

SOLID**T**

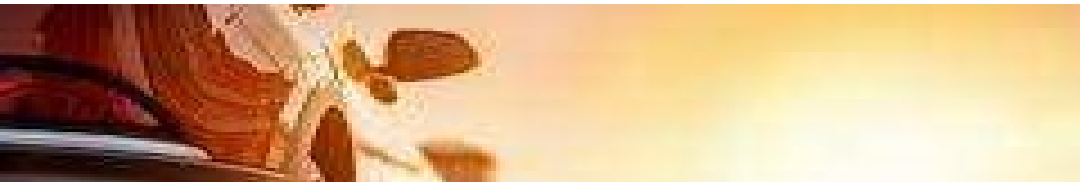
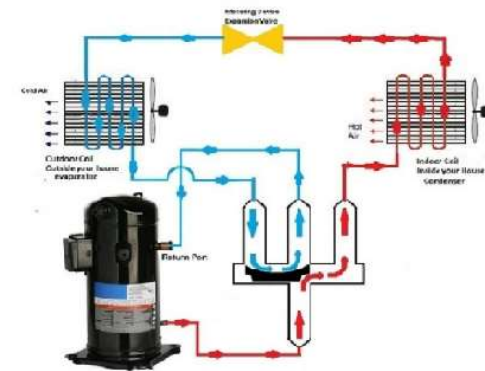
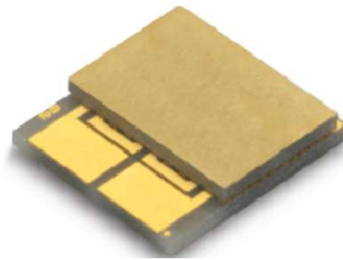
Revolution in temperature management

Disruptive SSTECH active temperature control



SOLIDT

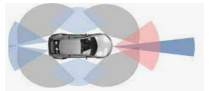
SolidT is on its way to revolutionize the cooling and heating industry through innovative technology that eliminates the dependence on moving components and polluting gas.



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Cooling & Heating effects

- **EV** – reducing driving range and reliability by up to 45%.
- **Computers** – limited performance and reliability
- **SERVERS**– up to 80% of the operating costs of servers are intended for cooling the servers
- **Radar performance** – range and life reduced in half the time
- **Satellite** – reduced operational life



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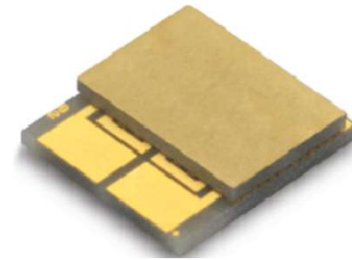
Today solutions

	Compressor A/C	Standard TEC
Efficiency	~2.6	~0.8
Heat flux	--	<40W/C^2
Mechanics	Yes	No
Gas	Yes	No
Weight	Heavy	Light
Cost	Expensive	Inexpensive
Market	Real estate Refrigerators Automotive Data centers	Electronics Lasers Mini-fridges Car seat Servers

SOLID**T**

Our solution:

- **First of a kind High efficient TEC.**
- **Smart engineering – no thermal barriers or thermal stress.**
- **Better overcoming higher temperature differences.**
- **Better efficiency**
- **Higher cooling/heating power**

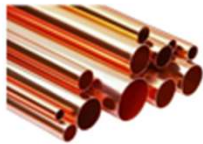


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Our solution – key benefits



Operates without any mechanical parts.



Eliminates the use of gas or copper pipes.



Adaptable to various applications.



Significantly reduces energy consumption.



Ensures higher reliability.



Applicable across a wide range of temperatures.



Environmental friendly



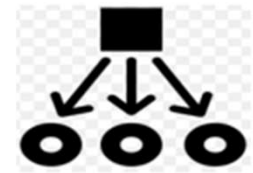
Lightweight



Integrated heating and cooling system.



Precise



Decentralized



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Competitive analysis

	SolidT	Standard TEC	Compressor A/C
Type	Active	Active	Active
COP	~3 (target)	~0.8	~2.6
Heat/Cool	Heat and cool	Heat and cool	Cool Heat*
Mechanics	No	No	Yes
Dimensions	Small	Small	Big
Weight	Light	Light	Heavy
Precision	Yes	Yes	No
Environment friendly	Yes	Yes	No
Reliability	Good	Good	Bad
Cost	Inexpensive	Inexpensive	Expensive
Heat flux	<300W/C^2	<40W/C^2	--
dT(RT)	+/-22	+/-22	+/-10
Dynamic rang*	-45 - +140**	-20 - +100	6-40

*By inverter

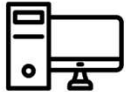
** high COP

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Comprehensive solution



Servers



Electronic devices



Satellites



sensors



Automotive – EV- Hydrogen –
Internal combustion



Engine room (ECU,
charger, fuse box)



Headlamp



Dashboard (infotainment
display)



