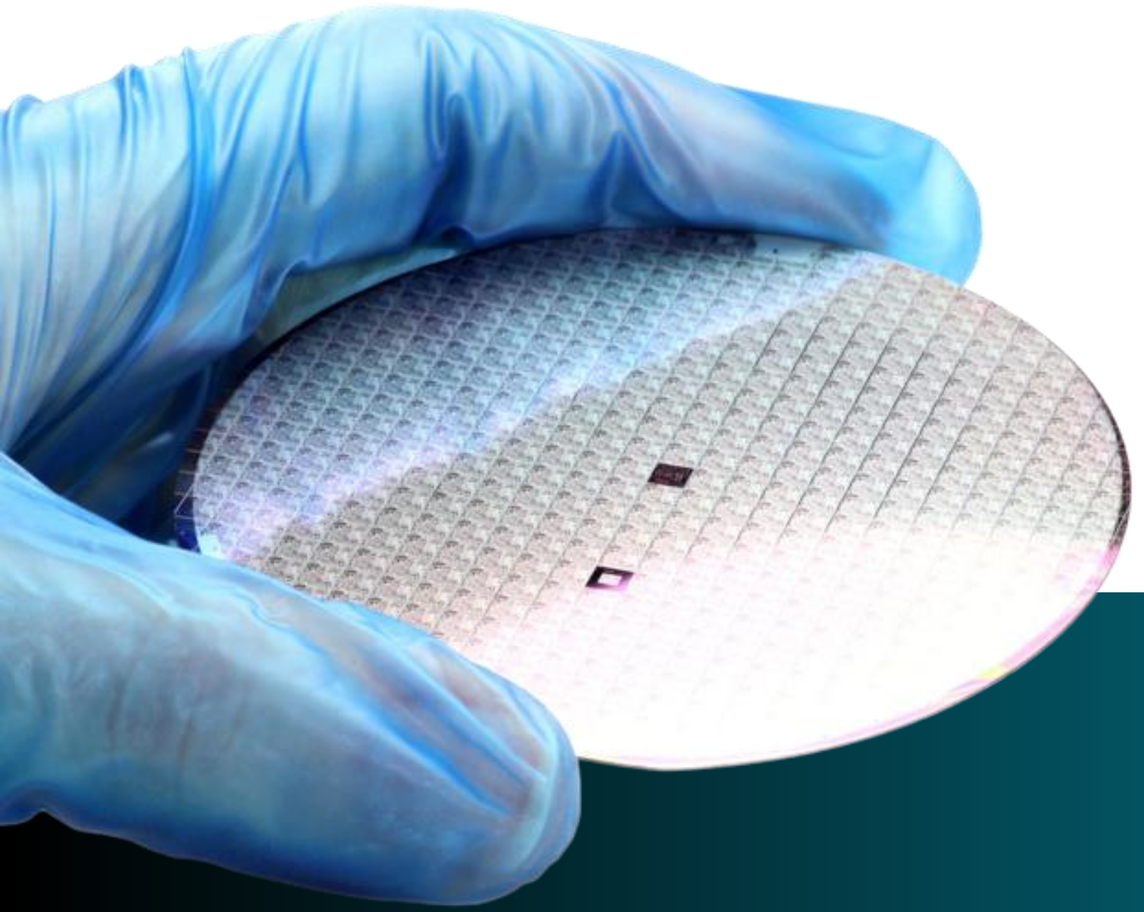
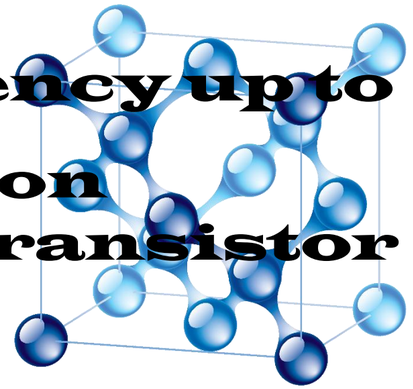


