PHYSEE

PowerWindow 2.1 16mm Datasheet

Quickly assembled. Seamlessly installed.

Compatible in all facades (24V DC)

Integrated maximum power tracking

Locally generated power and data

100% transparent

We spend 90% of our time in buildings, which consume 40% of our global energy demand. It's time to redesign them. At PHYSEE, we are changing the perspective by introducing the world's first SmartSkin facade with transparent, energy and data generating windows. By harnessing the power of the sun and gathering data from integrated climate sensors, we are balancing out energy production and consumption, transforming buildings into smart, powerful and sustainable eco-systems. The power of this combination allows you to take full control of your building's climate and energy usage, enabling reduced energy consumption and costs, while increasing comfort.

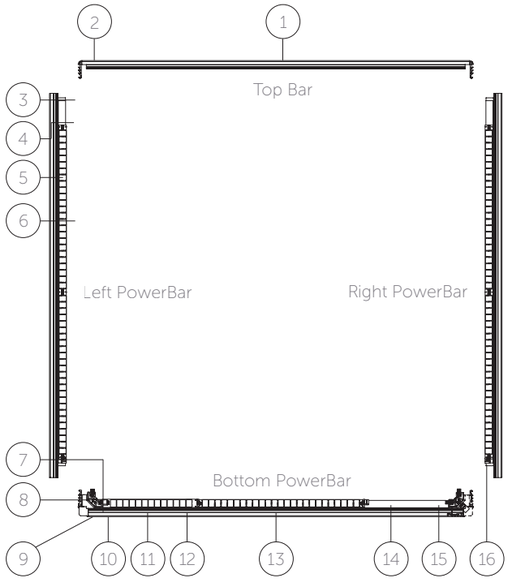
CE

EN1279

www.physee.eu

Technical Specifications

PowerWindow Frame Assembly



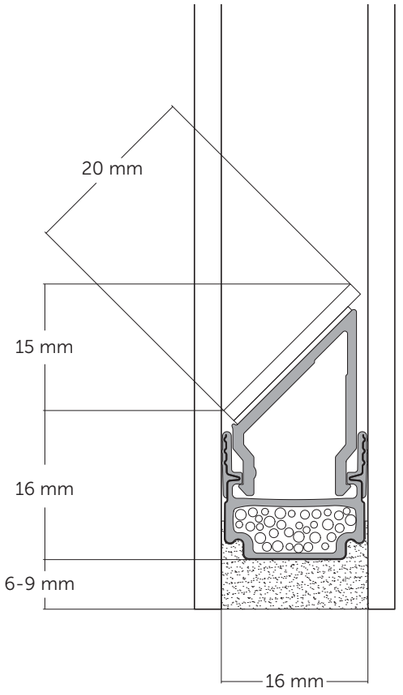
Item	QTY	Part List
1	1	SL2565 16mm spacer - top
2	2	SL2578 16mm corner key
3	2	PowerMount - vertical
4	2	3M GPH060F tape - vertical
5	2	SL2565 16mm spacer - vertical
6	2	PowerModule - vertical
7	2	PowerBridge
8	1	3M tape - PowerBridge to PowerCorner
9	2	PowerCorner
10	1	SL2565 16mm spacer - bottom
11	1	PowerMount - bottom
12	1	3M GPH060F tape - bottom
13	1	PowerModule - horizontal
14	1	PowerOptimiser
15	1	SensorModule
16	6	End connect housing

\+ Also available with 29mm cavity width.

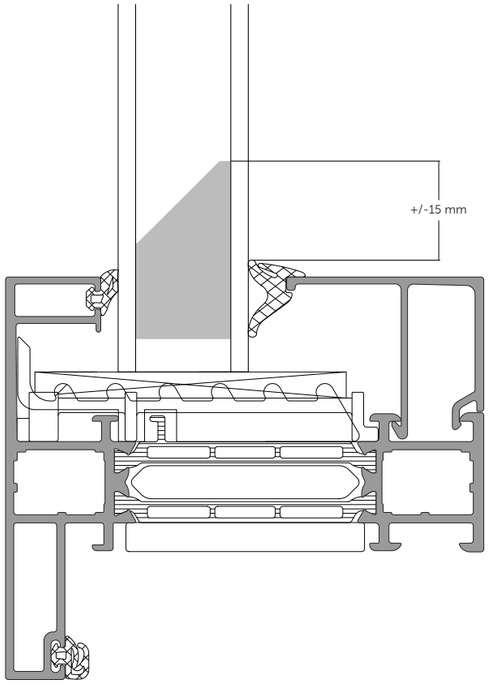
\+ No limitations of window glazing, configuration, coating or durability.

