DEVELOPMENT KITS

Integrate AURAFLEX into your designs and explore new capabilities.

Thin Protective Shell

Stimulator Layer | 1.2mm

Muscle Layer | <0.4mm

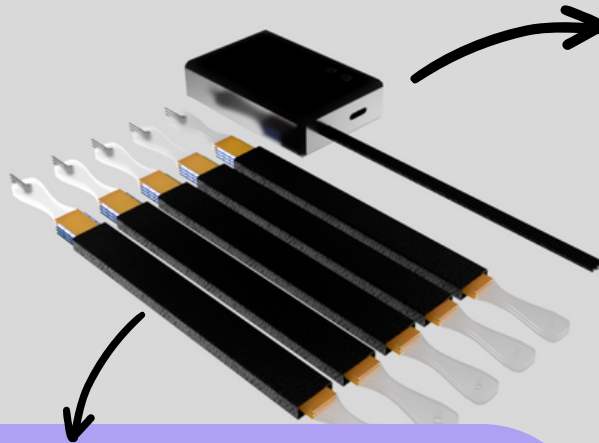
INTEGRATE

TEST

COLLABORATE

We offer our first AURAFLEX Development Kit Actuation System ready to be integrated into your products, direct from the founding engineers and scientists at Dennisson Technologies. This will enable you to explore and test AURAFLEX's actuation properties and evaluate it for your needs.

WHAT'S IN THE BOX? *



AURAFLEX MODULES

The modules can be attached to anchor points in a system to enable your desired actuation via various fastening mechanisms.

Multiple modules will be supplied to enable you to vary the maximum load and/or displacement capacities.

CONTROL UNIT & API

The control unit comes with a downloadable API software where AURAFLEX actuation properties can be tailored according to your desired application by controlling the:

- variable speed
- variable displacement
- variable cycling (time and number)

This enables a wide scope of control combinations that can be achieved such as actuation power or pressure profile over time.

For technical specifications, please contact our team through the Customer Enquiry Form.

*Image of Development Kit here is only a representative and will be refined closer to the launch date.

ENQUIRE NOW

Tell us what you need,
and *let's make it happen with **AURAFLEX***



Customer Enquiry Form