

# Monocrystalline vs. Polycrystalline Solar Panels

---

 [solarisesolar.com/monocrystalline-vs-polycrystalline-solar-panels](https://solarisesolar.com/monocrystalline-vs-polycrystalline-solar-panels)



A solar panel is a composition of solar photovoltaic (PV) cells that absorb light from the sun and convert it into electricity. Typically, solar cells are made of silicon. There are two common technologies used for creating solar cells for panels. Knowing the pros and cons of using the most prominent solar technologies can be important to your purposes for using solar energy. So, it's [monocrystalline vs. polycrystalline solar panels](#) for consumers interested in going solar. Which of these two primary versions makes the best solar panels for home energy?

## Two Most Common Types of Solar Panels

---

Silicon is used to build today's [energy-efficient solar panels](#). The silicon solar cells in the panels are developed with both a positive and a negative layer in order to generate an electrical field. It's not unlike the way a battery works to create power. The majority of today's most commonly installed solar panels are built from either polycrystalline or monocrystalline silicon cells.

### Monocrystalline Solar Panels

---

This widely used form of silicon solar panel composition has a distinct appearance and a higher efficiency rating than the polycrystalline alternative. This solar technology has been used for a long time in the industry and has a well-established track record of long-term durability. This type of panel also costs more than the other most popular panel type we're considering here.

- *Construction:* A silicon cell consists of a single crystal. That enables electrons to move more freely, thereby improving electricity generation efficiency.
- *Appearance:* Monocrystalline solar cells have a consistent pattern of black squares, usually with a black back sheet (the outer layer).
- *Performance:* The average range of efficiency varies among estimates, but generally speaking, the *maximum* is between 20-24%. Monocrystalline cells are more efficient in conducting electricity in adverse conditions, such as shade or high outside temperatures. That means they can generate more solar power than the same-sized polycrystalline cells.

## Polycrystalline Solar Panels

---

Also called multi-crystalline silicon panels, this solar panel is the most used worldwide. The solar cells are covered with non-reflective glass for greater absorption of sunlight. But, the performance rate of this technology remains considerably lower than the monocrystalline model.

- *Construction:* Many fragments of silicon crystals are heated to melt them together to form a solar cell.
- *Appearance:* The multifaceted solar cells are not consistent in appearance across the panels. So, instead of the smoother look of panels made from monocrystalline cells, the unit surface looks more like a panel of crystal stones, usually with a blue tone.
- *Performance:* The average efficiency rate may vary between estimates, but, generally speaking, it is a maximum of around 16% for polycrystalline panels. They are less efficient than the monocrystalline panels but less expensive.

## Comparing Silicon Solar Panel Types

---

As with anything else, it's a case of better quality costing more in solar panel technologies. The question is about what is the best value for your investment in solar. Here's a quick side-by-side comparison to feature the essential points. These should be the key considerations in determining which kind of solar panel makes the best sense for your home, your family's needs, and the budget you have set for your solar energy system:

Silicon Cell Type	Pros	Cons
Monocrystalline	Higher efficiency, more durable, more aesthetically attractive	Higher cost
Polycrystalline	Lower cost	Less efficient, less durable, less aesthetically attractive

## Best Value in Home Solar Technology – Solarise Solar?

---

We help homeowners and businesses throughout Colorado obtain the best solar energy systems for their needs. Solarise residential and commercial solar energy experts can custom design an affordable solar energy system configuration for your home or commercial building.

**For more information on solar cell types and solar panel options, call Solarise Solar at (719) 792-7725, or contact us online to schedule a free Energy Cost Analysis.**

---