CapaSeries

LED Solar Lights

Sales Agent

L-kougen

L-Kougen Capa Series Sales Performance　(Cumulative, 2008 ~ May 2016)

Domestic 4889 installations、Overseas 288 installations

The problem with most solar lights:
"Battery life is too short"

Solar lights have long been criticized for their poor battery life, but the Capa Series has solved this problem with an original idea and some new technology. The Capa Series has since been a hit, and in 2012, private corporations made up 40% of all orders. We are headed steadily towards widespread adoption.
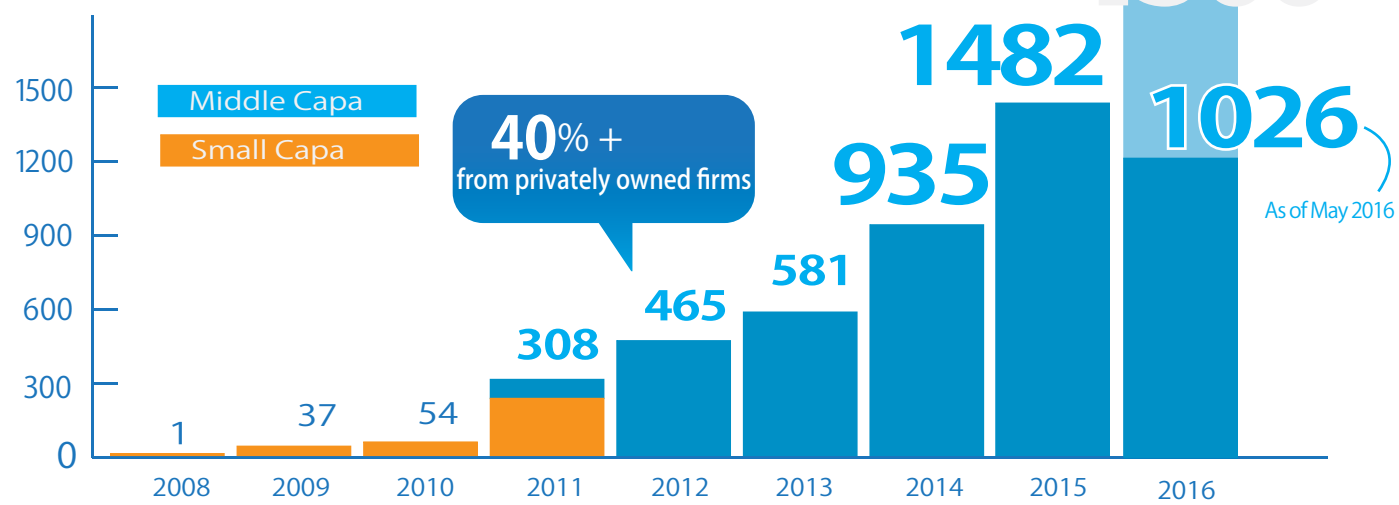
Afghanistan　16

272
Bhutan

100　10

Hokkaido　47

626
Chubu Region

Tohoku Region 1535

Chugoku Region 114

259
Kyushu,Okinawa

Kanto Region　595

Kansai　688

Shikoku　827

Estimated
1500~

1482
1026
As of May 2016

935
581

Middle Capa
Small Capa

40% +
from privately owned firms

308
465

1
37
54

1500
1200
900
600
300
0

2008　2009　2010　2011　2012　2013　2014　2015　2016

※Numbers based on number of battery units

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Making a Truly Practical Solar Light

Our development started with the simple desire to make a practical solar light; a solar light that isn't just "eco-friendly", but a solar light that can rival conventional lighting in performance. We are always aiming to make our solar lights more practical.

1 What makes the Middle Capa Plus different from conventional solar lights?

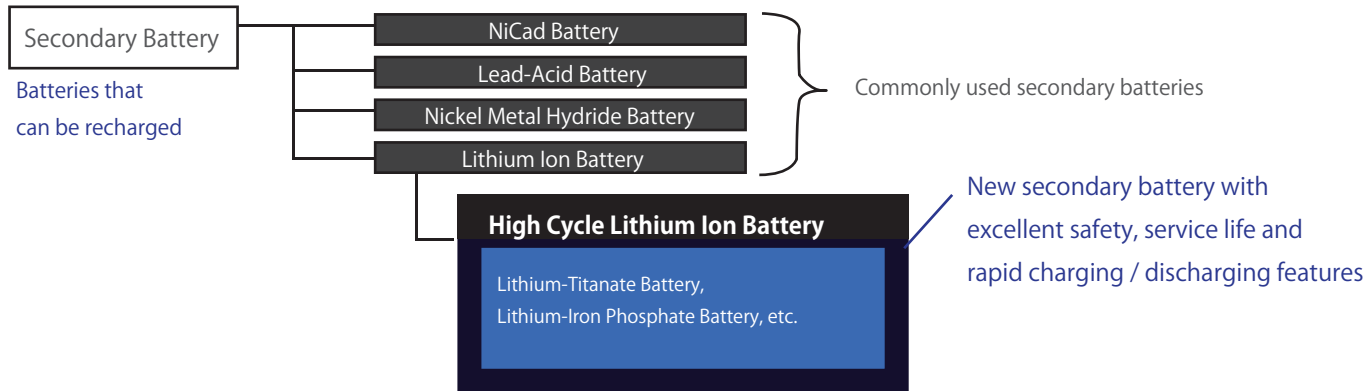## Uses a High Cycle Lithium Ion Battery

Li-ion batteries, "Toshiba SciB™" and "NEC ALM™"

Notable features that set them apart

① Low Temperature Performance, ② Safety, ③ Long Service Life

SCiB and ALM greatly outperform conventional Li-ion batteries in these areas.

