ENG

Glashütte Lamberts

restauro®UV
restauro®IR

Mouth-blown special glass

Historically valuable objects, furniture and interior decorations are under the constant influence of natural light and, therefore, are exposed to the harmful effect of ultraviolet and infrared rays. The shorter the wave lengths of these rays, the more energy and, as such, the more damaging their effect on the respective materials.

UV rays bleach organic dyes and destroy the structure of binding agents and layers of paint. IR rays lead to dehydration and accelerated ageing due to their thermal effects. Over time painted surfaces crack and flake when exposed to repeated temperature changes and associated expansion and contraction.

Entry of radiation into interior spaces primarily takes place through window openings. Simple window glass offers little protection. On the other hand, the specialized mouth-blown restauro®UV and restauro®IR glass types produced by LambertsGlas® contain UV and IR protection filters in their chemical composition. In addition to their aesthetic qualities, these unique glasses contribute effectively to the preservation and preventive conservation of valuable art and cultural heritage.

restauro®UV and restauro®IR are not coated or laminated. The protection filters are within the glass.

restauro®UV and restauro®IR, just like restauro® Light and restauro® Classic, are produced by traditional mouth-blown technology. Therefore they have the same typical characteristics (distortions, little bubbles, streaks) and visually integrate perfectly into historic building structures.

restauro®UV and restauro®IR are produced in thicknesses from 2 to 3mm and can also be easily installed in narrow glazing rebates of historic wooden windows.

restauro®UV and restauro®IR can be manufactured in double and triple insulated glass units having insulating values close to conventional insulating glass.

restauro®UV and restauro®IR are ideal for external protection glazing as well as suitable for the production of laminated glass and stained glass.

St. Marien Church, Wittenberg; Martin Luther's place of activity and mother church of the Reformation; restauro®UV as small-scale stained glass to protect the Lucas Cranach the Elder's altar inaugurated in 1547; installation 2014

Large Parlour, Brentano House, Oestrich-Winkel (Rheingau); restauro®UV installed in the historic muntin windows to protect the valuable interior of the early 19th Century; installation 2016

York Minster, Great East Window; largest example of medieval stained glass in England; external protection glazing with restauro®UV as stained glass with replicated lead lines; installation 2017

St. Nicholas Church, Wolfsbach/Bavaria; restauro®IR as honeycomb glazing to protect the baroque altar from the 18th Century; installation 2016

LambertsGlas®

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The production

Mouth-blown flat glass is real craftsmenship. At the Lamberts Glassworks, one of the last production sites worldwide, this glass is still produced using the centuries-old handcraft technology that has hardly changed through today.

Through the constant blowing and turning of blowpipes, glassmakers shape the viscous glass mass into an elongated glass balloon.

Cut open on both ends, the result is a glass cylinder which is slowly cooled, then cut lengthwise, and flattened after being heated once again.

Production of restauro® Light by swinging of the glass balloon in a deep pit, creates larger sheets exhibiting slighter distortions in the glass surface.

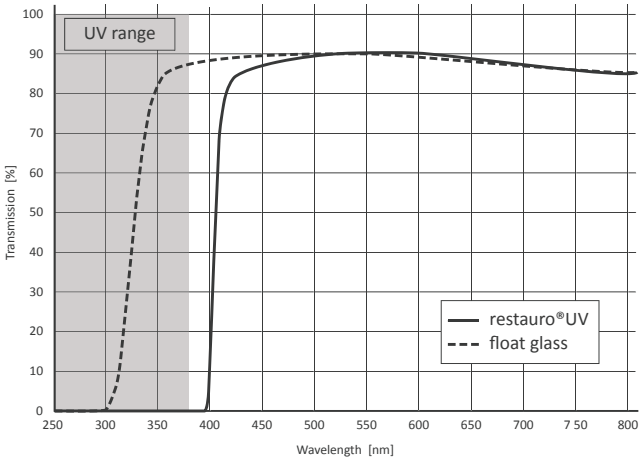
After being reheated, the cylinder is cut lengthwise, opened, and flattened.

restauro®UV

protects against ultraviolet rays in the spectral range up to 380nm

	Distortions	Dimensions	Thickness
restauro®UV	slight	on request	ca. 2-3mm

Schematic representation of the light transmission of restauro®UV compared to industrially produced float glass without UV protection.



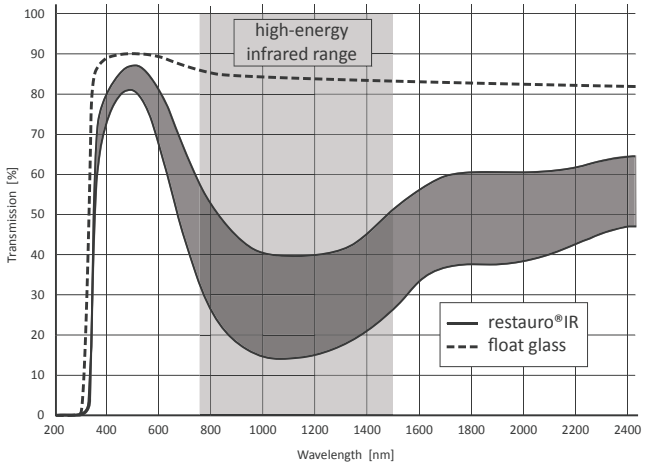
To verify the long-term stability in sunlight, restauro® UV was subjected to a solarisation weathering test. It showed neither a deterioration of the transmission values in the ultra violet spectrum, nor a noticeable subjective colour change in the transparency.

restauro®IR

protects against infrared radiation primarily in the spectral range between 780 and 1500nm

	Distortions	Dimensions	Thickness
restauro®IR Light	slight	85 x 100cm	ca. 2-3mm
restauro®IR Classic	pronounced	60 x 90cm	ca. 2-3mm

Schematic representation of the light transmission of restauro®IR compared to industrially produced float glass without IR-protection.
The grey area between the two graphs describes the tolerance range of the light transmission of thinner and thicker glass samples.



restauro®IR reduces the passage of infrared radiation by up to 80%.

With increasing glass thickness, the IR-protection effect increases as well.