

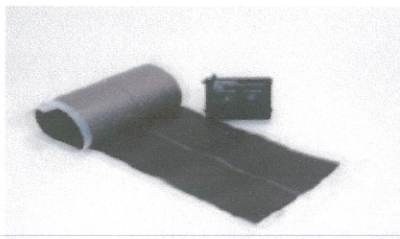
“Luz Solar” Superlight Weight, Thin Film Type Solar Panel



January, 2015

Kens.co
Tosu, Japan

What is “Luz Solar”?



Luz Solar Panel & Charge Controller

“Luz Solar” is Super Lightweight (less than 1Kg), Thin-Film (2mm thickness) type solar panel that can be portable and installed even the low load capacity of the roof thatched with grass or straw, or made by galvanized iron (tin) etc.

Luz Solar



Demonstration in Guinea


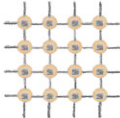


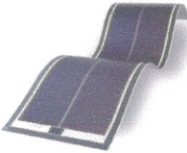
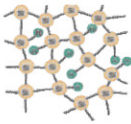




Demonstration in Nigeria



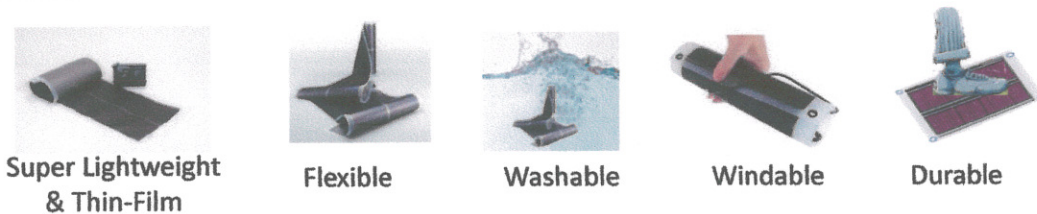
Demonstration in Kenya

Comparison of Solar Panels

Crystalline Silicon Solar Panel (covered by glass)		Crystalline Silicon 	 Low Cost by Mass Production in China  Weight: 8~20Kg/m², Thickness: 35mm
Luz Solar Amorphous Silicon Solar Panel (Thin-Film type)		Amorphous Silicon 	 High Quality made in Japan  Weight: 1Kg/m², Thickness: 1 mm



It is recommended to use Luz Solar in the applications where the advantages of Thin-film type can be utilized.

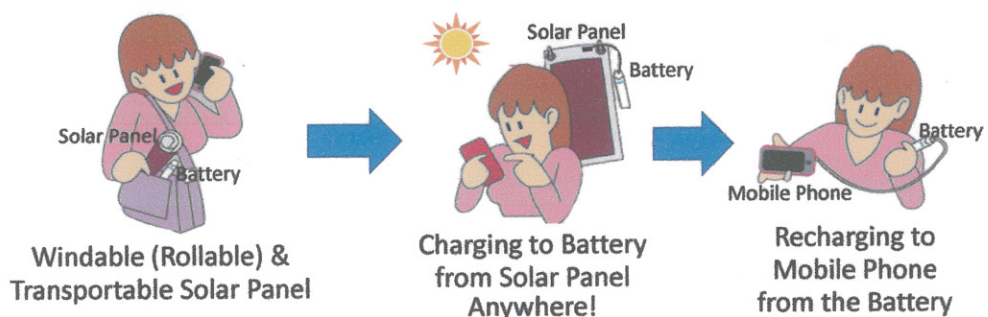


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1. Charging to Mobile Phone Anywhere



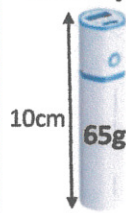
Portable Luz Solar can charge the power to Mobile Phone anywhere even when you visit the villages without access to electricity.



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2. On the Move & Temporary Use

Lithium Ion Battery

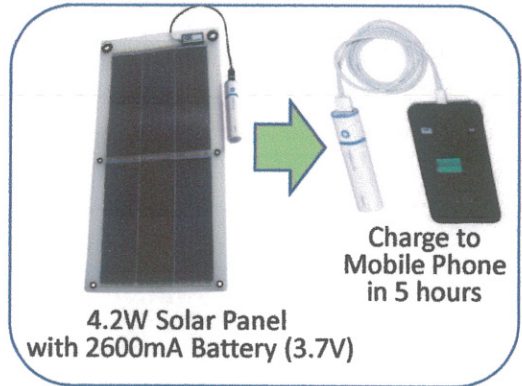


Front Side

Thin-film type Solar Panel

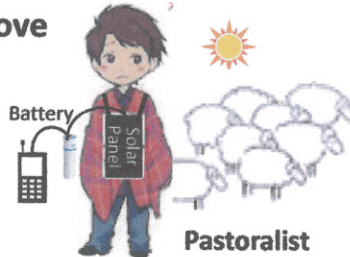


Back Side

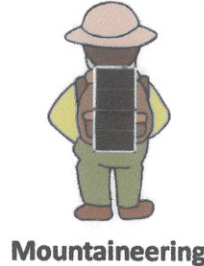


4.2W Solar Panel with 2600mA Battery (3.7V)