The Capa Series solar lights were developed to take advantage of these features

Secondary Battery

Batteries that can be recharged

- NiCad Battery
- Lead-Acid Battery
- Nickel Metal Hydride Battery
- Lithium Ion Battery

Commonly used secondary batteries

High Cycle Lithium Ion Battery

Lithium-Titanate Battery, Lithium-Iron Phosphate Battery, etc.

New secondary battery with excellent safety, service life and rapid charging / discharging features

By using this battery, we were able to make a highly practical solar light that can operate in a wide range of environments and usage scenarios.

High Durability

Lithium titanate batteries and olivine-type lithium iron phosphate batteries are stable at high temperatures, changing their electron conductivity, making them very safe.

SCiB™   SCiB™

Pictured: A short circuit test under extreme stresses. The battery does not show any signs of thermal runaway, leaking, or catching on fire.

Long Service Life & Maintenance-Free Usage

Until now, many solar lights required a battery replacement after about 3 years. By using a high cycle battery, we were able to achieve long-term maintenance free usage.

The diagram summarizes the cycle data for different kinds of batteries. Even though the SCiB battery was tested at 3C, it shows dominant performance in cycle retention rate compared to its competitors.

※Data for individual cell units   Charge/discharge retention at 25℃

Charge / Discharge Retention Rate （%）

10000 cycles about 90%

SCiB™(3C)

Deep cycle lead-acid (1C)
Conventional Li-ion (1C)
Lead-acid (1C)

(Cycles) 0 1000 2000 3000 4000 5000 6000 7000 8000 9000
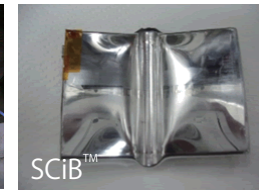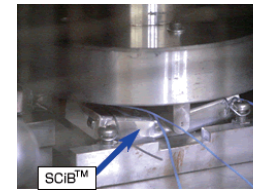
Eg：SCiB™

Wide Range of Temperatures (-20℃〜45℃)

Can operate in a wide range of temperatures. For this reason we were able to create a solar light that can operate from -20 to 45 degrees Celsius. Can be used anywhere in Japan, from Hokkaido to Okinawa.

【Image】

Even in the middle of the winter (Ebetsu, Hokkaido), the Middle Capa Plus will operate flawlessly.

1.5x Charge / Discharge Capacity ™

For example, SCiB compared to a standard lead-acid battery, can discharge about 1.5 times more for the same given charge. While you can only achieve a 70% discharge to charge ratio for lead-acid batteries, SCiB can achieve 97%. This allows SCiB batteries to remain effective on days with very little sunlight.

Result：Because a higher voltage is needed for the charging circuit, the difference is 1.5x!

+27.50 Lead-acid charge/discharge curve
SCiB™ charge/discharge curve +21.18

Voltage (V)

70.5wh charge
充電
68.4wh discharge
放電

For an input of 100, can output up to 97%

SCiB™ battery （96wh）

50.0wh charge
Lead-acid battery
36.2wh discharge

For an input of 100, can only output 72%

0.0 7200.0 14400.0 21600.0 28800.0 36000.0 43200.0
Time (s)

（From Our Measurements） e.g. SCiB™

Making a Truly Practical Solar Light

Our development started with the simple desire to make a practical solar light; a solar light that isn't just "eco-friendly", but a solar light that can rival conventional lighting in performance. We are always aiming to make our solar lights more practical.

2 | What makes the Middle Capa Plus different from conventional solar lights?
The Weather Synchronization   System Adapts to Inclement Weather

Turns on every day

The high cycle Li-ion battery allows for more efficient charging on days with bad weather. However, the battery may have trouble charging after a string of days with bad weather. This is why we developed the Weather Synchronization System. Simply put, it adjusts the brightness of the light at night based on the charge accumulated over the day.

Until now, solar lights would prepare a larger than necessary battery as a countermeasure for inclement weather. However, as you can see from the data, the number of days the battery does not charge fully in a year is less than 20% (17.7%) in Tokyo. Adding a battery with 5 ~ 10 times the necessary capacity for these days is neither practical nor economical.

For Weather Synchronization, if the battery does not charge fully over the day, the system will proportionally decrease the brightness of the light at night, but in return, the light will stay on throughout the night. For example, if the battery is 45% charged, the brightness of the light will be decreased by 55%. Even for extremely low battery levels, like 10%, the light will be very dim but will not fade until its predetermined time in the morning. This avoids a situation where the light turns off completely in the middle of the night.

A 30% decrease in brightness according to a luminometer (measured in lux) is barey noticeable for most people. In fact, it is only after a 50% decrease in brightness that some people can detect a difference in brighness. This is because humans, unlike luminometers, adjust their pupils to take in more light.

Until Now

Power Used 80Wh

Because it cannot charge on days with little sunlight, it charges 5 days worth (varies by specifications). The battery capacity is greatly increased to accomodate this.

Maintenance box at bottom of the pole for easy access

（Power Generation）

Day 0	80 Wh
1 days' worth	80 Wh
1 days' worth	80 Wh
1 days' worth	80 Wh
1 days' worth	80 Wh
1 days' worth	80 Wh
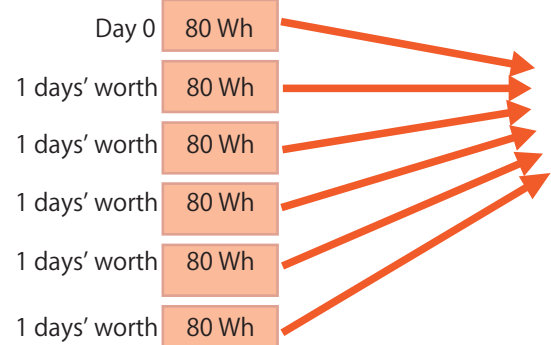
Battery that can charge 5 days' worth of power

Weather Synchronization System

Power Used 80Wh

(Power Generation)   (Power Used)

1day's worth   80Wh   →   80Wh

In general, the battery stores the same electrical power that it uses during the day. For days with little sunlight (rainy, cloudy), the Weather Synchronization System is activated.

