



Bird-X, Inc.
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1. INTRODUCTION

Bird-X, Inc. has been recognized worldwide as the bird control experts since 1964. Bird-X, Inc. is the only company anywhere that sells a complete line of bird repelling products including a variety of ultrasonic and sonic machines, visual repelling devices, non-toxic chemical roosting inhibitors, iridescent diffraction foil, netting and spike strips. New products are continuously being developed.

Bird-X, Inc. specialists have become experts through extensive experience and research. As a result, sales consultants are able to analyze problems and make recommendations based on each customer's specific situation and needs. In addition, Bird-X, Inc. maintains and avails to customers a library of application case histories and other reference materials.

2. APPLICATIONS

As the world's leading manufacturer of bird control products and accessories, Bird-X is happy to provide solar power panels to power our low wattage bird and pest repellers. The modules are a reliable, virtually maintenance-free power supply, designed to operate efficiently in sunlight. As such, they are also ideal for charging storage batteries associated with much more than just bird control devices. Use them to power remote homes, recreational vehicles, boats, telecommunication systems and other electric generation application.

3. MOUNTING SITE SELECTION

Mount the solar modules where they will receive maximum sunlight throughout the year. In the Northern Hemisphere, the modules should face south, and in the Southern Hemisphere, the modules should face north. Modules facing 30 degrees away from true South (or North) will lose approximately 10 to 15 per cent of their power output. If the module faces 60 degrees away from true South (or North), the power loss will be 20 to 30 per cent. Avoid trees, buildings or obstructions which could cast shadows on the solar modules, especially during the winter months when the arc of the sun is lowest over the horizon.

Solar modules produce the most power when they are pointed directly at the sun. For installations where the solar modules are mounted to a permanent structure, the solar modules should be tilted for optimum winter performance. As a rule, if the system power production is adequate in the winter, it will be satisfactory during the rest of the year. The module tilt angle is measured between the solar modules and the ground.

4. WARNINGS

Solar modules are live electrical power sources when exposed to light. Arrays of many modules can cause lethal shock and burn hazards. Solar modules should be covered with an opaque material during installation to avoid shocks or burns. Do not touch live terminals with bare hands. Use insulated tools for electrical connections.

5. PERMIT

Contact local authorities for necessary permit, installation, and inspection requirements.

6. INSTALLATION AND OPERATION

Systems should be installed by qualified personnel only. The system involves electricity, and can be dangerous if personnel are not familiar with the appropriate safety procedures.

Do not step on the module.

Although Bird-X Solar Modules are quite rugged, the glass can be broken (and the module will no longer work properly) if it is dropped or hit by tools or other objects.

Sunlight shall not be concentrated on the module in any CSP (Concentrating Solar Power) applications involving multiple “suns” or concentrated/focused energy (i.e. a magnifying glass).

The module frame is made of polycarbonate, and therefore corrosion will not occur if the module is subject to a salt water environment.

7. GROUNDING

All module frames and mounting racks must be properly grounded in accordance with the appropriate electrical codes.

8. INSPECTION

Follow the requirements of the applicable National and local electrical safety Codes.

9. BATTERIES

When solar modules are used to charge batteries, the battery must be installed in a manner which will protect the performance system and the safety of its users. The battery should be away from the main flow of people and animal traffic. Select a battery site that is protected from sunlight, rain, snow, debris, and is well ventilated. Most batteries generate hydrogen gas when charging, which is explosive. Do not light matches or create sparks near the battery bank. When a battery is installed outdoors, it should be placed in an insulated and ventilated battery case specifically designed for the purpose.

| Site Latitude | Tilt Angle |
|---------------|------------------|
| 0° to 15° | 15° |
| 15° to 25° | Same as Latitude |
| 25° to 30° | Latitude + 5° |
| 30° to 35° | Latitude + 10° |
| 35° to 40° | Latitude + 15° |
| >40° | Latitude + 20° |

Product Specifications

Maximum Power (Pmax): 5W ± 5 %

Voltage at Pmax (Vmp): 15V ±5%

Current at Pmax (Imp): 275mA ± 10%

Short-circuit current (Isc): 334mA ± 5%

Open-circuit voltage (Voc): ≥15V

Dimensions: 11¼" x 8" x 1¼"

Weight: 2.5 lbs.

Battery cable length: 6 feet

Power jack cable length: 4.5 feet