Naps Solar Powered Obstruction Light Systems

The Naps Solar Powered Obstruction light (SPOL) system is a reliable self-contained air traffic warning light system for towers, bridges, chimneys and other high structures.

SPOL systems are designed so that all components (warning light, module and battery enclosure) fit the same support pole or mast.

Key Features

Low power consumption: compact small systems due to the extremely low consumption LED lights.

Easy installation: Just a few pre-assembled components.

Independent of the AC Grid: Thanks to the solar array, the SPOL-system is independent from grid failures.

The LED lights are divided into independent groups, protected against single LED failure.

Low investment cost: No separate AC supply needed, which dramatically reduces the investment cost, especially in remote areas.

Low weight and corrosion free: Thanks to optimized materials, construction of the mountings and housings SPOL systems are strong and corrosion-resistant.

Maintenance free: All system components are designed to be maintenance free.

No frequent lamp replacement: Extremely reliable light due to proven LED technology.

Naps solar-powered obstruction light systems combine high efficiency components with expert design to give an optimised system concept. These systems combine proven reliability with the latest innovations and technical advances.

The SPOL system's main components are a red colour aviation obstacle light, a solar array, a system controller and a battery. During the daytime, the solar array charges the battery via the controller and during night-time the system controller automatically activates the obstruction light.

Naps SPOL systems are designed for easy installation and standard systems are available for assured use in most parts of the world. Featuring the highest standards of construction, the SPOL systems are able to withstand the harshest environments and continue to perform efficiently without any regular maintenance requirements.

Standard SPOL systems for 3 light options (Low Intensity 10 and 32 cd, Medium Intensity 2000 cd) provide compact and reliable solutions to independent obstruction lighting needs. Non-standard systems can be configured to exact needs.

Light Control

The controller in Naps standard SPOL systems switches on the LED light when it gets dark and switches it off again when it becomes light.

This 'dusk till dawn' control uses the solar module as the light sensor, and typically the light will operate for about 30 minutes to 1 hour longer than the actual night length, depending on local conditions.

In the standard systems, the 10 and 32cd lights operate continuously when on, but the Naps MiniPro-OL controller can also be set to flash one or two lights at a fixed 2 seconds on and 2 seconds off duty cycle. In the 2000 cd systems the light is normally flashed at a 5% duty cycle.

Battery

One or two sealed (valve-regulated) batteries are housed in the battery enclosure along with the controller and associated electrical hardware. These batteries are maintenance-free in that they require no water additions throughout their lifetime.

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Naps Solar Powered Obstruction Light Standard Systems

Naps standard Solar Powered Obstruction Light systems (SPOLs) are configured for the most common and economical cases. For all light types this is for a single light operated during the hours of darkness only. Low Intensity lights are operated continuously during this time, while the medium intensity lights are flashed at a 5% duty cycle to minimise energy consumption. The maps and tables indicate the size of the solar power system in these standard SPOL systems.

The maps indicate the size of standard SPOL system needed for different parts of the world, but please always ask Naps for an accurate sizing before ordering. We are also happy to quote for non-standard SPOL systems, for example with multiple lights or operating modes which are not as above.

The standard systems include the light, solar module including cable, the module mounting structure, the cable needed to connect the light to the cabinet and the battery cabinet with battery and controller. The warranty period for the system is three (3) years and (5) years for the lamp. The system operating temperature range is from –25 °C to +50 °C.

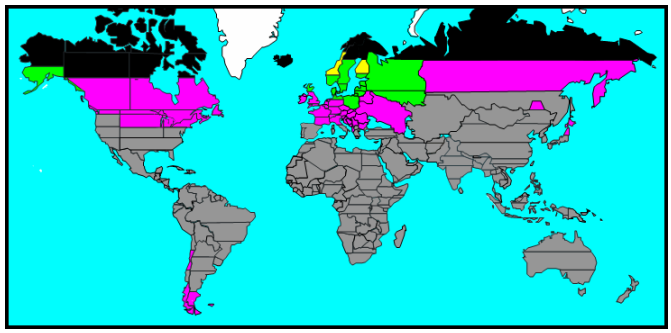
Key to standard system ratings

N = Night time operation (+1 hour dusk / dawn)
C = continuous light operation when on
5% = 5% flash duty cycle when on
Cold = for climate where freezing conditions are expected, battery will be AGM type
Hot = for climate where high temperatures are expected, battery will be gel type
xxW indicates PV module peak Watts
xxAh indicates battery nominal capacity

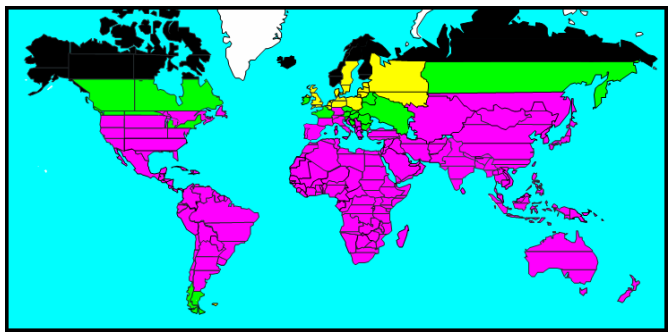
Key to map colour codes

These indicate PV array size

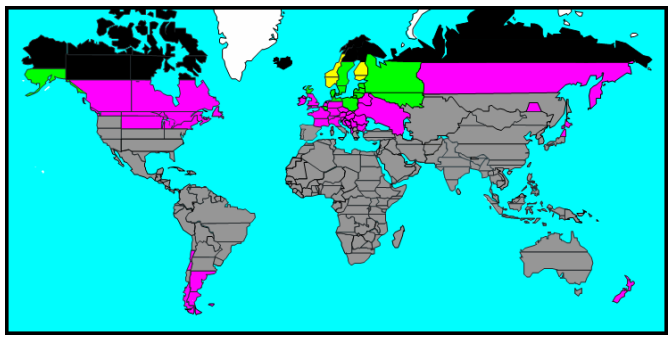
10, 32 cd		2000 cd
enquire		enquire
130Wp		2 x 130Wp
125Wp		2 x 125Wp
65Wp		2 x 65Wp
33Wp		2 x 33Wp
11Wp		2 x 11Wp



10cd standard systems, night operation, no flashing
SPOL-NC-10cd-Hot-11W-17Ah
SPOL-NC-10cd-Cold-11W-14Ah
SPOL-NC-10cd-Hot-33W-34Ah
SPOL-NC-10cd-Cold-33W-48Ah
SPOL-NC-10cd-Cold-65W-75Ah
SPOL-NC-10cd-Cold-125W-135Ah



32cd standard systems, night operation, no flashing
SPOL-NC-32cd-Hot-33W-34Ah
SPOL-NC-32cd-Cold-33W-48Ah
SPOL-NC-32cd-Cold-65W-75Ah
SPOL-NC-32cd-Cold-125W-135Ah



2000cd standard systems, night operation, 150ms flashing, 20 flashes per minute
SPOL-N5%-2000cd-Hot-2x11W-17Ah/24V
SPOL-N5%-2000cd-Cold-2x11W-24Ah/24V
SPOL-N5%-2000cd-Hot-2x33W-40Ah/24V
SPOL-N5%-2000cd-Cold-2x33W-55Ah/24V
SPOL-N5%-2000cd-Cold-2x65W-75Ah/24V
SPOL-N5%-2000cd-Cold-2x125W-135Ah/24V

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