The key factor is the amount of sunlight per day. If there is more than 8MJ, the battery will most likely reach a full charge. When it is less than this, the battery may not charge fully, resulting in a dimmer light at night. For example, an 80% battery charge will result in a 20% decrease in brightness.

Also used to light sign boards

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3 — What makes the Middle Capa Plus different from conventional solar lights?

Turns on 365 Days a Year

Shines all year long

Middle Capa Plus V2 (January ~ December 2013)

Reationship between weather, charge, and brightness of light

Measurements （Edogawa, Tokyo）

January 2013

Day	Weather	Sunlight [MJ/m^2]	Charge [%]	Brightness of light (%)
1		11.49	100	100
2		11.23	100	100
3		10.44	100	100
4		12.58	100	100
5		5.16	92	100
6		8.67	100	100
7		9.20	100	100
8		10.70	100	100
9		9.60	100	100
10		11.49	100	100
11		12.79	100	100
12		10.24	100	100
13		11.78	100	100
14		0.30	64	100
15		12.40	100	100
16		6.57	100	100
17		11.29	100	100
18		13.64	100	100
19		12.81	100	100
20		13.32	100	100
21		10.82	100	100
22		4.77	89	100
23		9.32	100	100
24		10.35	100	100
25		10.59	100	100
26		11.77	100	100
27		14.08	100	100
28		12.41	100	100
29		14.00	100	100
30		13.51	100	100
31		13.76	100	100

February

Day	Weather	Sunlight [MJ/m^2]	Charge [%]	Brightness of light (%)
1		11.83	100	100
2		8.75	100	100
3		14.04	100	100
4		10.39	100	100
5		12.06	100	100
6		2.01	73	100
7		13.03	100	100
8		10.03	100	100
9		14.02	100	100
10		15.71	100	100
11		15.04	100	100
12		7.56	100	100
13		16.63	100	100
14		8.03	100	100
15		2.49	75	100
16		17.64	100	100
17		13.89	100	100
18		3.83	83	100
19		1.89	55	100
20		15.34	100	100
21		16.25	100	100
22		13.34	100	100
23		17.60	100	100
24		18.48	100	100
25		19.28	100	100
26		18.32	100	100
27		4.42	87	100
28		18.29	100	100

March

Day	Weather	Sunlight [MJ/m^2]	Charge [%]	Brightness of light (%)
1		8.88	100	100
2		18.76	100	100
3		11.42	100	100
4		10.61	100	100
5		18.24	100	100
6		10.64	100	100
7		15.20	100	100
8		16.97	100	100
9		19.14	100	100
10		13.49	100	100
11		21.48	100	100
12		20.76	100	100
13		18.36	100	100
14		10.71	100	100
15		20.60	100	100
16		20.73	100	100
17		20.11	100	100
18		12.62	100	100
19		20.81	100	100
20		15.39	100	100
21		22.84	100	100
22		20.60	100	100
23		14.51	100	100
24		8.42	100	100
25		2.30	74	100
26		17.84	100	100
27		2.89	77	100
28		17.20	100	100
29		10.79	100	100
30		2.38	75	100
31		3.17	53	100

April

Day	Weather	Sunlight [MJ/m^2]	Charge [%]	Brightness of light (%)
1		20.11	100	100
2		3.96	83	100
3		3.23	62	100
4		22.15	100	100
5		22.02	100	100
6		8.62	100	100
7		22.91	100	100
8		26.21	100	100
9		20.03	100	100
10		13.64	100	100
11		17.71	100	100
12		22.63	100	100
13		25.64	100	100
14		19.55	100	100
15		23.79	100	100
16		23.40	100	100
17		11.54	100	100
18		22.36	100	100
19		8.45	100	100
20		3.64	81	100
21		5.56	76	100
22		26.93	100	100
23		22.31	100	100
24		3.84	83	100
25		21.52	100	100
26		25.28	100	100
27		26.97	100	100
28		27.78	100	100
29		22.93	100	100
30		7.60	100	100

May

Day	Weather	Sunlight [MJ/m^2]	Charge [%]	Brightness of light (%)
1		14.73	100	100
2		19.08	100	100
3		24.58	100	100
4		26.22	100	100
5		27.35	100	100
6		26.56	100	100
7		29.26	100	100
8		27.81	100	100
9		26.28	100	100
10		20.85	100	100
11		3.18	79	100
12		25.67	100	100
13		14.69	100	100
14		26.29	100	100
15		25.89	100	100
16		20.82	100	100
17		28.98	100	100
18		23.64	100	100
19		24.43	100	100
20		4.59	88	100
21		18.89	100	100
22		27.01	100	100
23		25.39	100	100
24		29.01	100	100
25		19.37	100	100
26		17.63	100	100
27		22.11	100	100
28		17.71	100	100
29		11.20	100	100
30		3.03	78	100
31		28.09	100	100