CrystalEn

Decades of computing and electronics

The same old materials



Transistor efficiency up to

5X

in comparison to a silicon transistor

Up to

22X

better heat conductivity in comparison to a silicon transistor

Up to

300°C

working temperature vs. 50°C in silicon

Ability to minimize the transistor to

nanotechnology sizes

CrystalEn

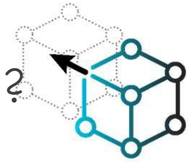
6̣2̣4̣1̣1̣2̣6̣ 3̣7̣4̣2̣3̣3̣ 3̣ 3̣ 1̣3̣3̣3̣5̣3̣4̣1̣5̣2̣4̣

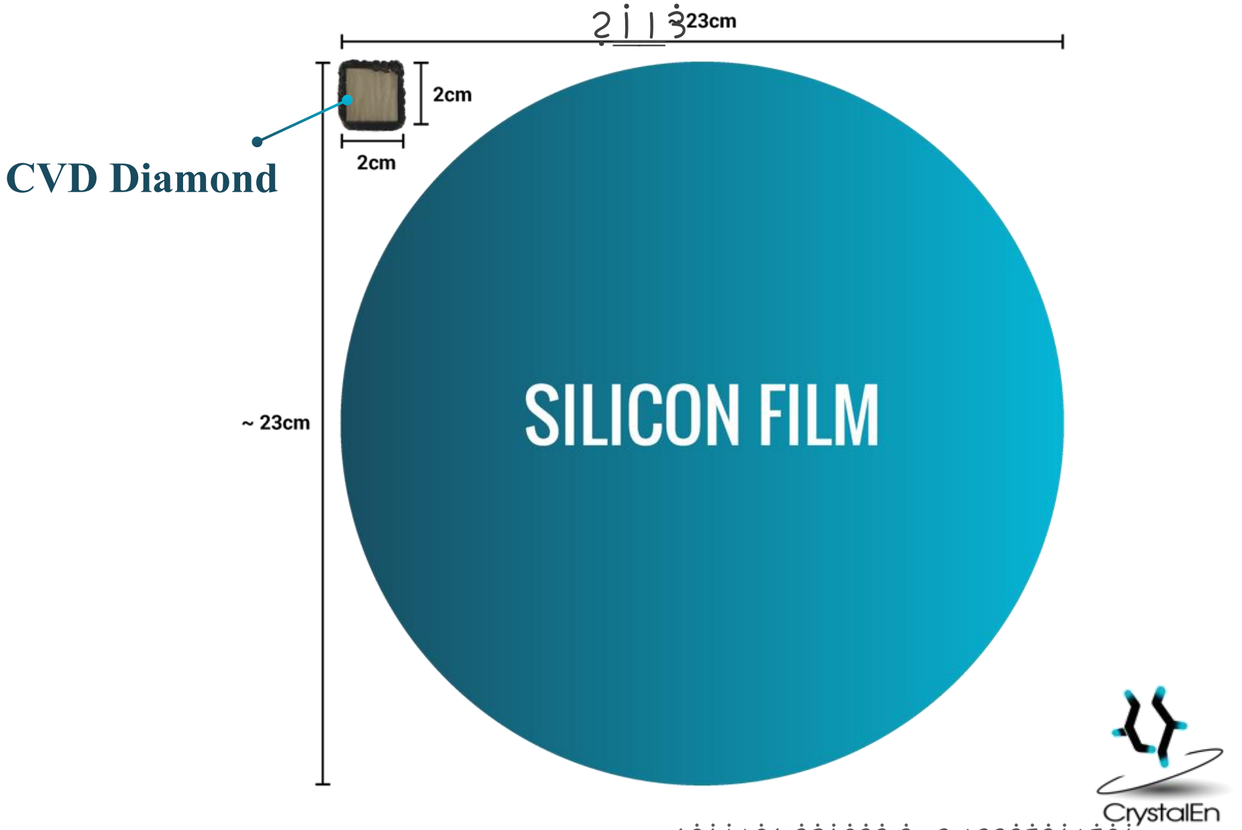
3̣1̣1̣7̣2̣6̣3̣2̣ 1̣4̣3̣ 3̣2̣7̣3̣4̣1̣2̣3̣3̣ 2̣4̣ 3̣1̣4̣5̣2̣6̣ 5̣1̣2̣3̣3̣ 3̣4̣6̣2̣5̣1̣5̣2̣0̣ 2̣6̣1̣3̣6̣ 1̣4̣3̣ 3̣3̣3̣7̣3̣3̣ 5̣2̣ 5̣3̣ 5̣6̣3̣ 4̣7̣5̣7̣4̣3̣ 7̣1̣5̣3̣4̣1̣1̣5̣ 4̣2̣4̣ 1̣6̣3̣7̣2̣5̣4̣1̣1̣5̣ 3̣7̣4̣3̣2̣2̣3̣2̣0̣ 2̣3̣3̣3̣1̣4̣1̣3̣1̣5̣5̣6̣ 1̣6̣ 5̣6̣3̣ 2̣3̣7̣1̣3̣2̣6̣3̣7̣3̣5̣2̣4̣ 1̣6̣3̣7̣2̣5̣4̣6̣X