(1) On the Move



Pastoralist

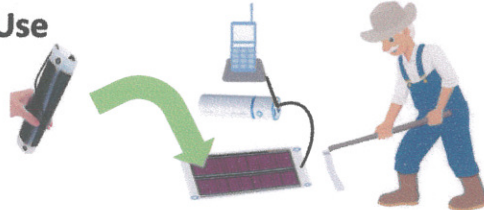


Mountaineering



During Hajj

(2) Temporary Use



Farm Work at Remote Field



Patrol by Military/Police

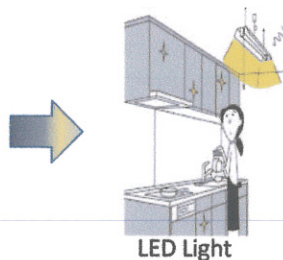
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3. Portable type Solar Panel for Apartment House

During power failure, Luz Solar can supply the power to the house.



Power Outage



LED Light



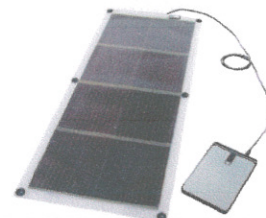
Charge to Mobile



DC-motor Electric Fan

16W Solar Panel

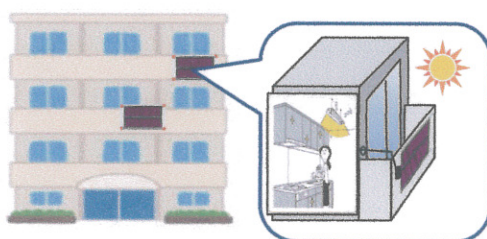
- L888mm x W360mm
- Thickness: 2mm
- Weight: 400g



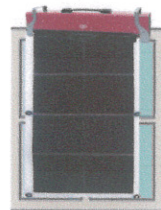
Lithium Ion Polymer Battery

- 23Ah Capacity (3.7V)
- W124mm x H185mm x D20mm
- Weight: 560g

Even at the apartment house without the roof or garden, Luz Solar can be installed on the veranda, window or wall.



Hanging down form veranda



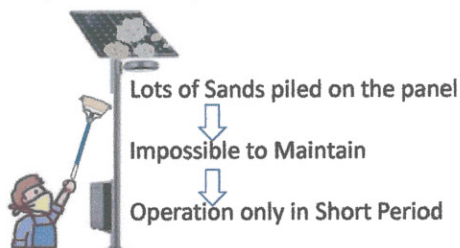
Hanging down form window

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4. Maintenance-Free Solar Powered Street Light

(1) Crystalline Silicon Solar Panel

Crystalline Silicon Solar Panel covered by glass installed in Middle East and Africa faces the troubles and operates only for a few years.



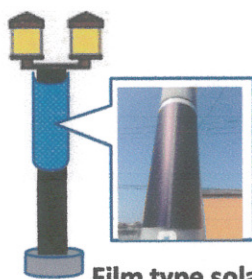
Impossible to wash away the sands on the panel installed at the top of the tall pole



Crystalline solar panel is Fragile against stone throwing

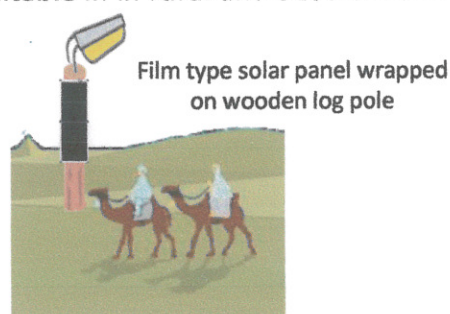
(2) Film Type Solar Panel (Luz Solar)

Film Type Solar Panel is vertically wrapped on the surface of the pole on which the sands are not attached. The maintenance free solar panel is suitable in rural and desert areas.



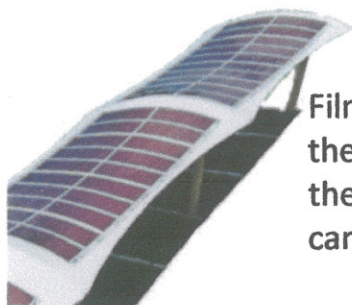
Film type solar street light

Almost No Sands on the Panel
↓
Maintenance Free
↓
Long time Operation



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5. Solar Powered Tent



Film type solar panels (Luz Solar) can be installed even on the tents and the awnings (fabric sun-shade) and supply the electric power to mobile phone, lighting, surveillance camera, large size fan, mist jet cooling system etc.

