

**SOLAR
ENERGY &
INSULATION**

STRUCTURAL SOLAR

SOLAR TECHNOLOGIES

- Protected by patents
- Monocrystalline cells 60/72
- Superior performance with modules efficiencies varying between 15.27% and 15.46% (STC)
- Power tolerance 0 to + 3%
- 60% weight reduction compared to traditional solar panels
- Low maintenance costs
- Ultra-thin solar panels of 3/32 of an inch (4mm), covered with fiberglass

STRUCTURAL PANELS

- Substantial reduction of installation costs, by eliminating solar racking
- Encrusted structural solar panels covered by a thin film of fiberglass providing a durable and robust surface
- Building Code compliant in Canada and International Building Code (IBC) compliant
- Homologated CAN/ULC Class II Fire Resistance Class
- Fireproof panels requiring no other surface finish

MULTIPLE APPLICATIONS

- Carports
- Rapid construction buildings with integrated renewable energy systems
- Residential structures
- Industrial units, agricultural and "Grow Ops" applications

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APPLICATIONS

Experienced architects, technicians and construction teams design and build various structures and energy systems suited to the end-users needs. They are adaptable to different sizes and needs of homes, carports even vertical building structures. They can also be used for industrial complexes, greenhouses, military, medical and food grade facilities.

The roofs are easy to clean and naturally pest-resistant, as they are built entirely of unattractive materials for rodents and insects. EPS materials and structures can span shipping and trucking industries needs providing durable maintenance free shipping containers that can also be efficiently temperature regulated, if required. The applications for this technology is limitless and poised to advance the standards across a variety of industries and markets.

Solar roof structures can now be built entirely using Structural Solar. These are ultralight, high efficiency solar panels, which are integrated directly in a special roof structure. The structural part located under the photovoltaic panels is made of an Expanded Polystyrene Structure (EPS), weighing 2.5 lbs. per cubic foot. EPS contains a large amount of air, giving it superior thermal insulation properties, so it keeps outside heat from getting in and does not let cool or warm indoor air escape.

The thickness of the EPS panels may vary from 1 to 6 inches, depending on the structural needs of the roof. A thinner EPS panel may be affixed to an existing roof and a thicker one, may be installed directly on roof trusses. The panels can be fixed, screwed and glued onto plywood and the roof may be finished using flashing and shingles.

On a metal roof, the EPS panels with ultralight solar panels can be custom manufactured to fit between the edges and stabilized using edge fasteners. The maximum structural capacity of an EPS panel is 13 feet without middle support. The maximum length production of an EPS panel is 40 feet.

The use of Structural Solar is unrivaled, as a roof structure or even a wall providing solar energy and insulation.



FOR MORE INFORMATION, CONTACT:

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