

20/20

europa

international eye fashion

SPECIAL: 3D PRINTED EYEWEAR

In detail *Materialise* / Interview *Kaleos*

**LEINZ EYEWEAR
A BERLIN-BASED EYEWEAR
INNOVATOR**

Beate Leinz founded LEINZ Eyewear four years ago. She previously worked as an eyewear designer for renowned fashion brands for 25 years. Today, she shows her own personal design language in her eyewear designs. The LEINZ collection first became well-known when it won the OptiBox Award in 2022 at the opti trade fair in Munich. The OptiBox Award jury described the young independent label's design as "quiet extravagance and cool courage". From the desire to unite two contrasting materials in one pair of glasses, Beate Leinz developed an innovative combination of an acetate front and a polyamide-printed endpiece and temple unit.

“3D printing enables us to produce in small quantities. The advantage of this is that the designer is freer in combining colours and can react to trends without production costs rising to infinity, as no predetermined and purchased quantities of material have to be used. The variety of current colour variations in the collection shows how I use this possibility very consciously for the frame designs....”

Beate Leinz, LEINZ Eyewear



In the current collection, the designer works with two different 3D printing processes to produce the individual components of her eyewear. The temple and end piece are printed using the established SLS printing process. For the front, a new technology is used, a further development of the well-known stereolithography process. The front is printed from an acrylic-based resin more commonly used in dentistry. What's new is that this resin is not only translucent, but also coloured, allowing LEINZ to take a new approach to designing the frames. 3D printing makes it possible for LEINZ Eyewear to work sustainably: in the DLP printing process, components are built up layer by layer using pixel-based exposure. The components are then extracted from the liquid synthetic resin. The unused liquid resin remains in the build space for the next print. This minimizes material consumption. The CO2 footprint is over 90% lower than the production of glasses made from acetate. Asked to explain the exciting qualities of using 3D printed technology, Leinz explains that the complex plug-in system she has designed can be produced very precisely in 3D print.

Today, Beate Leinz uses the different material qualities of the two printing processes with their respective colour worlds as she did at the very beginning of her design development: in order to create a contrast and tension between transparent and opaque volumes in the design, she combines the translucent acrylic resin with the opaque polyamide. This creates the impression that the endpiece and temple section breaks through the front.

leinzeyewear.de | [leinzeyewear](https://www.instagram.com/leinzeyewear)



3D manufactured Eyewear – Made in Switzerland

gotti.ch