(1) For Charging to Mobile Phones



(2) For Lighting



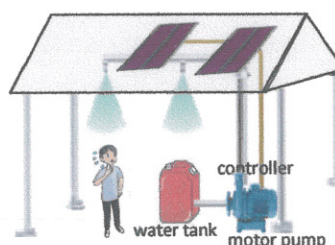
(3) For Surveillance Camera



(4) For Large Size Fan

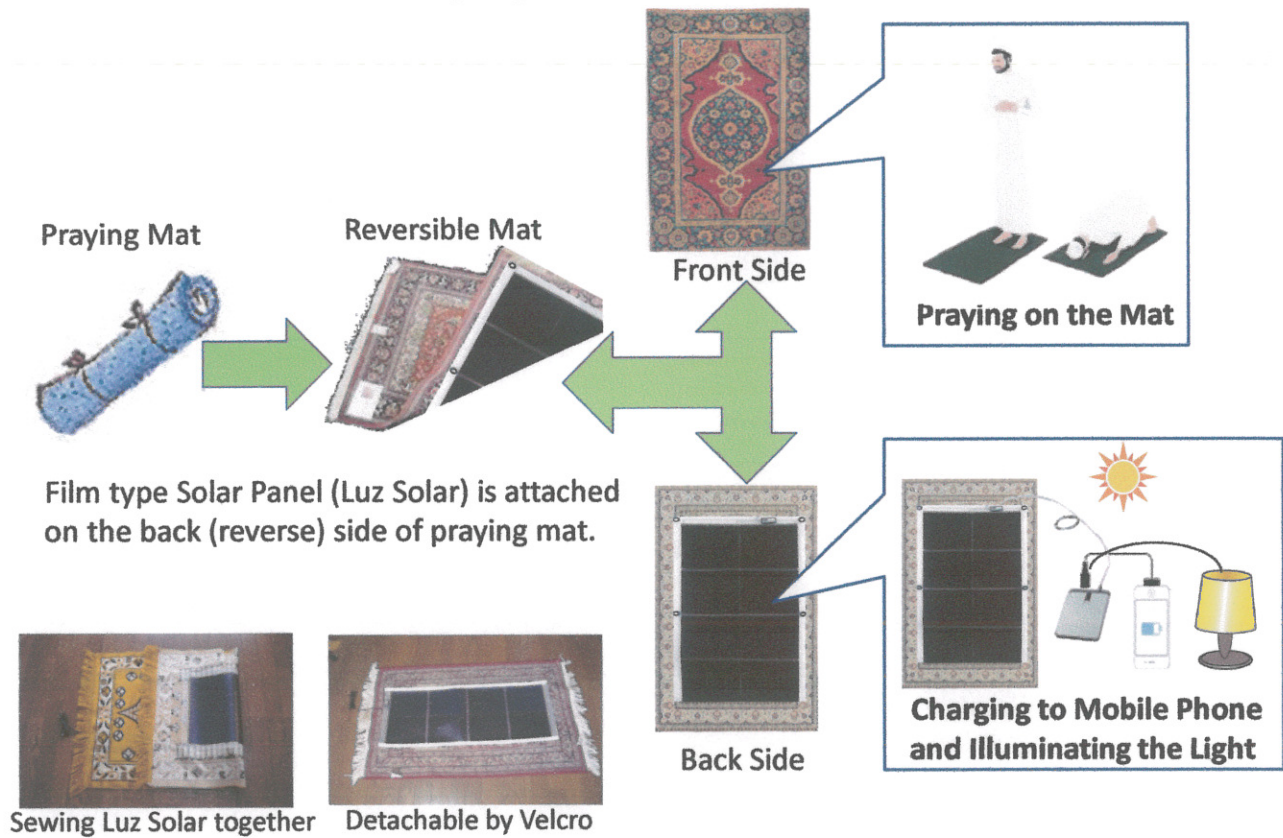


(5) For Mist Jet Cooling System



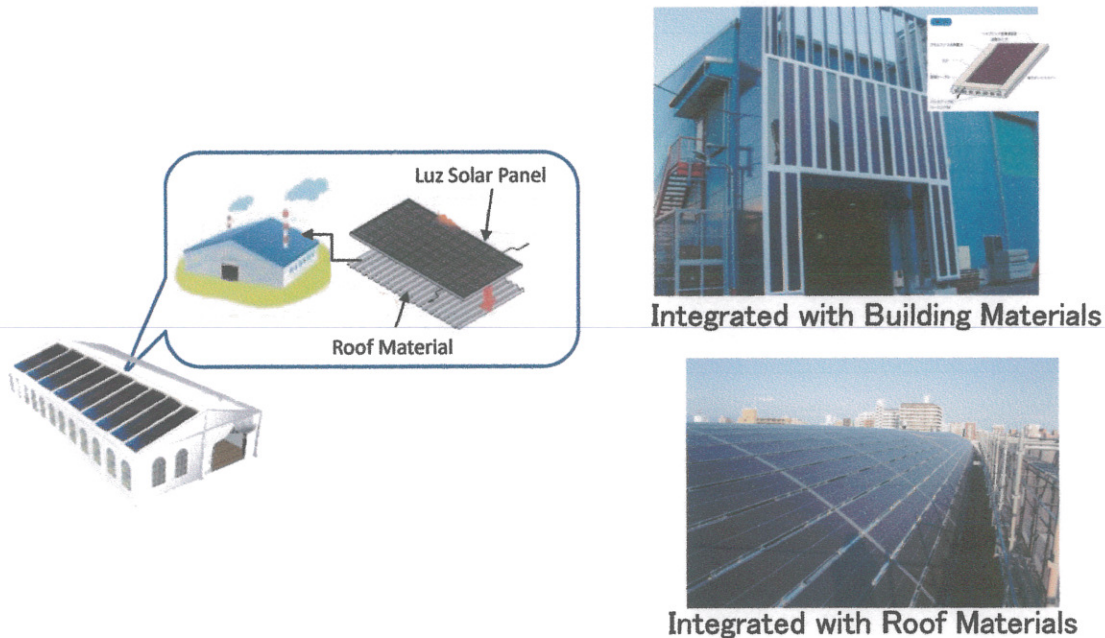
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6. Solar Powered Praying Mat



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7. Integrated Roof Material at the Factory



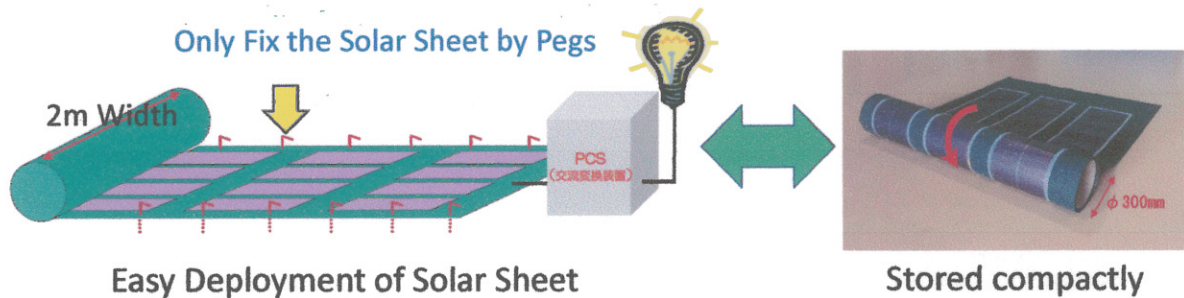
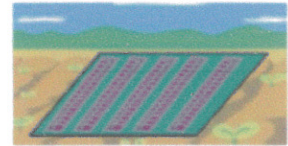
We design and supply the integrated roof materials mounting the Thin-film type Solar Panels (Luz Solar) for the roof of the factory.

- We design the custom-made roof materials of factory together with the Thin-film type Solar Panels.
- Thin-film type Solar Panels on the roof supply the electricity energy for the lights of the factory.

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8. Weeding Solar Sheet

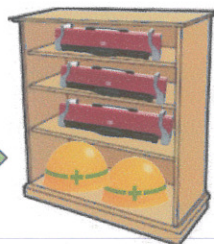