June

Day	Weather	Sunlight [MJ/m^2]	Charge [%]	Brightness of light (%)
1		21.61	100	100
2		23.46	100	100
3		25.30	100	100
4		28.41	100	100
5		27.25	100	100
6		15.34	100	100
7		16.60	100	100
8		21.82	100	100
9		25.11	100	100
10		14.43	100	100
11		4.26	85	100
12		4.56	73	100
13		3.75	55	100
14		8.79	75	100
15		21.79	100	100
16		9.04	100	100
17		21.61	100	100
18		18.00	100	100
19		3.49	81	100
20		2.82	57	100
21		4.28	43	86
22		19.68	100	100
23		21.32	100	100
24		14.99	100	100
25		9.68	100	100
26		3.36	80	100
27		26.00	100	100
28		20.31	100	100
29		21.61	100	100
30		19.37	100	100

July

Day	Weather	Sunlight [MJ/m^2]	Charge [%]	Brightness of light (%)
1		14.01	100	100
2		23.38	100	100
3		14.08	100	100
4		7.90	100	100
5		8.26	100	100
6		25.09	100	100
7		27.35	100	100
8		24.85	100	100
9		26.93	100	100
10		25.07	100	100
11		25.30	100	100
12		24.69	100	100
13		14.48	100	100
14		18.32	100	100
15		20.42	100	100
16		17.95	100	100
17		13.53	100	100
18		18.28	100	100
19		21.95	100	100
20		17.50	100	100
21		23.65	100	100
22		22.14	100	100
23		17.45	100	100
24		3.70	82	100
25		4.61	70	100
26		19.17	100	100
27		17.92	100	100
28		22.08	100	100
29		5.35	93	100
30		13.52	100	100
31		11.18	100	100

August

Day	Weather	Sunlight [MJ/m^2]	Charge [%]	Brightness of light (%)
1		13.54	100	100
2		18.29	100	100
3		20.02	100	100
4		15.15	100	100
5		20.16	100	100
6		14.30	100	100
7		21.93	100	100
8		18.03	100	100
9		22.58	100	100
10		21.52	100	100
11		18.82	100	100
12		19.14	100	100
13		21.77	100	100
14		20.77	100	100
15		24.21	100	100
16		3.96	83	100
17		22.14	100	100
18		22.48	100	100
19		24.02	100	100
20		18.33	100	100
21		12.05	100	100
22		11.71	100	100
23		4.81	89	100
24		12.87	100	100
25		3.81	82	100
26		14.60	100	100
27		23.16	100	100
28		23.95	100	100
29		16.77	100	100
30		22.75	100	100
31		19.16	100	100

September

Day	Weather	Sunlight [MJ/m^2]	Charge [%]	Brightness of light (%)
1		23.01	100	100
2		17.34	100	100
3		20.83	100	100
4		12.51	100	100
5		8.22	100	100
6		8.33	100	100
7		10.24	100	100
8		7.55	100	100
9		16.15	100	100
10		13.81	100	100
11		8.43	100	100
12		21.68	100	100
13		19.22	100	100
14		15.12	100	100
15		7.64	100	100
16		3.96	83	100
17		13.06	100	100
18		17.31	100	100
19		11.95	100	100
20		20.85	100	100
21		19.23	100	100
22		15.48	100	100
23		8.90	100	100
24		11.17	100	100
25		5.03	91	100
26		7.06	97	100
27		20.16	100	100
28		16.74	100	100
29		15.08	100	100
30		16.55	100	100

October

Day	Weather	Sunlight [MJ/m^2]	Charge [%]	Brightness of light (%)
1		5.32	93	100
2		4.91	83	100
3		16.93	100	100
4		2.45	75	100
5		2.00	48	96
6		8.54	68	100
7		9.04	90	100
8		15.44	100	100
9		14.42	100	100
10		9.09	100	100
11		15.38	100	100
12		15.92	100	100
13		17.99	100	100
14		15.92	100	100
15		2.68	76	100
16		9.62	100	100
17		14.48	100	100
18		12.60	100	100
19		7.40	100	100
20		1.42	64	100
21		8.51	82	100
22		4.47	69	100
23		6.35	70	100
24		3.37	50	100
25		4.53	37	75
26		3.38	26	53
27		16.23	100	100
28		15.02	100	100
29		2.57	75	100
30		12.89	100	100
31		13.49	100	100

November

Day	Weather	Sunlight [MJ/m^2]	Charge [%]	Brightness of light (%)
1		13.85	100	100
2		13.00	80	100
3		8.55	98	100
4		4.55	85	100
5		13.92	100	100
6		12.65	100	100
7		3.02	78	100
8		13.73	100	100
9		3.93	83	100
10		4.69	72	100
11		8.48	90	100
12		5.76	86	100
13		13.27	100	100
14		12.02	100	100
15		3.46	80	100
16		12.93	100	100
17		11.97	100	100
18		11.86	100	100
19		12.50	100	100
20		12.94	100	100
21		12.38	100	100
22		12.17	100	100
23		12.43	100	100
24		11.93	100	100
25		3.40	80	100
26		11.37	100	100
27		10.69	100	100
28		6.57	100	100
29		11.98	100	100
30		11.25	100	100

December

Day	Weather	Sunlight [MJ/m^2]	Charge [%]	Brightness of light (%)
1		11.22	100	100
2		10.78	100	100
3		11.14	100	100
4		9.98	100	100
5		10.90	100	100
6		10.21	100	100
7		10.00	100	100
8		7.11	100	100
9		4.78	89	100
10		3.10	67	100
11		8.08	82	100
12		10.74	100	100
13		11.09	100	100
14		11.13	100	100
15		11.20	100	100
16		10.88	100	100
17		8.84	100	100
18		1.90	73	100
19		1.56	44	88
20		3.62	30	59
21		10.49	77	100
22		11.54	100	100
23		4.14	85	100
24		10.12	100	100
25		11.16	100	100
26		4.13	85	100
27		2.34	59	100
28		11.58	99	100
29		11.58	100	100
30		10.92	100	100
31		10.96	100	100

