Solar Cookers

Eco Tech
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Introduction of our works

- Legally a limited corporation, but the concept is more like a ‘workers co-op’.
- A workers co-op (workers cooperative) is an entity where the workers jointly fund and operate by themselves
- People oriented projects
  - More emphasis on environment and releasing social burden, than profit
- Social helpfulness
- Working with a mission, a new style of work
The Businesses of Eco Tech

- Sales and Construction of natural energy related systems and hardware: solar energy systems, solar power water heater, solar cooker, micro wind power generator, Morzine water pumping windmills, Bio gas plants.

- Sales and Construction of Housing related systems and hardware: rainwater utilizing systems, rainwater tanks, solar heat storage, Izena convector floor heating, wooden pellet stoves, Ishii method septic tanks
What is a Solar Cooker?

- A solar cooker is a cooking device utilizing solar power.
- An estimated 500,000 is used worldwide; NGOs are working to spread this in India, China, and others.
- UNICEF estimates that 200,000,000 Solar Cookers can potentially be spread worldwide.
Significance of Solar Cookers

- Contributes to prevention of Global Warming
- Contributes to slowdown of deforestation and lack of fuel wood
  According to estimations of UNICEF, use of Solar cookers can reduce 36% of world’s fuel wood use, and prevent 35 million tons of wood from being used.
- Contributes to Health
  Solar heated water at 65 degrees can prevent most of water borne diseases where 80% is caused by contaminated water; Also prevents inhale of smoke from the wood fuels.
Significance of Solar Cookers (2)

- **Generation of Time**
  Releases women and children from hard work and time consumed for firewood collection and maintaining the fire

- **Contributes to addressing Income Gaps**
  Solar cookers are low cost solutions; Used cardboard boxes which could easily sustain for several years (some 10 years), and save on fuel cost: which helps low income households spend more on other necessities.

- **Environment Education**
  Solar cookers are used in environment education classes in developed countries

（参考文献：手作り企画「ジャーニー・トウ・フォーエバー」）
Nepal

Solar Cookers made out of Bamboo baskets
Solar Cookers constructed in a high school for girls in Afghanistan by a German NGO
At the refugee sites of Haiti
Jammu Kashmir, India

A village 100% run on solar cookers (run by July Ladakh, NGO)

Temperature rises up to 400°C
Various Types of Solar Cookers

- **Hot Box Type**
  Raises temperature by collecting sunlight. Suitable for hot pots; mid to high temperature. Also called solar ovens.

- **Parabola Type**
  Heats the bottom of the pot by reflection of sunlight. Enables high temperature in short time.

- **Panel Type**
  A Combined type, having features of both Hot Box Type and Parabola Type. Simple structure and low cost.
Eco Box Solar Oven

*Materials: Sunlight collecting board (cardboard with Aluminum sheet)
*Lid: Transparent Polycarbonate
*Size: 500 × 500 × 480
*Weight: 860g
*Storage: Foldable
*Retail Price: US $33 (incl.tax)
*Optional Stand: US $21
*Manufactured by: Shizennokaze
Parabola Type

‘Karupika’

**Materials:**
Reflecting Mirror
(Aluminum vapor high reflecting panel board)

**Size:** Parabola diameter 800 mm

**Weight:** 3.08kg

**Manufacturer:** Kobo Amane

**Retail Price:** US$327

Cooking temperature rises up to 205 degrees on a sunny day
Parabola Type

Sunny Cooker
Foldable Type
Time for assembly: 5-10 minutes
Retail Price: US$432 (incl.tax)
Manufacturer: Ogawa Crown
反射クロス
太陽の光を集める。

五徳取付け
ボルト
反射クロスと五徳を固定します。

露先
外周リングを通します。

スライド
ファスナー
太陽角度を合わせ、固定します。

支柱
反射クロスを三脚に取り付けます。

三脚
安定して反射クロスを自立させます。

外周リング
球面精度を保持します。

五徳
調理受台として、鍋等を乗せます。

五徳パイプ
支柱と結合し五徳を安定させます。

総重量
約3.5(kg)

箱包容積
305×820×120(mm)