SOLARTECH

WHERE SOLAR MEETS ART & TECHNOLOGY

European Solar Energy Storage

Why can t we magnify solar rays for energy

Overview

TL;DR: Concentrated sun rays are reflected onto a tower, where they're magnified and used to heat a block of salt to 1,000ºF. The salt is then used to convert water to steam, which powers a turbine.

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TL;DR: Concentrated sun rays are reflected onto a tower, where they're magnified and used to heat a block of salt to 1,000ºF. The salt is then used to convert water to steam, which powers a turbine. Photovoltaic cells are continuing to drop in price, though, making that a more efficient way overall.

ELI5: Why can’t we use huge lenses + sunlight to heat water to turn turbines and generators to produce electricity?

I’m sure that this is dumb and has been discounted decades ago, but if a huge lens can produce huge heat, couldn’t we produce some electricity that way?

Edit: What I should have added. Does using a magnifying glass on a solar panel increase electrical energy?

In this quick guide, we’ll discuss if using a magnifying glass on a solar panel increases more electrical energy. You will learn how it works and decide if this is relevant to your solar project or experiment. Let’s check it out! Can a Magnifying Generate Electricity?

No. A magnifying glass doesn’t generate electricity.

Does a magnifying glass generate electricity?

No. A magnifying glass doesn’t generate electricity. As the name implies, the primary function of a magnifying glass is to magnify and not generate electricity. What’s the Energy Transformation of a Magnifying Glass?

The energy transformation of a magnifying glass is from mechanical to thermal energy.

Can a magnifying glass be used to concentrate sunlight?

Lenses and mirrors can be used to concentrate sunlight. All schoolboys know that a magnifying glass can focus sunlight into a small spot to create very high temperatures. Concentration is not creation, of course.

What is the energy transformation of a magnifying glass?

The energy transformation of a magnifying glass is from mechanical to thermal energy. Generally, the act of burning an object with a magnifying glass is known as COMBUSTION. In this case, the energy from the sun is coupled with a magnifying glass. The heat energy is then concentrated, leading to burning. How Hot Can a Magnifying Glass Get?

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How hot can a magnifying glass get?

A magnifying glass can get as hot as 400 degrees at its focal point. In order to determine the level of hotness a magnifying glass can get, one needs to determine the temperature of the sun’s surface. Is it possible to subject an object to the heat of more than 6000K using a magnifying glass?

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Are magnifying glasses a good idea?

While this is an interesting concept and not categorically implausible, we don’t know of anyone who has made such a notion practical yet.* For one: Magnifying glasses increase heat intensity in a focused area, but the photovoltaic process that makes solar marvelous is based on light, not temperature.

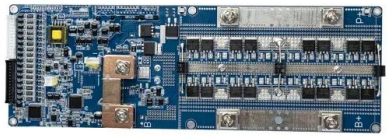
Why can t we magnify solar rays for energy

eli5: Does casting rays through magnifying lens on the solar ...

A magnifying lens would take all of the light going through it and focus it on a smaller area. This would increase the amount of energy hitting a particular solar panel, which could increase its ...

Tiny Lenses and Mirrors May Bring Concentrating ...

The lenses and mirrors focus sunlight on the solar cell like a magnifying glass. With a gentle nudge, the concentrators move relative to the cells, keeping sunlight in focus all day.



Glass Magnifies The Sun'S Rays , British Glass

Glass already plays a leading role in harnessing solar power, but new research may be changing how it is used in PV applications. Beyond windows, glass has recently found itself involved with ...

Tiny Lenses and Mirrors May Bring Concentrating Solar Power to ...

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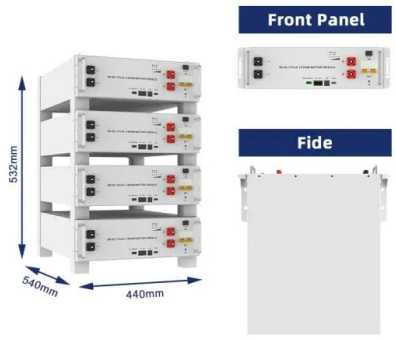
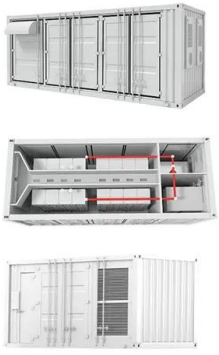


Lenses & mirrors Sunlight The Energy Advocate

A 2-inch diameter magnifying glass concentrates the sunlight into a small spot, but it also leaves a 2-inch diameter "shadow" where sunlight is not present. The small spot is nothing more and ...

electrical engineering

I have been wondering about this question for quite some time. Assuming an ideal case, the energy from photons hitting solar cells is converted into electric energy as ...

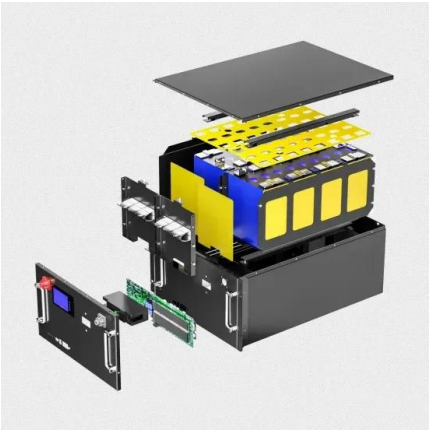


What happens if you reflect more sunlight on to a solar cell

Silicon solar cells used in flat plate are designed for use under normal sunlight (what we call "1 sun") so they are relatively large and have a relatively large internal series resistance, so they ...