3̣ 1̣7̣ 6̣3̣ 1̣6̣3̣ 5̣6̣3̣4̣ 2̣3̣7̣ 3̣ 6̣3̣7̣3̣5̣ 4̣2̣

	Silicon X2̣1̣.	Silicon Carbide X2̣1̣3̣.	Gallium Nitride X5̣1̣6̣.	Diamond
Band Gap X3̣4̣.	1.11	3.26	3.39	**5.47**
Breakdown Field *Ec* X7̣4̣. 37̣.	0.3	3.5	3.4	**10.0**
Electron Mobility *μe* X37². 4̣2̣.	1,500	800	900	**2,200**
Thermal Conductivity X2̣. 37 .	1.5	4.9	2.0	**21.3**

no competitors offer single-crystal diamond films





5̇2̇ 3̣3̇4̣3̇5̇2̇3̇ ! 6̇2̇4̇3̇5̇ 3̇4̇2̇3̣7̇3̇5̇1̇2̇6 3̇4̇2̇3̇3̣7̇4̇3̇ 4̣2̇4̇ 5̣4̇2̇2̇1̇6̣5̣ 5̇!4̇5̣3̇ 2̣3!5̇3̇ !6̣3̣ 6̣1̇5̣6̣ 1̇7̇!5̇1̇5̇6̇ 2̣1̇6̣5̣5̇3̇ 3̇4̇6̇2̣5̇!5̇ 3̣1̇!7̇2̇6̣3̣ 4̣1̇5̇7̣2̣ 4̣2̇4̇ 5̇6̣3̇ 2̣3̇7̇1̇3̇2̇6̣3̣7̇3̇5̇2̇4̇ !6̣3̣ 3̇5̇3̇3̇5̇4̇2̇6̇1̇3̣2̣ 1̇6̣3̣7̇2̣5̇4̇6̇X

