

# Smart Glass and IEQ: Enhancing Wellbeing in the Residential and Commercial Smart Glass Market | FMI Study

*Smart glass enhances indoor environmental quality, improving comfort, health, and productivity in homes and commercial spaces beyond energy savings.*

NEWARK, DE, UNITED STATES, May 5, 2025 /EINPresswire.com/ -- The global [residential and commercial smart glass market size](#) is projected to be valued at USD 58248.1 million in 2024 and further increase at a CAGR of 12.4% during the forecast period. Worldwide sales of residential and commercial smart glasses are set to total USD 187475.7 million by 2034.



Smart glass enhances indoor environmental quality, improving comfort, health, and productivity in homes and commercial spaces beyond energy savings.

“

As wellness-driven design gains traction, smart glass is emerging as a key IEQ solution, offering dynamic light, heat, and acoustic control for healthier indoor environments.”

*Nikhil Kaitwade, Associate Vice President at Future Market Insights*

Traditional discussions on smart glass, often under the umbrella of [electrochromic glass](#) trends or intelligent glass for office buildings, revolve around solar heat gain reduction, glare control, and energy savings. However, the conversation is expanding to encompass human-centric design principles. The integration of smart glazing systems into residential and commercial structures can influence physiological and psychological health by modulating natural light, maintaining optimal thermal comfort, and enhancing [acoustic insulation](#). These factors are central to IEQ—a measure of the indoor conditions that affect occupants' physical and mental states.

This pivot toward health-conscious architecture is especially critical in the post-pandemic world,

where remote work and wellness-focused spaces have elevated the importance of indoor comfort. Smart glass enables adaptive environments that align with circadian rhythms and minimize exposure to harmful UV radiation, marking a shift from static glass applications to intelligent, biologically attuned surfaces.

Smart glass market forecast – 2024 to 2034 – Global market insights!

<https://www.futuremarketinsights.com/report-sample#5245502d47422d343733>

As technology advances, smart glasses are expected to become affordable and attractive for various applications. They also enhance the architectural appeal of residential and commercial buildings by providing privacy control without compromising natural light. However, higher initial costs and the need for additional demonstrations are hindering their wider adoption.

Key market insights:

- The global residential and commercial smart glass market is set to reach USD 187475.7 million by 2034, with a CAGR of 12.4% in the forecast period.
- Based on technology type, the electrochromic glass segment accounted for a market share of 39.4% in 2024.
- By end-user, the residential segment is leading with a market share of 54.8% in 2024.
- India is anticipated to record a CAGR of 18.4% between 2024 and 2034.
- Sales in China are predicted to rise at a CAGR of 13.8% through 2034.

Consumers are increasingly demanding smart glasses to fulfill the luxurious appeal of their homes. Manufacturers are targeting specialized markets for smart glasses beyond their conventional uses,” Says Nikhil Kaitwade, Associate Vice President at Future Market Insights (FMI).

Smart glass market forecast – 2024 to 2034 – Global market insights!

One of the most compelling features of smart glass is its ability to dynamically tint in response to solar radiation. Electrochromic variants, for instance, darken when exposed to high light levels, reducing glare and heat without blocking daylight entirely. This functionality supports visual comfort and reduces eye strain, a major concern in digital-heavy workplaces.

In addition, smart glass mitigates temperature fluctuations by controlling solar heat gain, thereby maintaining thermal equilibrium in interior spaces. Unlike traditional blinds or static low-emissivity windows, smart glass adapts throughout the day and seasons, ensuring a consistent indoor environment.

Moreover, certain smart glass solutions incorporate UV filtering, which not only protects furniture and interior finishes from fading but also minimizes harmful exposure to occupants. In residential applications, such protection is especially relevant in sun-facing rooms, nurseries, and

home offices.

Acoustic performance is another underrated benefit. Laminated smart glass units, particularly those used in switchable glass for homes, offer improved sound insulation, enhancing acoustic comfort in both noisy urban environments and open-plan commercial buildings.

Future Market Insights: Smart Glass Market - Global Outlook and Forecast to 2030:

<https://www.futuremarketinsights.com/reports/smart-glass-market>

What are the key players?

Key players in the smart glass industry, including Gentex Corporation, Asahi India Glass Limited, Glass Apps, LLC, and Kinestral Technologies, Inc., are developing customizable smart glass solutions with features like tint adjustment, integration with smart home systems, and self-cleaning properties. They are investing in research and development to create cost-competitive materials, such as electrochromic or suspended particle display technologies.

They are also innovating for voice control, improved user experience, and automated adjustments based on environmental conditions. They are targeting specialized markets like smart shower enclosures, skylights, commercial space partitions, and greenhouses to diversify consumer categories and generate additional revenue. They are also optimizing production procedures and exploring substitute materials to reduce costs.