ELI5: Why can't we use huge lenses + sunlight to heat ...

While photovoltaics are more efficient per unit area, and thus better to use on personal rooftops and the like, solar thermal plants like this one are arguably better for mass energy production for several reasons.



Glass Magnifies The Sun'S Rays , British Glass

Beyond windows, glass has recently found itself involved with solar power as a means of magnifying the sun's rays. So-called mirror augmented PV systems seek to use glass mirrors ...

Magnifying lens used to concentrate some solar rays ...

Download this stock vector: Magnifying lens used to concentrate some solar rays on a piece of paper. Digital illustration. - PXY876 from Alamy's library of millions of high resolution stock photos, illustrations and vectors.

B5 We build a thermal solar plant - With a magnifying glass ...

B5 We build a thermal solar plant - With a magnifying glass and mirror The two subexperiments on concentrating sunlight with a lens and a mirror are particularly suitable in physics class for ...

A novel way to concentrate sun's heat

Most technologies for harnessing the sun's energy capture the light itself, which is turned into electricity using photovoltaic materials. Others use the sun's thermal energy, usually concentrating the sunlight with mirrors to ...

Why aren't solar panels made using magnifying lenses?

Everything here seems crazy if you are using a giant magnifying glass and focus it on anything, it will burn right through it. Why not use the focused sun energy and create steam that drives a ...

Can A Magnifying Glass On A Solar Panel Increase More Energy?

In this quick guide, we'll discuss if using a magnifying glass on a solar panel increases more electrical energy. You will learn how it works and decide if this is relevant to ...

Under the magnifying glass: A new type of solar energy

What Does This Mean? The technology is called 'concentrated solar power'. It works by using A LOT of mirrors angled to reflect the sun's energy on to one target spot like a ...

New optical device could help solar arrays focus light, ...

Stanford engineers' optical concentrator could help solar arrays capture more light even on a cloudy day without tracking the sun

How hot can you get something using a magnifying glass and the ...

Thermodynamics says you can only get something as hot as the source of radiation, and the sun's photosphere is around 5000 degrees C, but the solar corona is over 1 million degrees. ...

Magnification of the sun

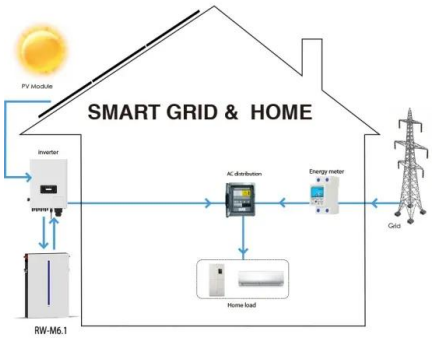
Quick question, could we magnify the sun into (or onto) an array of solar panels that then transfer the energy to earth using radiation (microwave?). Secondly could it be ...

Can Magnifying Glasses Create Heat?

Magnifying glasses magnify the intensity of heat in a focused area, but in order to be of beneficial use in solar panels there must be a mechanism to disperse the heat and cool ...

Why can't ultraviolet light, x-rays and gamma rays be ...

From my reading it seems that you can't capture or absorb ultraviolet light, x-rays and gamma rays in order to create energy. UV-C and UV-B seem to carry more energy than visible light but it doesn't seem like that energy is harvested. Is ...



Does Magnifying Glass Increase Solar Power?

A magnifying glass, also known as a convex lens, works by converging light rays to a single focal point, intensifying the energy contained within those rays. This property of magnifying glass has the potential to significantly increase the ...

Magnified Solar Panels

Here's how it works: The magnifying glass focuses the sun's rays onto a small area of the solar panel. This increase in sun exposure makes the solar panel work harder, and ...

The Power of a Simple Magnifying Glass

Concentration of Solar Power From First Principles Figure 3 shows my calculation for the magnifying glass' concentration of solar power. I make the assumption that we can approximate the diameter of the spot by ...

Does Magnifying Glass Increase Solar Power?

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How much heat can concentrated sunlight produce?

Thunderstorms concentrate solar energy (albeit inefficiently) via work rather than heat and typically generate 30000 K lightning bolts (the strongest lightning bolts may be even hotter).

Why you absolutely cannot stare at the sun without ...

The sun is the most powerful source of energy in the solar system. It's the most energetic object for light-years in all directions (it's literally a huge fusion reactor).

Can A Magnifying Glass on Solar Produce More ...

While we don't currently staff a chemical engineer or photovoltaic genetrix, we do have the expertise and integrity to help you take advantage of available technology in order to power your home with sunlight in ...

Can A Magnifying Glass on Solar Produce More ...

For one: Magnifying glasses increase heat intensity in a focused area, but the photovoltaic process that makes solar marvelous is based on light, not temperature.

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