Section view

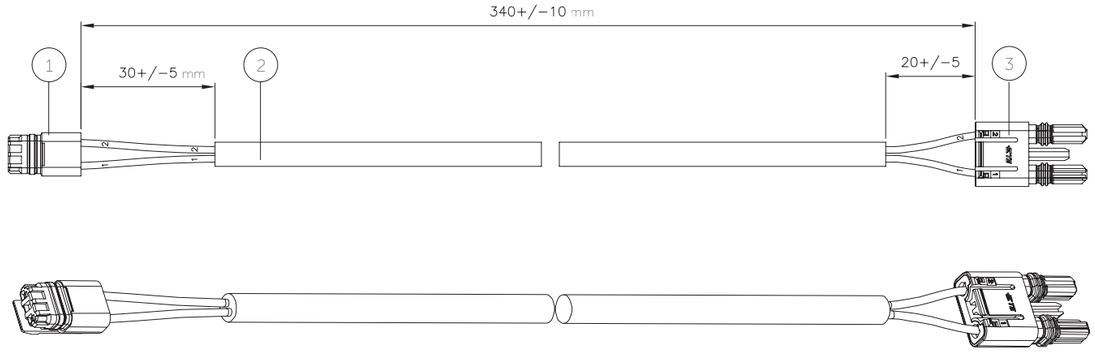
Cross Section in frame



Detailed cross section in IGU



TE Cable Connector



Item	QTY	Part List	Specifications
1	1	TE connectivity SlimSeal miniature	IP67, 2 pos, 22 AWG, Dimensions: 10mm x 8mm
2	1	Cable	L~300mm, outer Diameter: 5.5 mm, inner wires: 2x 0.75mm²
3	1	TE connectivity SlimSeal SSL connector	IP67, 2 pos, 22 AWG, Dimensions: 15mm x 6mm

Electrical Specs STC*

Part List	Specifications
Power output (Pmpp)	6.5 W/m²
Voltage output (Vmpp)	24 V
Current output (Impp)	0.25 A/m²
Open circuit voltage (Voc)	28 V
Short circuit voltage (Isc)	0.3 A/m²
Module efficiency	17 %
Voltage temperature coefficient	- 2.1 mV/K
Current temperature coefficient	+0.12 mA/(cm²K)

* STC: 1000 W/m², 25 °C, AM 1.5 according to EN 60904-3

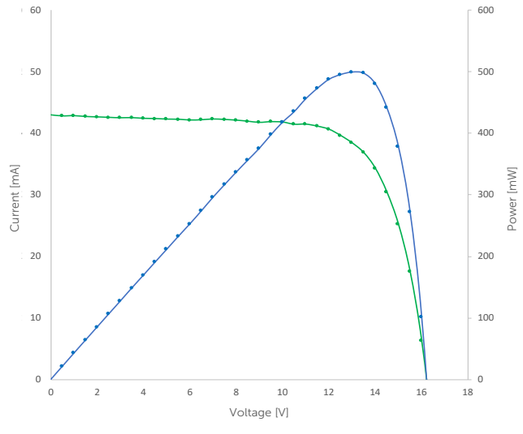
Mechanical & Physical Specs*

Part List	Specifications
PV type	Monocrystalline Silicon
PV strip	20 mm x 285 to 3600mm*
Window sizes	Min: 545 x 360mm / Max: n.a.
Frame	Anodized Aluminum
Weight	0.35 kg/m**
Connector type	SSL, IP67
Cable	1000 W/m², 25 °C, AM 1.5 , EN 60904-3
Spacer type	Warm edge, TGI