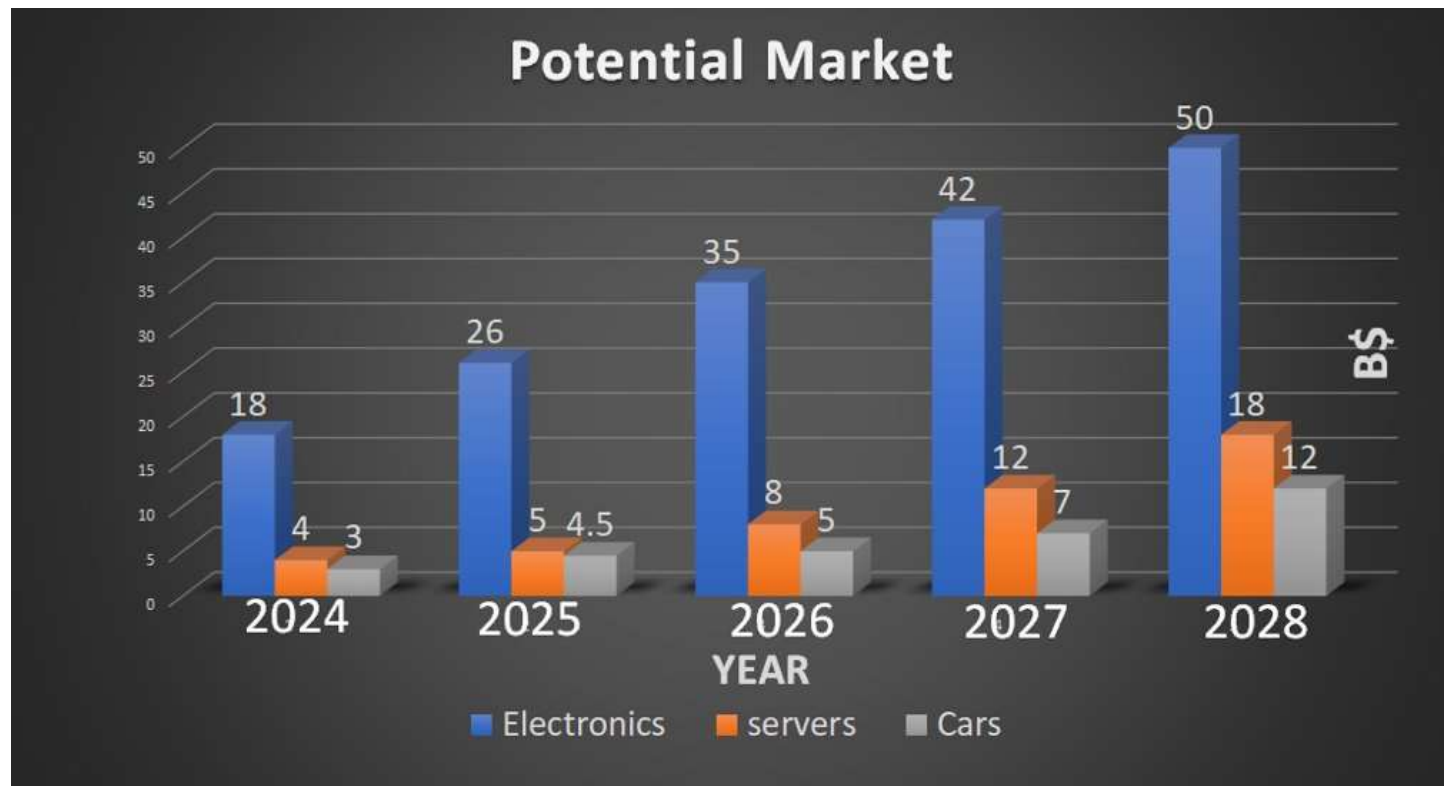
Power Electronics
IGBT, Inverter



Battery, Fuel cell

SOLIDT

TAM





The founders – decades of experience:

**Dr. Joseph
Kaplun**



CTO

PhD in material science and 40 years of experience in subtractive and additive solid states nanotechnologies in synthetic diamonds, semiconductor and PCB industries.

Last 35 years Joseph's duties were Director of applications of PCB, VP R&D and CTO of NaNO Dimensions, CTO of Phononics, CTO and VP R&D of Gal-El (MMIC) ELTA/RAFAEL

Mr. Ziv Cohen



COO

Bachelor's degree in Physics and Engineering and an MBA both from Ben-Gurion university. More than 27 years of experience in leading as Director of R&D groups at several companies mostly in communication companies such as Elta, Elbit, Motorola communication & TI.

Experience in various fields mostly in RF/Microwave such as Satellites, Cellular communications, 3D electrical design & multidisciplinary products.

Mr. Ariel Popper



CEO

More than 25 years of experience in mentoring, business management, and consulting in the field of nanotechnology, trade, and finance. As an entrepreneur, Mentored numerous tech enterprises in ICT, fintech, and measuring equipment. Entrepreneur of several startups and holds senior position in the high-tech sector. He holds a bachelor's degree in law from Bar Ilan University and advanced management studies with Merage institute.

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The company

- Established 2022 by 3 professionals with decades of experience
- Connected to major market players and industry leaders
- Two patents on process
- One operating demo system
- Granted by the Israeli Innovation authority  רשות החדשנות
Israel Innovation
Authority
- Recognized as one of the 40 best European startups 2023 – HTVD Germany 



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Timeline

Year1	Year2	Year3	Year 4
Thin film TEC	Vertical cascaded TEC	Vertical cascaded TEC – high performance	Vertical cascaded TEC – ultra performance Improved materials
COP>1.8 Heat flux 80W/C ²		COP>2.5 Heat flux 180W/C ²	COP>3 Heat flux 300W/C ²
Servers		Servers Electronics Automotive	



Thank you

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