During the agricultural off-season, the Weeding Solar Sheet can be easily deployed to free from the weeds on the ground while the electric power can be generated.



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9. Disaster Countermeasure Use

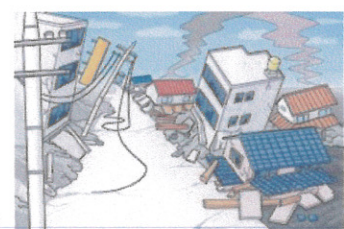
1. Merit



Compact to store easily at shelf

2. When to Use

Solar Panels should be stored at municipal office for disasters. Solar Panels can feed the power for "Disaster Control Center".

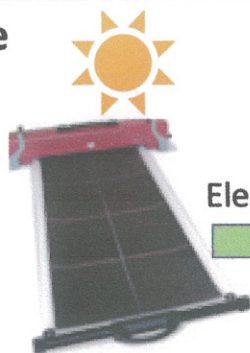


In case of Disaster

3. How to Use



Mobility



Immediate Deployment

Electricity

Disaster Control Center



Video Camera
Transceiver
Digital Camera
Loud Speaker

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10. Camping Car Use

- (1) Thin-film type solar panel (Luz Solar) has the feature to be resistant to vibration even on the roof of the camping car.
- (2) Luz Solar can be transportable from the camping car to the tent or carryable for potable use by changing the size of the batteries.

