



**SCHOTT**  
glass made of ideas

ASI® THRU  
ASI® OPAK

Building-integrated  
Photovoltaik

SCHOTT is an international technology group with more than 125 years of experience in the areas of specialty glasses and materials and advanced technologies. With our high-quality products and intelligent solutions, we contribute to our customers' success and make SCHOTT part of everyone's life.

SCHOTT works closely with architects and designers to extend the boundaries of design and create new opportunities for building culture – in terms of design and space, indoors and outdoors, for solar power and fire protection, aesthetics and functionality – sustainable and custom tailored. That's what makes SCHOTT a qualified partner for architecture and design.

**Cover:** Southern façade of the SCHOTT Solar headquarters building in Mainz with ASI THRU® modules

**Right:** Solar façade of an arts center in Munich-Milbertshofen, Germany

SCHOTT photovoltaic modules turn a roof or a façade into a solar power plant. Both technologies are extremely cost-efficient because the high-performance thin-film elements also perform all of the functions of a modern outer shell. The semi-transparent SCHOTT ASI® THRU allows for the passage of light, while SCHOTT ASI® OPAK, is the perfect solution for opaque surfaces.



## Harness the sun

### Glass that generates energy

SCHOTT's photovoltaic modules are known for their long life expectancy, high performance and low investment costs. Once they have been functionally and aesthetically integrated into the building shell, they deliver decades of consistent performance.

#### High-performance semi-conductors

ASI® modules are produced using the most successful thin-film technology. Based on amorphous silicon, it not only ensures high energy output even under overcast or partly shaded conditions, it also stands up to the high temperatures common to building-integrated applications. Solar modules from SCHOTT are free of toxic additive arsenic and heavy metals such as cadmium or indium; their uniform surface lends them an impressive appearance.

#### A variety of options

The semi-transparent ASI® THRU modules are known for their light intensity, while ASI® OPAK, is ideal for opaque, homogeneous surfaces. Both versions are available as laminated safety glass or insulating glass elements. This opens up a number of design options with all the structural-physical advantages of conventional glass façades. ASI® glass modules not only supply energy, they also reduce consumption by allowing for a precisely engineered interplay between heat insulation and energy yield, transparency and shade.

#### Low maintenance – Excellent insulation

The elements can be installed in a variety of different mullion-transom constructions to form wall claddings, canopies, skylights or flat and pitched roofs. The result is a low-maintenance building shell that also provides excellent solar and thermal insulation. ASI® THRU insulating glass elements achieve the same G-values as high-quality sun protection systems installed on the outside. At 1.1 W/m<sup>2</sup>K, their U-value is equal to that of an insulating glass unit with low-E thermal insulation coating.

#### ASI® THRU ASI® OPAK

- > High-performance photovoltaic modules
- > Amorphous thin-film silicon layer
- > Service life of at least 20 years
- > Laminated or insulating glass structures
- > Fully building-integrated

**Left:** ASI® modules were used to form the roof of the Stillwell Avenue metro station in New York. Designed by Kiss + Cathcart Architects, it is one of the largest building-integrated photovoltaic installations in the world.

**Right:** ASI® THRU modules with integrated shielding effect for sun protection were installed in the roof of the vocational school in Wolfhagen, Hesse (Germany). This special solar solution designed by HHS Planer + Architekten AG was awarded the German Solar Prize 2011.  
Photo: M. Wilhelm







Airy elegance: semi-transparent thin-film modules float above the recreation hall at the elementary school in Munich-Trudering (Germany).

## Building-Integrated Photovoltaics from SCHOTT

### Twice the expertise

SCHOTT combines a deep fundamental understanding of photovoltaics and solar power with more than 125 years of technological leadership in the area of glass. A trailblazer for comprehensive solutions, SCHOTT's vast experience in this field – from supplying key components for entire power plants to producing thin-film building integrated modules and PV modules – has made us a global market leader. Our expertise allows us to leverage the power of the sun for a new building culture. For these reasons, SCHOTT was selected as the exhibition partner for photovoltaics for the German contribution to EXPO 2010 in Shanghai. Adding to a wide variety of standardized types and sizes, SCHOTT develops customized solutions for nearly all thinkable dimensions, shapes and designs. Our solutions serve any number of contemporary design-related purposes, from solar and fire protection to heat insulation and fall protection.

Please contact us.

**SCHOTT AG**  
Architecture + Design  
Hattenbergstrasse 10  
55122 Mainz  
Germany  
Phone +49 (0)6131/66-2400  
Fax +49 (0)6131/66-2525  
E-Mail: [info.architecture@schott.com](mailto:info.architecture@schott.com)  
[www.schott.com/architecture](http://www.schott.com/architecture)

**SCHOTT AG**

Architecture + Design

Hattenbergstrasse 10

55122 Mainz

Germany

Phone +49 (0)6131/66-2400

Fax +49 (0)6131/66-2525

[info.architecture@schott.com](mailto:info.architecture@schott.com)

[www.schott.com/architecture](http://www.schott.com/architecture)