



**SUPSI**

Swiss BiPV Competence Centre



# MGT-esys Energy-Railing Lech/ Arlberg (A)

## Building Details

CONTACTS	Name	Website (or e-mail)
Owner	Private	
Architect	Pichler Bau + Plan GmbH	<a href="http://www.pigue.at/">http://www.pigue.at/</a>
Energy Consultant	Solux e.u.	<a href="http://www.solux-solar.at/">http://www.solux-solar.at/</a>
PV Installer	MGT-esys GmbH	<a href="http://www.mgt-esys.at/">http://www.mgt-esys.at/</a>

## BUILDING

Completion year	2013 Building	2013 Plant		
Category	New	Renovation	Enlargement	Other
Typology	Residential	Administration	Industrial	Sport
	Agricultural	Urban	Historical	Other

**Building Energy Performance** kWh/m<sup>2</sup>y -

## Description

The private residential building, located in a mountainous area in Austria, is characterized for its wooden construction and for the integration of the PV system in the glazed railing system. The design of the railing, completely configured by semi-transparent PV laminates, includes a frame of galvanized steel. On the south and east side 32 PV panels with monocrystalline cells are integrated for a total power of 7.6 kWp. On the north side and in shadowed areas panels in laminated safety glass without photovoltaics are mounted. The electrical cabling system passes through the lateral edges resulting completely hidden.

**Acknowledgments** -



SOURCE: www.mgt-esys.at

## BiPV Details

### LOCATION OF PLANT

<b>Roof</b>	Flat roof	Sloped	Curved
<b>Façade</b>	Cladding	Balcony	Greenhouse Curved
<b>Glass</b>	Façade	Roof	Solar shading Canopy
<b>Orientation</b>	South	West	East North
<b>BiPV System</b>	Energy railing for balcony		

### ARCHITECTURAL EVALUATION

<b>Color</b>	Black
<b>Transparency</b>	10 %
<b>Frame</b>	Framless (glass-glass)

### COSTUMIZATION LANGUAGE AT COMPONENT SCALE

PV CELL	MODULE LAYERING	MODULE FEATURES	DUMMIES
<b>DESCRIPTION</b>	32 elements customize with monocrystalline cells. 12 elements without cells in nearly same optic.		

### SPECIFICATION

<b>Photovoltaic</b>	Monocrystalline	Multicrystalline	Thin Film
<b>PV Module</b>	<b>Cells</b>	Monocrystalline (97 - 268 Wp/each )	
	<b>Module</b>	MGT-esys Verbund	
<b>Power</b>	<b>kWp</b>	7.6	
<b>Size</b>	<b>m<sup>2</sup></b>	54	
<b>Energy production</b>	<b>kWh/year</b>	6000	
<b>Cost</b>	<b>€/m<sup>2</sup></b>	500	