	Count	Percentage
100% Brightness	359	98%
Over 50%	6	2%
Under 50%	0	0%

- 100% Brightness
- Over 50%
- Under 50%

2% 0%
98%

Standard Lighting Modes — Our products feature these 6 popular modes

Please consult us if you would like to customize for your usage

※The lighting mode can be changed after installation

A 100% brightness from sunset to sunrise
200% / 100% — Sunset → Sunrise

B 200% for 3 hours after sunset / 30% until sunrise
200% / 30% — Sunset → 3 hrs later → Sunrise

C 150% for 5 hours after sunset / 30% until sunrise
150% / 30% — Sunset → 5 hrs later → Sunrise

D 200% for 2 hours after sunset / 150% for 4 hours / Turn off
200% / 150% — Sunset → 2 hrs later → 6 hrs later → Sunrise

E 150% for 7 hours after sunset / Turn off
150% — Sunset → 7 hrs later → Sunrise

F 200% for 3 hours after sunset / Turn off for 7 hours / 150% until sunrise
200% / 150% — Sunset → 3 hrs later → 10 hours later → Sunrise

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Illuminance Distribution
All values measured in brightness (lux)
Warning: If your light is incandescent, brightness decreases by 30%

※Lenses are included with our solar lights. Please let us know when placing an order if you would like to remove the lense.

Mode A （Night Light)
100% brightness (with lens)
About 850 lm (lumens)
(Old brightness 3)

With No Lens
100% brightness (no lens)
About 850 lm (lumens)
(Old brightness 3)

Height：3 m
Angle：30 degrees from horizontal Upward
Maintenance Factor 0.8
Distance to Light
3m

200% brightness (with lens)
About 1690 lm
(Old brightness 7)

150% brightness (with lens)
About 1250 lm
(Old brightness 5)

30% brightness (with lens)
About 300 lm
(Old brightness 1)

Making a Truly Practical Solar Light

Our development started with the simple desire to make a practical solar light; a solar light that isn't just "eco-friendly", but a solar light that can rival conventional lighting in performance. We are always aiming to make our solar lights more practical.
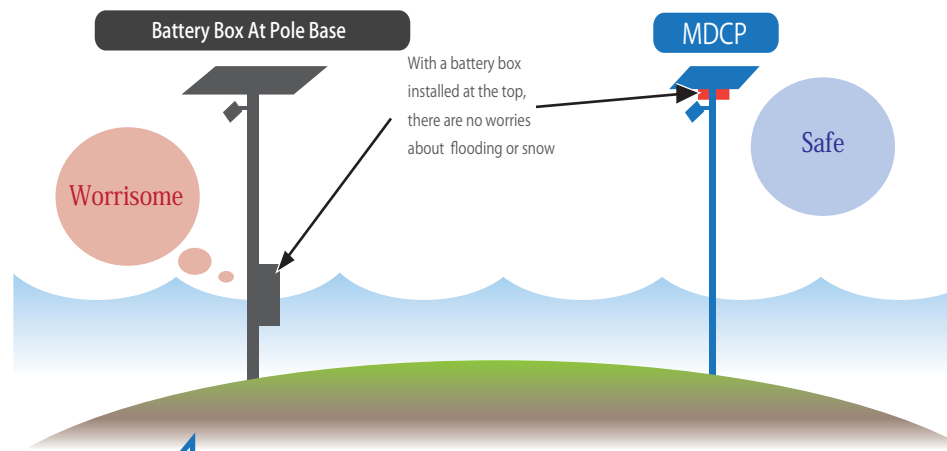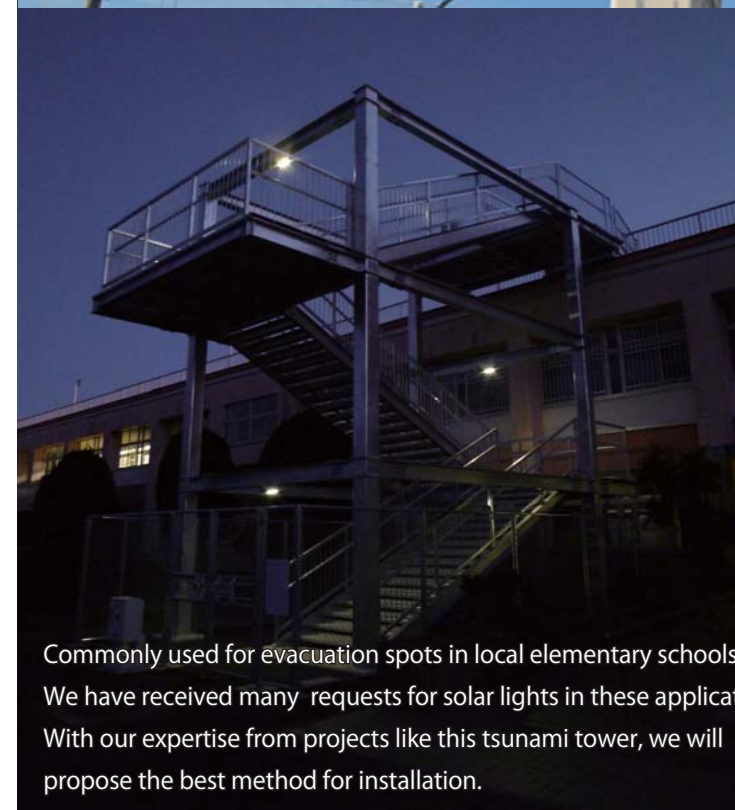
More Practical
Reliable lighting when you need it most

Small, Light Battery
No longer need a large battery box at the pole base

The way lead-acid batteries were used until now necessitated a large battery box. Because it is difficult to install a heavy battery box at the top of the pole, these models commonly featured battery boxes at the pole base.

