



# SOLAR ENERGY SYSTEMS

**COSEMA** Solar Energy Systems, convert sunshine directly to electrical energy and store this energy in a storage battery, to be used as the load requires. Computer programming is used by COSEMA to determine the size of solar energy panels and battery capacity for a specific geographic location and load. Each plant is composed of the following parts:

## SOLAR PANEL:

Panels of various sizes are available; they are made of monocrystalline silicon cells, enclosed and protected by tempered glass; the frame is made of anodized aluminium.

Computer matched cells, high transmittent toughened glass and rigid frame all combine to provide a durable product, which is specifically designed to withstand the corrosive environment in which navigational aids are installed.

## BATTERIES:

They store the energy accumulated during the day, and provide it at night. Two main types of battery are commonly used:

- completely sealed, of gelatinous electrolyte, for plants installed on oscillating systems such as buoys;
- semi-sealed, of liquid type electrolyte, for fixed plants.

## CHARGE REGULATOR:

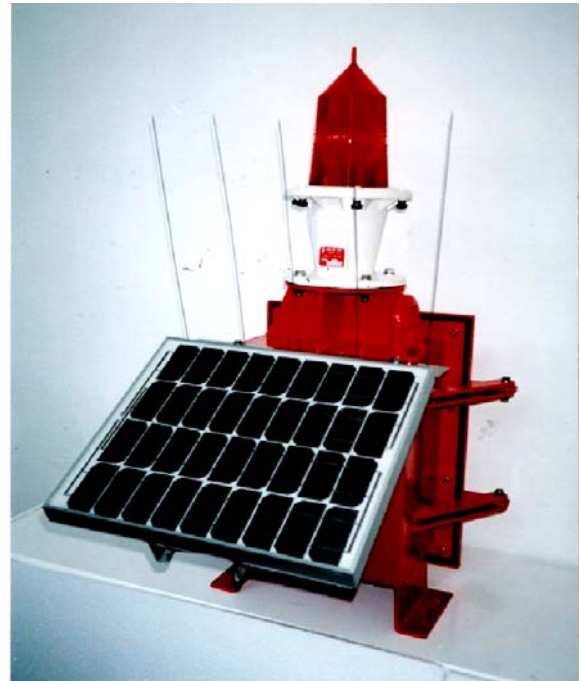
The control system that regulates the charging and the discharging of the battery, signaling the various phases by the lighting-up of the LED.

Without it the photovoltaic panels would continue to supply energy to the batteries, overcharging them and causing the electrolyte to boil; or, during the winter period, more energy could be required from the batteries than can be supplied, thereby leading to discharging beyond the consented level, and resulting finally in rapid ageing of the batteries themselves.

## SUPPORTS:

Weather proof hot galvanized box painted with epoxy paint in the colour required; several sizes according to the batteries needed are available.

On request stainless steel boxes are supplied. Stainless steel bird-spikes are added.



**CO.SE.MA.**

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## SPECIFICATIONS

Series	No. of Panels	No. of Batteries
CSS1-10-40	1 x 10	1 x 40
CSS1-20-40	1 x 20	1 x 40
CSS1-40-115	1 x 40	1 x 115
CSS2-30-115	2 x 30	1 x 115



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