X

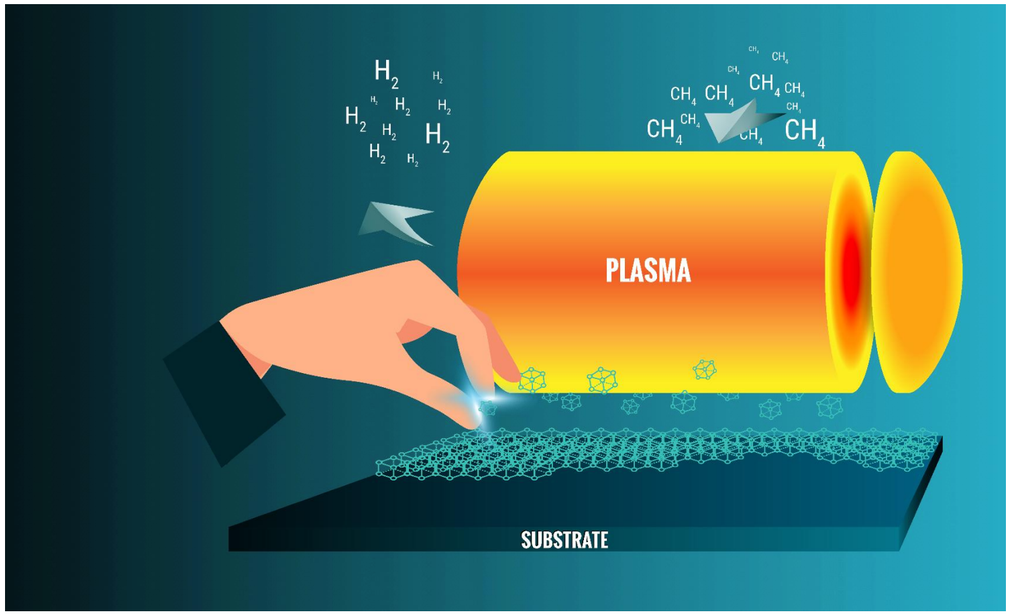
- **Multidisciplinary team of 4 highly skilled professionals**
- **1 patent pending**
- **Supported by the Israel Innovation Authority. Eligible for EIC grants.**
- **Selected as one of the best startups in K-Startup grand challenge (Korea), Wolves summit (Poland), HTVD (Germany), GoGlobal international), EnergyVest (Israel)**
- **First 2 prototypes in operation at a [illegible] scale**

6̣2̣4̇1̇1̇2̇6̇ 3̇7̇4̇2̇3̇3̇ 3̇ 3̣ !3̣3̇3̇5̇3̇4̇!5̇2̇4̇

2̣3̇5̇4̣ 3̣3̇2̣1̇5̣6̇3̇3̣0̲ 3̇1̣5̇3̇6̲5̇3̇3̣0̲ 6̣6̇5̲4̇1̲3̣ 4̣3̣ 3̣4̣3̣ 2̣6̇2̣5̇3̇7̲0̲

1̣5̇ 3̣4̇6̇2̣5̇1̣5̇3̇6̲0̲ 2̇7̇4̇ 7̲3̇5̇6̣2̇3̣ 1̇2̣ 5̲1̣2̣3̇3̣ 2̇6̲ 2̣3̇5̇4̣_ 1̣2̣2̣3̇7̲5̇5̇6̇ 5̇3̇3̲6̣6̲2̇5̇2̇5̣6̇X 7̇4̇ 7̇6̲1̇1̇7̇3̇ 1̣3̇3̇4̇2̇1̣3̲6̣ 2̇4̣ 3̇2̇7̲5̇1̇6̇1̇6̲5̣ 3̣6̣3̇7̲1̇3̲1̣5̇ 4̣1̣3̇2̇4̇ 3̣3̇3̇2̇2̣1̇5̇1̇2̇6̲ X3̣4̣3̣. 2̇1̇5̇6̣ 6̣6̇2̣1̇3̲1̣5̇ 4̣1̣3̇2̇4̇ 3̣3̇3̇2̇2̣1̇5̇1̇2̇6̲ X 4̣3̣. 4̣3̇1̣5̇7̇4̇3̇2̣ 1̇2̣ 3̲1̣3̇1̣5̲5̇3̇ 2̇4̣ 5̣4̇2̇2̇1̇6̲5̣ 2̣1̇6̲5̣5̇3̇_ 3̲4̇6̇2̣5̇1̣5̇5̇1̇6̇3̇ 3̣1̇1̣7̇2̇6̲3̣ 2̇1̣4̣3̇4̇2̣ 1̣6̲3̣ 4̲1̇5̇7̲2̣0̲ 3̣2̇3̇3̇3̣ 2̇4̇ 7̇6̲3̣2̇3̇3̇3̣0̲ 2̇1̇5̇6̣2̇7̇5̇ 5̇6̣3̇ 6̲3̇3̇3̣ 2̇4̣ 6̲7̇3̲5̇3̇1̣5̇1̇2̇6̲ 2̣3̇3̇3̣2̣X