However, this can be an obstruction, such as when these are installed near roads. Also, a battery box at the pole base is susceptible to flooding and accumulated snow.

Unlike lead-acid battery Solar lights, the Capa Series features a light battery with a slim pole.

Can store the battery behind the solar panel

In case of lead-acid battery system, there is big maintenance box here.

But middle-cap series, there is no maintenance box, so nothing obstruction for pedestrian.

Battery Box At Pole Base

MDCP

With a battery box installed at the top, there are no worries about flooding or snow

Worrisome

Safe

The Capa Series is especially effective against natural disasters. The Capa Series is gaining demand for lighting places like tsunami evacuation facilities and other emergency lighting.

Guidance Lights for Natural Disasters

Light

Solar Panel

Different designs for different towers

【Example】
Shizuoka tsunami evacuation tower

Making a Truly Practical Solar Light

Our development started with the simple desire to make a practical solar light; a solar light that isn't just "eco-friendly", but a solar light that can rival conventional lighting in performance. We are always aiming to make our solar lights more practical.

Install Anywhere! ① "Separate Model" for evacuation guidance lights

Can Illuminate a Dim Evacuation Road

The popular "Separate Model" separates the solar panel from the light
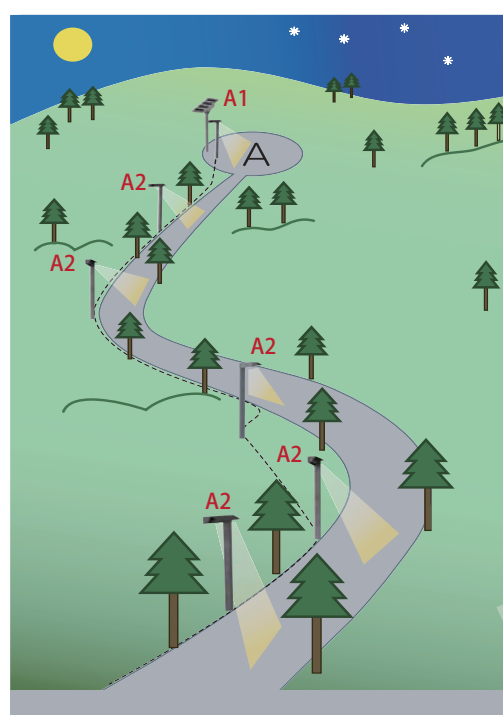
Until now, it was difficult to install a solar light in woodlands because of the lack of sunlight. This is why we decided to place the solar panel somewhere convenient, separate from the light. This greatly expands the possibilities of solar lights, proving to be a popular model.

Place solar panel and battery somewhere with good exposure to sunlight

A 1 Solar Panel

A 2 Light

A 1

A 1

It is now possible to install the light in a dim path in the mountains

A 2

We will propose the best place to install the solar panel

Optionally add a motion sensor

We can perform 3D brightness simulations, to better inform your decisions on placement and brightness of the lights.
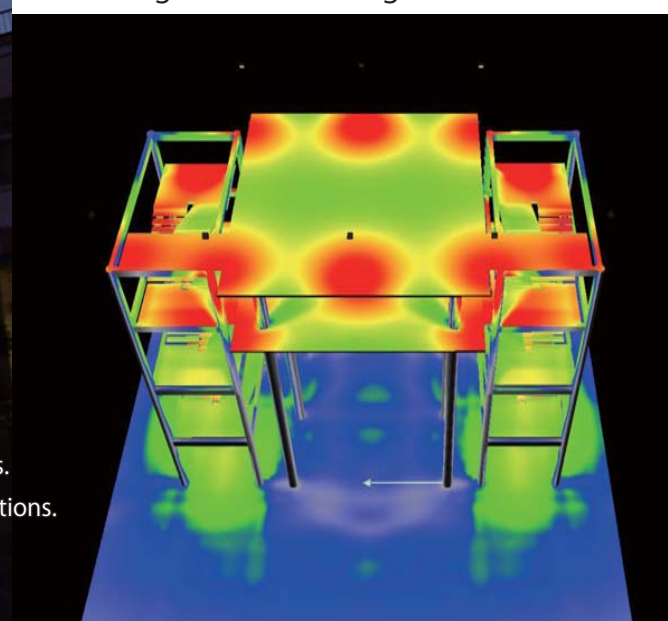
Commonly used for evacuation spots in local elementary schools. We have received many requests for solar lights in these applications. With our expertise from projects like this tsunami tower, we will propose the best method for installation.

Making a Truly Practical Solar Light

Our development started with the simple desire to make a practical solar light; a solar ight that isn't just "eco-friendly", but a solar light that can rival conventional lighting in performance We are always aiming to make our solar lights more practical.

Install Anywhere! ②
This freedom makes it even more practical

Can be installed anywhere, and even relocated
Can utilize existing walls and poles, save on construction costs

The below image is an actual installation case. Because it does not require a large battery box, this solar light can be installed on existing electrical poles, walls, and many other places. There is no need to install a new pole or base, so you save money on the anchor bolt, pole and associated construction costs. This "Anywhere Model" makes up over half of the solar lights we sell. Furthermore, after installation, it is possible to relocate the solar light if needed. You can change the placements of your solar lights economically this way.

