

## UV printed glass



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Dubiel Vitrum uses an advanced plotter which enables it to produce glass printed with UV curable ink paint. This makes it possible to produce highly attractive glass for a wide range of applications. The printer enables us to achieve the highest possible, photographic image quality and to produce any patterns or graphics and whole-surface prints, also on irregularly shaped pieces.

UV curable glass print is characterized by a high, but not total resistance to mechanical damage. In order to ensure print durability, we offer laminated glass (VSG) printed on the inside of the laminate; this technology enables us to print directly on glass and PVB. Glass prints produced and protected in this way are resistant to damage and atmospheric conditions, including UV radiation.

Glass with UV prints inside the laminate is produced by Dubiel Vitrum according to the PN-EN ISO 12543, PN-EN 12600, and PN-EN 14449 standards in terms of the resistance to UV radiation, humidity, high temperature, and mechanical damage.

### Applications

UV printed glass is increasingly popular in construction and interior architecture. At Dubiel Vitrum, we have completed a lot of projects which used our UV printed glass in such structures as:

- glassed-in structures and partition walls
- balcony barriers
- interior balustrades
- wall linings
- façade glass
- skylights



- joints for woodwork
- decorative glass elements

### TECHNICAL TERMS OF REFERENCE FOR UV GLASS PRINTING at Dubiel Vitrum

<b>maximum size of material for printing (e.g. glass or PVB)</b>	2,500 x 1,250 mm (i.e. maximum print area = printed up to the edge) in practice, the material can be slightly bigger (to be consulted with Sales)
<b>printing from ROLL - maximum material size</b>	<ul style="list-style-type: none"><li>• width: up to 2,200 mm (maximum print width: 2,190 mm)</li><li>• roll diameter: up to 240 mm</li><li>• core diameter: above 76.2 mm</li></ul>
<b>maximum material thickness</b>	48 mm
<b>maximum glass thickness</b>	12 mm
<b>printing from ROLL -maximum material thickness</b>	3 mm
<b>maximum medium density (gsm)</b>	34 kg/m <sup>2</sup>
<b>maximum media weight (ROLL)</b>	depending on the size (width) – up to 50 kg
<b>medium (material for printing)</b>	flat materials, rigid and soft, such as: <ul style="list-style-type: none"><li>• glass</li><li>• polymers (also transparent, e.g. acrylic)</li><li>• cardboard</li></ul>

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- high density paper
- textiles (e.g. linen stretched over a frame)
- aluminium
- other

### Printing on PVB, PET, PCV

can be done only on a table – roll printing is not allowed due to the material's and resulting print deformations. In foil printing, there is always a risk of defects which impacts the quality of the pattern printed – this can be especially visible with long straight lines.

### inks

- CMYK paints + additional color: white

a print is produced by superimposing four partial (raster) images in the following colors: blue (*Cyan*), pink (*Magenta*), yellow (*Yellow*) and the complementary black (*Black*).

- UV curing

### key limitations and operating conditions

- white is printed as a uniform color – without tone transitions
- single-layer print is transparent
- to eliminate transparency we use a ground print, most often white
- ambient temperature: 18 – 30°C
- ambient humidity: 30 – 70% (without condensation)

#### Quality of UV print on glass

Due to our customers' high expectations concerning the quality (accuracy) of glass prints, below we present the minimum standard according to which our clients should order UV prints from our company. Let us note here that the print quality to a large extent depends on the quality of the file/graphics submitted, but also on whether the print is made on annealed float glass or tempered glass (ESG), on the type of ground print used, on the client's expectations, etc.

## RULES FOR ACCEPTING GRAPHICS FOR UV PRINT ORDERS

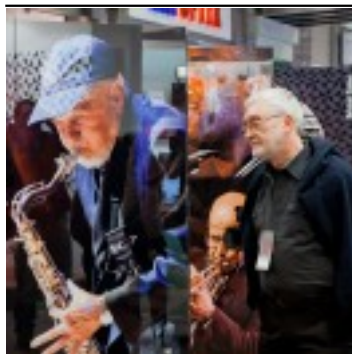
PARAMETER	VALUE	COMMENTS
<b>Raster image (photo) resolution</b>	<ul style="list-style-type: none"> <li>• optimum resolution: 150 - 300 dpi (6 to 12 pixels / mm)</li> <li>• minimum resolution: 75 dpi (approx. 3 pixels / mm)</li> <li>• for prints seen from a greater distance (several meters): minimum 40 dpi (1.5 pixel / mm)</li> </ul>	Photo resolution is strictly connected with print size
<b>Raster graphics formats</b>	JPG, TIF, BMP, PNG, GIF, PSD, XCF	In general, all of the commonly used formats
<b>Vector graphics formats</b>	CDR (ver. 11), AI (ver. 8), SVG and formats used by CAD applications: DWG (ver. 2006), DXF (ver. 2006), 3DM (ver. 3)	Avoid PDF files (3)

Colors

1. The choice of colors according to the RAL and NCS palettes is approximate.
2. It is impossible to perfectly reproduce colors seen on the screen by a printer.
3. Works can be saved as PDF files, if they are complete in terms of size and color (there are objective limitations in editing of this type of files)



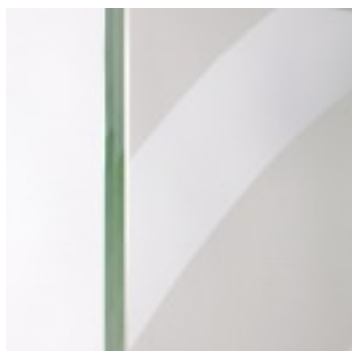
[2]



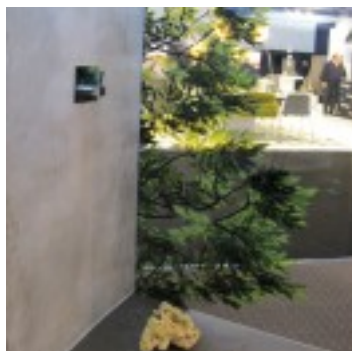
[3]



[4]



[5]



[6]



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**Source URL:** <http://www.dubielvitrum.pl/en/offer/construction-glass/products/uv-printed-glass.html>

### Links

- [1]  
[http://www.dubielvitrum.pl/sites/default/files/styles/duze\\_800/public/\\_mg\\_0299\\_0.jpg?itok=QbQ-NEsE](http://www.dubielvitrum.pl/sites/default/files/styles/duze_800/public/_mg_0299_0.jpg?itok=QbQ-NEsE)
- [2] [http://www.dubielvitrum.pl/sites/default/files/styles/duze\\_800/public/img\\_1313.jpg?itok=v-2-rmdz](http://www.dubielvitrum.pl/sites/default/files/styles/duze_800/public/img_1313.jpg?itok=v-2-rmdz)
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