7̇4̇ 5̇3̇3̲6̣6̲2̇5̇2̇5̣6̇ 3̇6̲1̣5̲5̇3̇2̣ 5̇6̣3̇ 3̇4̇2̇3̣7̇3̲5̇1̇2̇6̲ 2̇4̣ 6̲3̇2̇ 3̣1̇1̣7̇2̇6̲3̣ 5̲1̣2̣3̇3̣ 7̲1̣5̇3̇4̇1̇1̣5̇2̣ 1̣3̣6̣3̇4̇1̇6̲5̣ 5̇2̇ 5̇6̣3̇ 6̣1̇5̣6̣ 2̣5̇1̣6̲3̣1̣4̇3̣2̣ 2̇4̣ 5̇6̣3̇ 2̣3̇7̲1̇3̇2̇6̲3̣7̇3̲5̇2̇4̇ 1̣6̲3̣ 3̇5̇3̇3̲5̇4̇2̇6̲1̇3̲2̣ 1̇6̲3̣7̇2̣5̇4̇6̇X



6̣2̇4̇1̇1̇2̇6̲ 3̇7̇4̇2̇3̇3̇ 3̇ 3̣ 1̣3̲3̲3̇5̇3̇4̇1̣5̇2̇4̇

CrystalEn's technology introduces a major technological breakthrough that enables us to create a new generation of semiconductors:

4!3!3 34625!5 542256
X7!55!73534 56!346322 334
62?4.

Controlled process
X!7!5!56 7 2!13.

62 67353!5!26 2333

34625!5 2!13 !2 32654255!553
56 56 53366252 56

(>6", similar to current silicon

42373512 24
523 !7!5!56 34625!52

332 44!36356 53366252560
2!56 62 !34!!5 32557512 6

6323362!43 !63 43!3!56
!4!!5!553 7!534!!52

2!6553 34625!5
237!326373522 42

(undoped and p- or n-doped)

62411 26 37423 3 3 !33353 4!524

CrystalEn

Suppliers - Machinery

Suppliers - Production

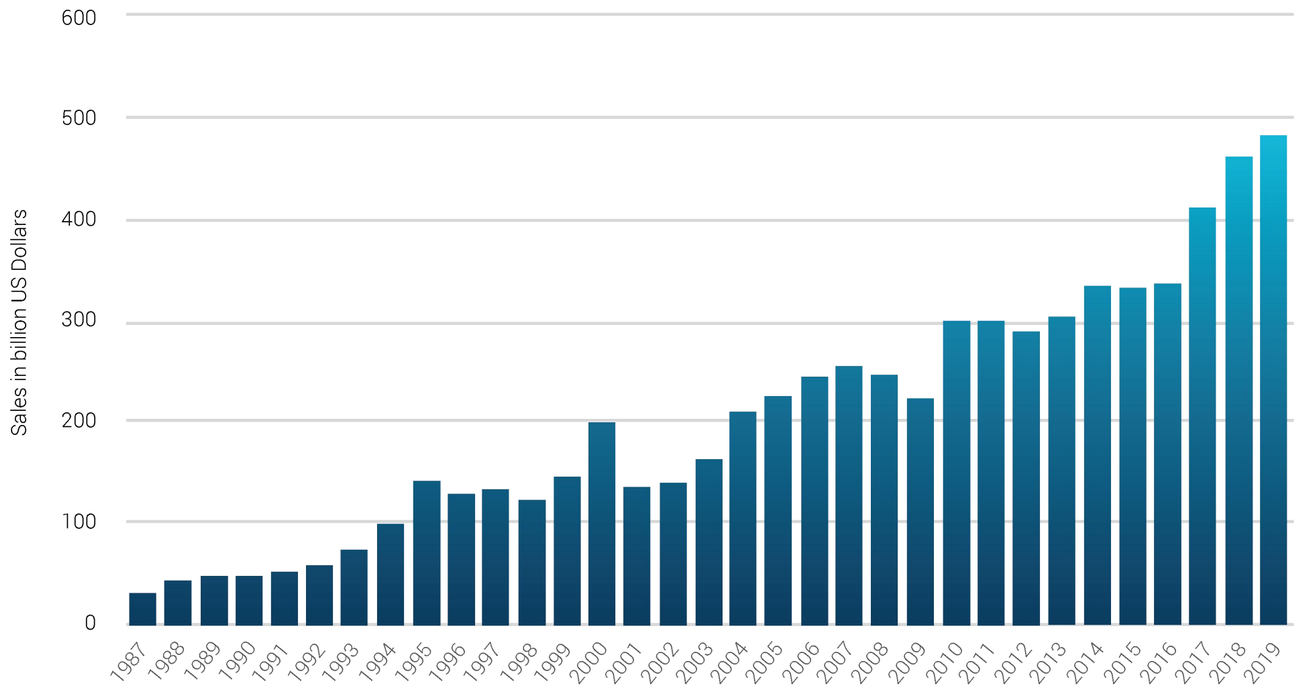
CrystalEn (R&D, IP, production, sales)