Install solar panel on existing pole

Light

Solar panel

Light

Light

Solar panel

Light

Solar panel

Solar panel

Light

Moves freely

Both the solar panel and the light are free to rotate 360 degrees. The panel can be tilted 45 degrees from its horizontal position. No matter where you place this solar light, it will be effective.

360 degree range of motion for solar panel

360 degree range of motion for light

Light can tilt 0 ~ 30 degrees

Basic Specifications for the Capa Series

| solar panel | battery charging circuit | LED light |

We convert solar energy to electrcity with the solar panel, and store the electricity in the battery. Once the solar light determines that it is night from the panel voltage, it will use the stored electricity to operate the LED light. The solar light will turn off the LED light when the panel starts charging again in the morning.

Be aware of large shadows

Make sure that the installation site exposes the entire solar panel to sunlight throughout the year. Even if there is no problem from spring to fall, please make sure that sunlight will reach the panel on the winter solstice, when the sun is the lowest. It is required that the solar panel is exposed to direct sunlight for proper charging.

★ It is important that the entire panel is exposed to sunlight, otherwise if even a small portion of the panel is shaded, the solar panel's efficacy is severley reduced

Summer Solstice

about 80°

30°

Winter Solstice
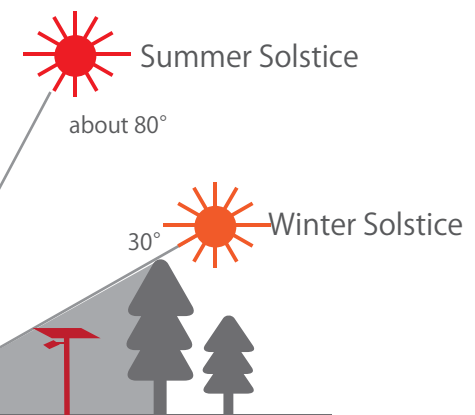
❄ Installing in cold climates

Be careful when installing in snowy areas, because there is a chance that the panel gets covered with snow, preventing the battery from charging. We can discuss appropriate countermeasures, such as installing the panel at angle, so please consult us beforehand.
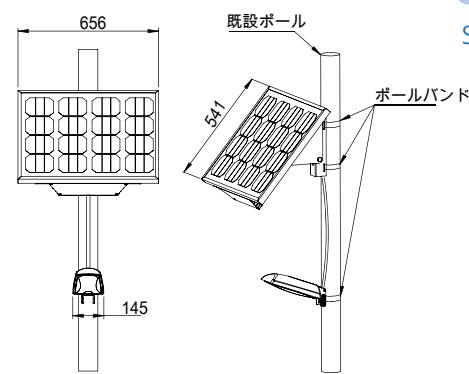
Warnings

❗ The pole type solar light is designed for wind loads up to 60 m/s. Do not install anywhere with wind loads greater than this value. Also, please consult us before installation of the existing pole mounted types and the approach type solar lights.

❗ Do not use in areas with temperatures above 45 degrees Celcius. This will cause the solar light to fail.

❗ Please consult us for installations in cold climates and regions with short days. In some cases, this can cause failure in the solar light and its instrumentation.

❗ Please conduct routine inspections.

❗ This product is for general outdoor use (weather-proof). Do not install anywhere else.

Middle Capa Plus V2
Pole-Mounted Model

MDCN-L1N5
MDCN-L1T5

This model can be installed onto an existing pole, eliminating the need to purchase and install a new pole. Not only do you save money on the pole and anchor, but you also reduce construction costs.
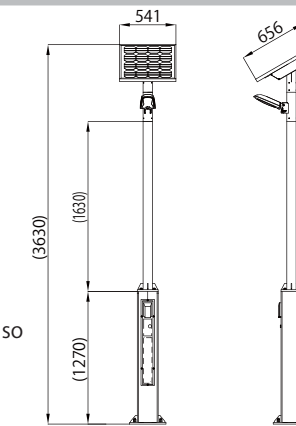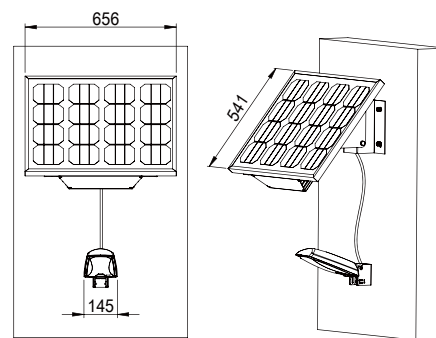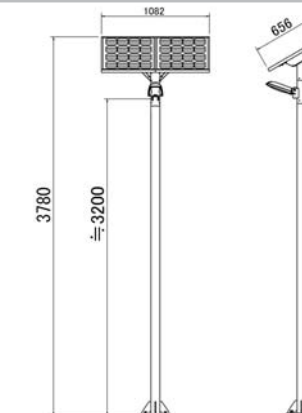
既設ポール
ポールバンド

● Specifications

Solar Panel : 50Wp monocrystalline silicon
Battery : L1N5 : 132wh
L1T5 : 264wh
Light : (Cover) Acrylic resin
(Body) Cast aluminum
LED : Power LED

Middle Capa Plus V2
Wall-Mounted Model

MDCW-L1N5
MDCW-L1T5

This model can be installed onto existing walls. Not only do you save money on the pole and anchor, but you also reduce the construction costs.

● Specifications

Solar Panel : 50Wp monocrystalline silicon
Battery : L1N5 : 132wh
L1T5 : 264wh
Light : (Cover) Acrylic resin
(Body) Cast aluminum
LED : Power LED

Middle Capa Plus V2
One Light, One Pole

MDCP-L1N5
MDCP-L1T5

The basic model with one light attached to a pole. Due to its simple design, it features the smallest pole diameter and foundation size among the pole type models.

