

# SCHOTT Glasses for Restoration – Restoration and Conservation further thought

## Historical in form, inovative in function: UV and IR protection

SCHOTT glasses for restoration are the best choice for the most accurate restoration of historical buildings from various eras by mimicking the appearance of the original glazing materials. GOETHEGLAS for buildings from the 18th and 19th centuries, RESTOVER® glass for buildings dating from the early 1900s and TIKANA® glass for buildings from the classical modern period.

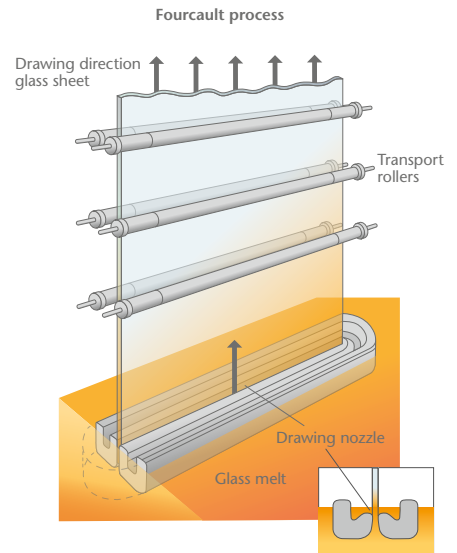
At the same time, a wide range of processing options offer highly contemporary functions, including protection against UV and IR radiation.

### Production process

The traditional Fourcault process vertically draws glass from a liquid melt upwards through a nozzle and into a drawing shaft. At the end of the shaft, the glass is cut to size. SCHOTT restoration glass exhibit striations typical for this production process. The glass also has varying degrees of waviness depending on the product. These dynamic surfaces make the glass the ideal choice for the most realistic restoration of windows and doors in historical buildings and monuments of different eras.

### Processing options

All SCHOTT restoration glasses have the European Technical Assessment ETA-12/0159 of the German Institute for Building Technology, i.e. they can be processed into standard building products such as toughened safety glass, laminated safety glass and insulating glass, depending on the glass thickness.



Babelsberg Palace, Babelsberg, Germany



German Historical Museum, Berlin, Germany



Maggi-Areal, Kempthal, Switzerland

### SCHOTT GOETHEGLAS

GOETHEGLAS is a colorless, drawn glass with the distinctive, irregular window glass surface typical of the 18th and 19th centuries.

### SCHOTT RESTOVER®

RESTOVER® resembles window glass manufactured around 1900. RESTOVER® Light and RESTOVER® Plus can provide a less or more textured surface variant resembling traditional blown glass depending on individual requirements.

### SCHOTT TIKANA®

TIKANA® is particularly suitable for buildings in the Bauhaus style. Its slightly irregular surface blends harmoniously into classical modernist buildings.

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## For extended protection against UV and IR radiation

Conventional PVB films guarantee comprehensive protection against ultraviolet light (UV) when constructed as laminated glass to 380 nm. However, the solar radiation up to 400 nm beyond this is also relevant, because this wavelength range is also permanently harmful to materials such as wood, paints, fabrics, etc. This broader definition of UV protection plays a major role in the selection of glass, especially for museums, churches and sacred buildings with a cross-generational responsibility for art and its preservation.

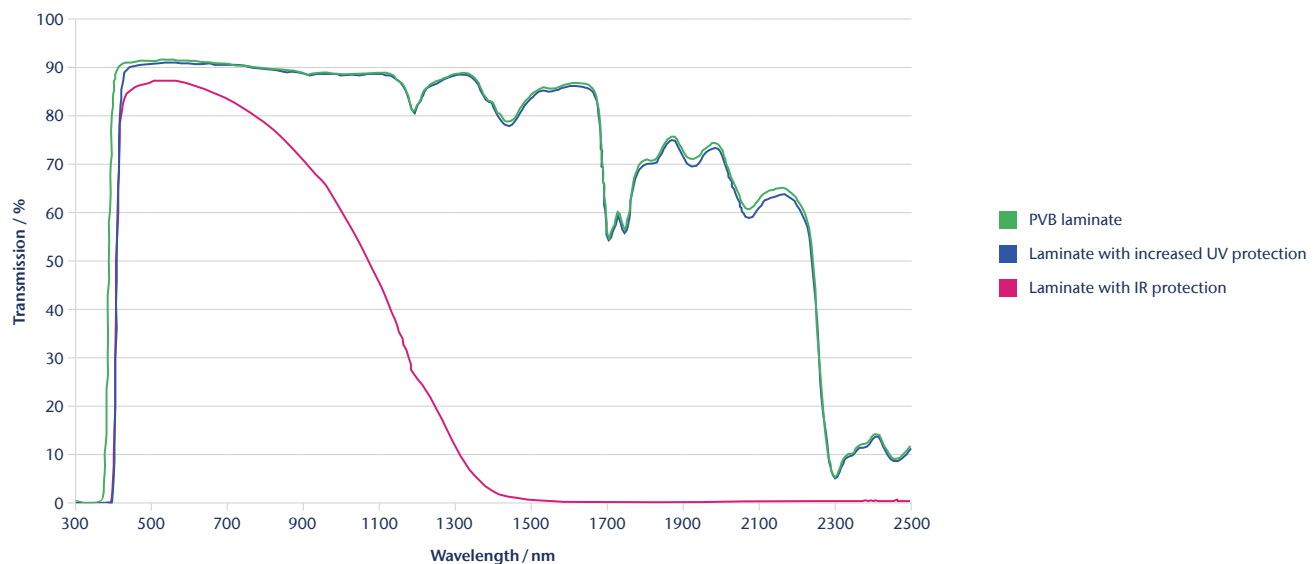
SCHOTT therefore offers special UV-protective laminated glasses that reduce harmful transmission in the range up to 400 nm to less than 1% and thus support the preservation of relevant cultural assets for future generations. Protective glasses for the infrared range (IR) of solar radiation (780–2500 nm), which reduce excessive heat input, round off SCHOTT’s product range here.

In principle, all protective and restoration glasses from the SCHOTT portfolio can be processed into laminated glasses with enhanced protective functions.

## Overview of UV and light transmission\*

Transmission / Wavelength	Laminate with PVB film [%]	Laminate with increased UV protection [%]	Laminate with IR protection [%]
Ultraviolet ( $\tau_{UV}$ ): 300 – 400 nm	9.0	< 0.05	< 0.05
Visible light ( $\tau_{vis}$ ): 380 – 780 nm	88.5	83.1	78.4
Infrared ( $\tau_{IR}$ ): 780 – 2500 nm	69.3	68.7	16.0

## Comparison of transmission spectra of SCHOTT protective glazing\*



\* The measurements were performed on a glass structure with a total thickness of 6.51 mm (RESTOVER® / foil / low-iron soda-lime float glass).

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

SCHOTT AG, Hattenbergstrasse 10, 55122 Mainz, Germany  
Phone +49 (0)6131/66-2678, [info.architecture@schott.com](mailto:info.architecture@schott.com)