* 29mm spacers are also available

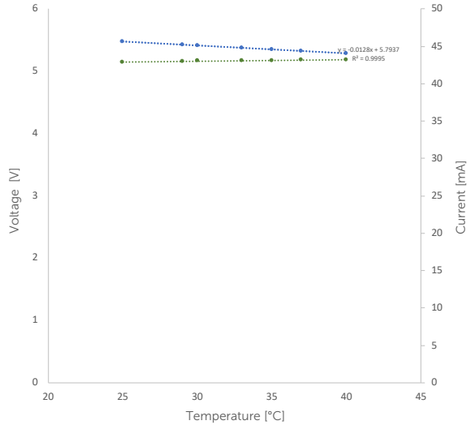
**Additional to standard IGU

IV & PV Curves*

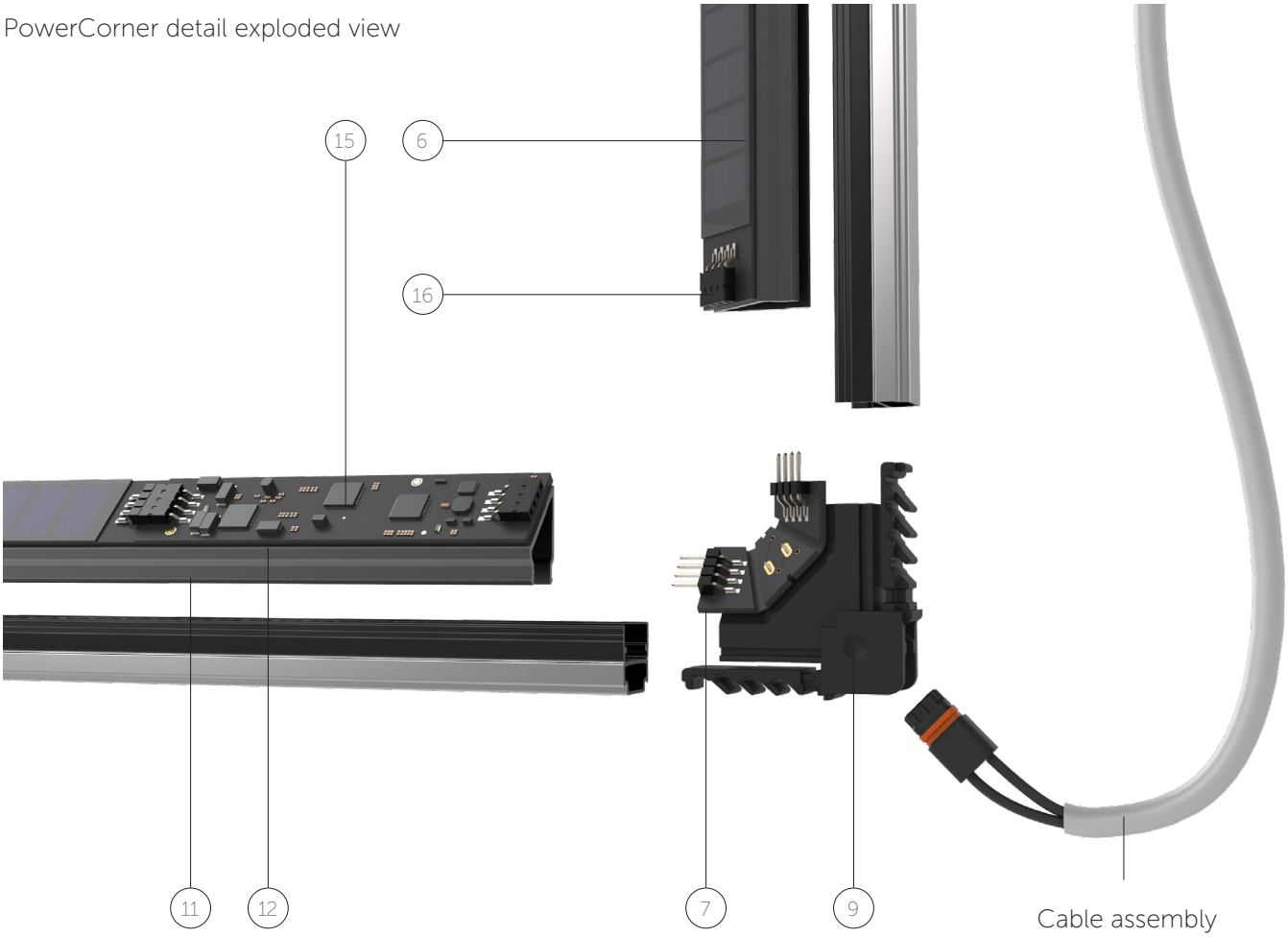


* Results for one PowerModule under a solar simulator at STC

Thermal Characteristics



PowerCorner detail exploded view



PowerWindow in Use

Binck Kade Towers

1700m² of SmartSkin is installed, consisting of PowerWindows with integrated sealed glass sun blinds (fabricated by Pellini). The facade is operated on PowerWindow energy and programmed to pro-actively react to indoor climate demands. This dynamic, one-system combination of sealed glass sun blinds and PowerWindows enables self-sufficient energy usage, while simultaneously increasing comfort levels for the Binck Kade residents.

EPC impact: -0.1,

U-value: 0.6
G-value: 0.08
Cavity width: 29mm

Sun blinds controlled by lux and temperature sensors

15% energy savings, meeting NZEB & BENG demands