



KUANTUMEK TECHNOLOGY®

➤ Solar Focusing Systems



Material: Polycarbonate

Dimension: 950X1950X100;
1200X1950X100

Heating: Increase water temperature by approximately 60 degrees – 90 degrees from sunset to sunrise.

We produced for Solar Focusing Systems

* **Water Heating**

* **Electricity**

- Increase the temperature of the system from the sunrise to sunset.
- 25 years life time.
- Absorption of High Density Light Beams
- Cleaning energy source
- High Performance Optical Quality
- The seasonal water temperature ranges from 90 degrees to 100 degrees. In addition, the solar focusing lens allows condensation of sunlight to reach the sunrise until the sun is steep so that the water temperature can be kept constant.
- Absorption into the system can be achieved without using the selective surface due to the vertical incidence of the light.

<http://www.kuantumek.com>

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Management of the SUN

Solar concentrators provide high energy density solar radiation to a target receiver, thus raising the temperature of the target. Depending on the degree of concentration, the optical properties (solar absorption and radiation) of the target surface, and the target's cooling rate, the following may occur:

- the target will melt (high concentration);
- the target will reach an equilibrium temperature with natural cooling (modest concentration); or
- the target will reach an equilibrium temperature with a forced (circulating) coolant (intermediate concentration).

The first instance is that of a solar furnace. The second may be considered a solar cooker or solar oven. In the third instance, the heated coolant is used directly as, for example, hot water or steam in home or industrial applications, or indirectly, as a vapor (steam) to generate electricity. In the case of electricity production, common energy conversion devices provide an intermediate step--shaft rotation--between the heated fluid and conversion to electricity. If the target of the concentrated sunlight is a photovoltaic cell, or an array of cells, electricity will be produced directly. The degree of solar concentration, cell conversion efficiency, the design of the cell assembly, and the cell material will determine if natural circulation or forced circulation cooling is necessary for efficient operation of the cell. Currently, the cost/unit area of a concentrator is less than the cost/unit cell area. As a result, concentrators are used to reduce

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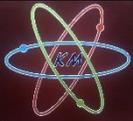
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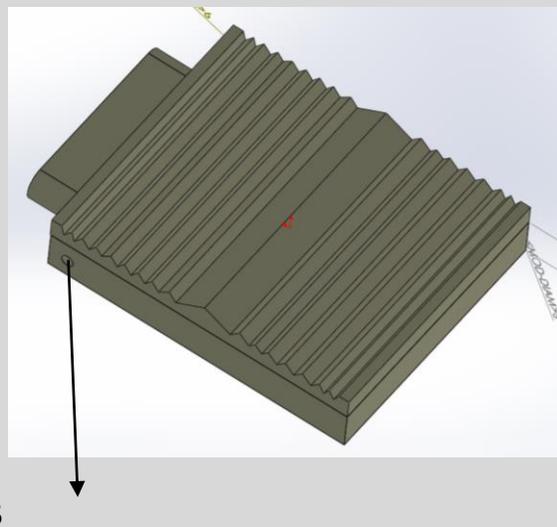
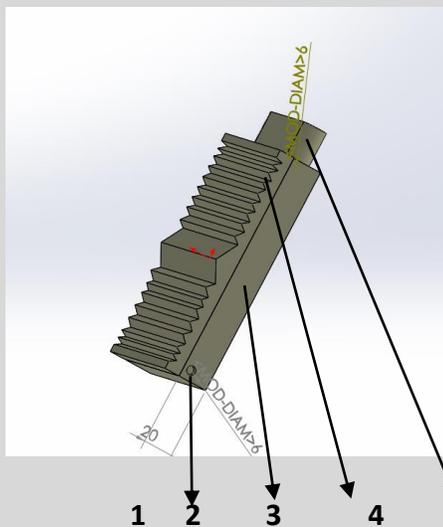
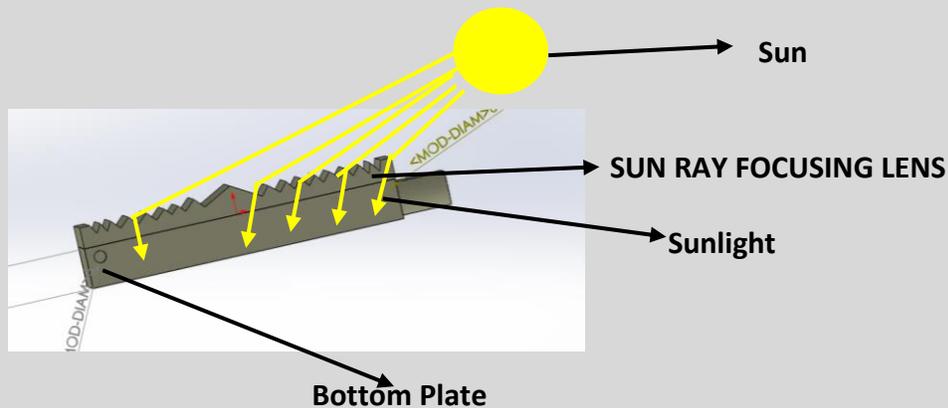
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cell area. Should the cell area become less expensive than the concentrator area, concentrators would not be utilized. This paper deals principally with concentrators for thermal applications rather than for applications with photovoltaic cells. Emphasis is placed on applications in less developed countries.



- 1.) Cold water entry, 2.) Thermos Systems, 3.) Sun Ray Focusing Systems, 4.) Water tank, 5.) Heat water entry

[Sun Ray Concentrator Lens Video1](#) [SunRay Concentrator Lens Video2](#)

R & D Project has been continuing...

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