

# **Solar curtain wall of office building in Alexandria Egypt**





## Overview

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What is a photovoltaic curtain wall?

They enhance thermal comfort and help prevent the greenhouse effect. A standard curtain wall offers no return on investment. In contrast, a photovoltaic curtain wall not only insulates the building but also generates power for over 30 years. This reduces monthly electricity bills and ultimately pays for itself over time.

Does Photovoltaic Glass fit in a curtain wall?

No, the BIPV photovoltaic glass structurally does not differ from other types of conventional glazing. Therefore, it is integrated into the building envelope (curtain wall, façade, or skylight) like any construction material. What solar control and comfort advantages does photovoltaic glass offer in a curtain wall?

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Does a PCM double glazing unit reduce electricity consumption in Alexandria?

Figure 12 shows the monthly cooling electric consumption in Alexandria as retrieved from the design builder simulation. It is clear that the office building with the integrated PCM double glazing units is more effective than the one with traditional DGUs in reducing the electric consumption required for cooling the building.

What is a glass curtain wall?

Glass curtain walls (GCW) are a common feature in most modern buildings nowadays. The architectural aesthetics appearance of glass curtain walls helped in spreading its usage especially with office buildings.



## Solar curtain wall of office building in Alexandria Egypt

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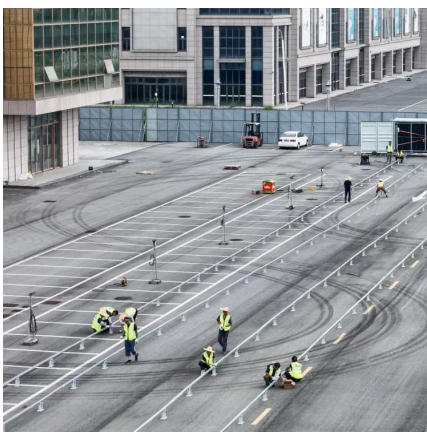
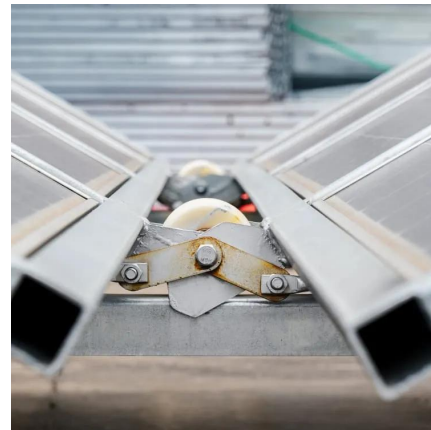


### [The Role of Curtain Wall Design on Reducing Thermal ...](#)

In this study five scenarios using different curtain wall facades design for the five parameters were applied and simulated using design builder software for an existing office building located in ...

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PDF , On Jul 6, 2021, Maha Anber published The efficiency of using building integrated photovoltaics in the retrofitting of office buildings in Egypt , Find, read and cite all the research ...



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Feb 6, 2025 · Nowadays glass curtain walls are used widely in modern buildings as they offer a significant aesthetic appearance and provide the building with natural lighting.

### [The Efficiency of Using Building Integrated Photovoltaics ...](#)

Oct 19, 2025 · Office buildings consume around 40% of their energy for lighting to provide an adequate visual environment for their occupant [3]. As shown in figure 1, the energy ...



[Simulation of a zero energy office building in Egypt with ...](#)

A. Shahin and D. Sumiyoshi, "Integration of passive and active solar techniques towards developing a zero-energy strategy for Egyptian office Buildings," in PIEA2017 Proc., pp. ...



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[THE IMPACT OF USING SEMI-TRANSPARENT PHOTOVOLTAIC IN OFFICE BUILDING](#)

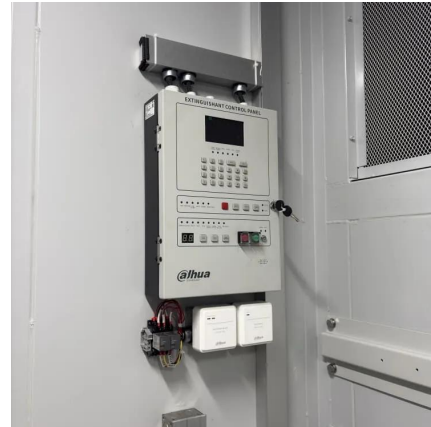
This research dealt with semi-transparent photovoltaic STPV as a substitution material of the transparent parts of office building envelope. Integrating STPV in facades especially in the ...





### [A photovoltaic curtain wall under construction in ...](#)

Sep 26, 2025 · What is a photovoltaic curtain wall? Building Integrated Photovoltaics At Onyx Solar we provide tailor-made photovoltaic glass in terms of size, shape, transparency, and ...



### [Assessment of retrofitting smart glass on office building ...](#)

Apr 1, 2025 · This office building is chosen based on its relevance to the research topic and represents various office buildings here in Egypt. Moreover, its façade is covered with a large ...

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