Chip Manufacturers

Chip Integrators

End Users

Semiconductor Sales Revenue Worldwide from 1987 to 2019 (in billion US dollars)



Additional Information: Worldwide WSTS 1987 to 2017

- SCD semiconductor wafers and films.
- Production and sale
- Licensing
- R&D

The company holds a signed LOI for basic product purchase from Dare Labs, and is in constant connections with industry [illegible]ers [illegible] In[illegible], T[illegible] and Kyocera.

CEO

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

CTO

Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam, eaque ipsa quae ab illo inventore veritatis et quasi architecto beatae vitae dicta sunt explicabo. Nemo enim ipsam voluptatem quia voluptas sit aspernatur aut odit aut fugit, sed quia consequuntur magni dolores eos qui ratione voluptatem sequi nesciunt. Neque porro quisquam est, qui dolorem ipsum quia dolor sit amet, consectetur, adipisci velit, sed quia non numquam eius modi tempora incidunt ut labore et dolore magnam aliquam quaerat voluptatem.

Electrical Engineer

Ut enim ad minima veniam, quis nostrum exercitationem ullam corporis suscipit laboriosam, nisi ut aliquid ex ea commodi consequatur? Quis autem vel eum iure reprehenderit qui in ea voluptate velit esse quam nihil molestiae consequatur, vel illum qui dolorem eum fugiat quo voluptas nulla pariatur? At vero eos et accusamus et iusto odio dignissimos ducimus qui blanditiis praesentium voluptatum deleniti atque corrupti quos dolores et quas molestias excepturi sint occaecati cupiditate non provident, similique sunt in culpa qui officia deserunt mollitia animi, id est laborum et dolorum fuga. Et harum quidem rerum facilis est et expedita distinctio. Nam libero tempore, cum soluta nobis est eligendi optio cumque nihil impedit quo minus id quod maxime placeat facere possimus, omnis voluptas assumenda est, omnis dolor repellendus. Temporibus autem quibusdam et aut officiis debitis aut rerum necessitatibus saepe eveniet ut et voluptates repudiandae sint et molestiae non recusandae. Itaque earum rerum hic tenetur a sapiente delectus, ut aut reiciendis voluptatibus maiores alias consequatur aut perferendis doloribus asperiores repellat.

System Engineer

Nam libero tempore, cum soluta nobis est eligendi optio cumque nihil impedit quo minus id quod maxime placeat facere possimus, omnis voluptas assumenda est, omnis dolor repellendus. Temporibus autem quibusdam et aut officiis debitis aut rerum necessitatibus saepe eveniet ut et voluptates repudiandae sint et molestiae non recusandae. Itaque earum rerum hic tenetur a sapiente delectus, ut aut reiciendis voluptatibus maiores alias consequatur aut perferendis doloribus asperiores repellat.

CrystalEn

Duis autem vel eum iure reprehenderit qui in ea voluptate velit esse quam nihil molestiae consequatur, vel illum qui dolorem eum fugiat quo voluptas nulla pariatur.