● Specifications

Solar Panel : 50Wp monocrystalline silicon
Battery : L1N5 : 132wh
L1T5 : 264wh
Light : (Cover) Acrylic resin
(Body) Cast aluminum
LED : Power LED
Pole : Galvanized steel (∅89.1)
urethane resin coated

Middle Capa Plus V2
One Light, Dual Solar Panel

MDCP-L1D5

Recommended for areas with low levels of sunlight. Maintains the functionality of the L1T5 while doubling the capacity of the solar panels.

● Specifications

Solar Panel : 100Wp monocrystalline silicon
（50Wp×2）
Battery : 264Wh
Light : (Cover) Acrylic resin
(Body) Cast aluminum
LED : Power LED
Pole : Galvanized steel (∅89.1)
urethane resin coated

Middle Capa Plus V2
Emergency Electrical Outlet

MDCS-L1N5-ACU
MDCS-L1T5- ACU

This model adds an AC and/or outlet to the functionality of the Middle Capa. The pole is split into two parts for easy shipping. The lights and the AC outlet are wired separately, so using the AC outlet will not affect the light's performance.

● Specifications

Solar Panel : 50Wp monocrystalline silicon
Battery : L1N5 : 132wh
L1T5 : 264wh
Light : (Cover) Acrylic resin
(Body) Cast aluminum
LED : Power LED
Pole : Upper (∅89), lower (∅200)
Galvanized steel
urethane resin coated

Middle Capa Plus V2
One Light, Quattro Type

MDCP-L1Q5

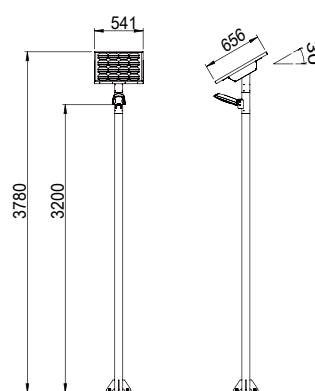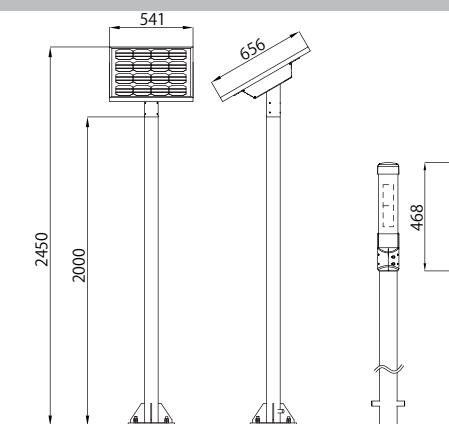The brightest of the standard lineup. Can shine for up to 14 hours with the brightness of a 20VA LED security.

● Specifications

Solar Panel : 100Wp（50Wp×2）
monocrystalline silicon
Battery : 528Wh
Light : (Cover) Acrylic resin
(Body) Cast aluminum
LED : Power LED
Pole : Galvanized steel (∅89.1)

Middle Capa Plus
Light-Panel Separated

MDCP-BS2T5

This model separates the solar panel from the light. Suitable for places with little sunlight, such as tsunami evacuation paths in the mountains. This can be installed many different ways, and can even be installed in places like handrails (see our homepage for details).
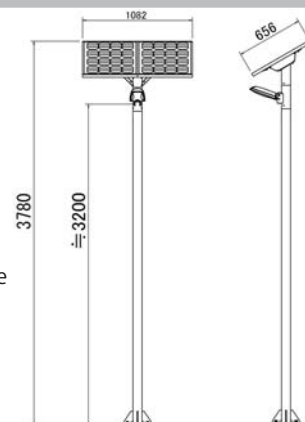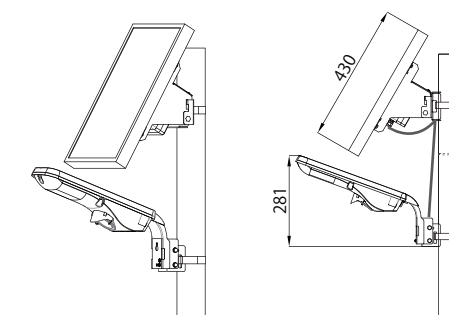
● Specifications

【Main Unit】
Solar Panel : 50Wp monocrystalline silicon
Battery : L1T5 : 264wh
【Sub Unit 】
Light : (Cover) ABS
(Body) Polycarbonate
LED : Power LED

Little Capa
Motion Sensor Type

LTCN-M615

This model includes a motion sensor. Because the solar panel is small, it is ideal for places that only need to be lighted when people are nearby.

● Specifications

Solar Panel : 15Wp monocrystalline silicon
Battery : 66wh
Light : (Cover) Acrylic resin
(Body) ABS
(Frame) ZAM steel plate
LED : Power LED

※-1 Please note that product specifications may change without notice.
※-2 Please consult us for our products' installation conditions.
※-3 Technical drawings and data can be downloaded from our homepage at the "Downloads" page.
※-4 Storage capacity varies for different batteries.

Customize We can customize your solar lights with the following features
Optional GPS for accurate on / off times, multiple small LED lights, custom lighting modes, custom LED colors (incandescent lights as well), install solar panel seperately from light (for bettering sunlight exposure), custom pole length, custom pole material for salt damage countermeasures (aluminum, SUS), painted finished, etc.

Popular! Emergency Electrical Outlet Model

MDCP-L2W5 （Two lights, one pole）

"Separate Type" - Main Unit

"Separate Type" - Sub Unit

MDCP-L1T5 (One Light, One Pole)

For rooftop evacuation (custom)

MDCP-L1T5