#### Industry Updates-

- Zeiss, headquartered in Oberkochen, in January 2024, showcased its Multifunctional Smart Glass Technology that can float “holographic” and AR content on transparent surfaces.
- Panasonic, headquartered in Osaka, in September 2023 developed photovoltaic glass with perovskite for power-generating windows with solar cells that can convert the façade into a renewable energy source.

#### Leading Residential and Commercial Smart Glass Brands

- Gentex Corporation
- Asahi India Glass Limited
- Glass Apps, LLC
- Kinestral Technologies, Inc.
- NODIS Pte Ltd.
- Polytronix, Inc.
- RavenBrick LLC
- Scienstry Inc.
- Smart Glass Technologies Inc.
- ToughGlaze (UK) Ltd

Smart Glass Market Size, Share, and Outlook

Despite its clear advantages, the adoption of smart glass in both residential and commercial markets faces several hurdles. High upfront costs, installation complexity, and the need for electrical infrastructure still limit widespread integration. However, the technology is rapidly advancing. Companies are exploring hybrid models that combine smart glazing systems with photovoltaic functionality, offering energy generation and IEQ benefits in one package.

Additionally, advancements in AI and IoT are enabling predictive control systems where smart glass can anticipate changes in sunlight and room occupancy. These intelligent systems not only enhance performance but also provide data-driven insights for facility managers and homeowners alike.

General & Advanced Materials Market Insights:

<https://www.futuremarketinsights.com/industry-analysis/general-and-advanced-materials>

By Technology Type:

By Technology Type:

Based on technology type, the sector is divided into electrochromic, thermochromic, and photochromic.

By End-use:

By end-use, the sector is segmented into residential and commercial. The residential segment is further divided into smart windows and doors, smart glass partitions, smart shower glass, and smart glass walls. The commercial category is segregated into commercial buildings, automobiles, aircraft, marine, consumer electronics, and others.

By Region:

The sector is spread across North America, Latin America, Western Europe, South Asia, East Asia, Eastern Europe, the Middle East, and Africa.

Read Complete Source: <https://www.globenewswire.com/news-release/2024/07/26/2919328/0/en/Residential-and-Commercial-Smart-Glass-Sales-Set-to-Total-USD-187475-7-Million-by-2034-Amid-Rising-Trend-for-Comfort-and-Convenience-Future-Market-Insights-Inc.html>

Source: Future Market Insights:

Building Thermal Insulation Market: <https://www.futuremarketinsights.com/reports/building-thermal-insulation-market>

Beryllium Aluminum Alloy Market: <https://www.futuremarketinsights.com/reports/beryllium-aluminum-alloy-market>

Advanced Automotive Materials Market:  
<https://www.futuremarketinsights.com/reports/advanced-automotive-materials-market>

Nanoscale Chemicals Market: <https://www.futuremarketinsights.com/reports/nanoscale-chemicals-market>

Ceiling Tiles Market: <https://www.futuremarketinsights.com/reports/ceiling-tiles-market>

□□□□□ □□□□□□ □□□□□□ □□□□□□□□ (□□□□)

Future Market Insights, Inc. (ESOMAR certified, recipient of the Stevie Award, and a member of the Greater New York Chamber of Commerce) offers profound insights into the driving factors that are boosting demand in the market. FMI stands as the leading global provider of market intelligence, advisory services, consulting, and events for the Packaging, Food and Beverage, Consumer Technology, Healthcare, Industrial, and Chemicals markets. With a vast team of over 400 analysts worldwide, FMI provides global, regional, and local expertise on diverse domains and industry trends across more than 110 countries.

Join us as we commemorate 10 years of delivering trusted market insights. Reflecting on a decade of achievements, we continue to lead with integrity, innovation, and expertise.

□□□□□□□□ □□:

Future Market Insights Inc.  
Christiana Corporate, 200 Continental Drive,  
Suite 401, Newark, Delaware - 19713, USA  
T: +1-347-918-3531  
For Sales Enquiries: [sales@futuremarketinsights.com](mailto:sales@futuremarketinsights.com)  
Website: <https://www.futuremarketinsights.com>  
[LinkedIn](#) | [Twitter](#) | [Blogs](#) | [YouTube](#)

Ankush Nikam  
Future Market Insights Global & Consulting Pvt. Ltd.  
+ +91 90966 84197

[email us here](#)

Visit us on social media:

[Other](#)

---

This press release can be viewed online at: <https://www.einpresswire.com/article/809659482>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2025 Newsmatics Inc. All Right Reserved.