In the near future computers will define a car’s cockpit. A minimized interior design is already being customized during production. Many control functions and display features are digital. Creating an oasis of comfort and security.

Car manufacturers find themselves faced with the challenge of how to satisfy all of the needs for innovation. All while keeping the overall weight of the vehicle as low as possible to keep electric cars running longer and to reduce exhaust emission of a combustion engine.
Enabling unknown moods

Because glass is an inorganic, ageless substance, it is ideally suited for the pioneering technology of car interiors. In contrast to many other materials, glass has numerous benefits – it offers both beauty and strength. Glass’ optical properties make it extremely scratch-resistant, allowing touch screens to be integrated under trim components even the most elongated trim.

To date, glass has been sparingly utilized in interior car design. Reasons being that glass must be extremely strong so that it does not lead to further injuries when accidents happen. Secondly, a high degree of malleability is essential in order to fit futuristic, curved designs. Lastly, the need to be as lightweight as possible, which, when considering glass, is not an obvious assumption.

From smartphones to car interiors

SCHOTT’s ultra-thin glass is most popularly used in mobile device applications, such as protective glass for fingerprint sensors and camera lenses. Both borosilicate glass as well as aluminosilicate glass, which have been chemically toughened, are being utilized. The integration of displays and touch screens begs the question: will our car’s cockpit soon be more of an entertainment hub instead of a purely functional driver’s seat?

When it comes to the automotive industry, ultra-thin glass in thicknesses of 250 micrometers or below is a particularly interesting material. At this thickness, it is lightweight but extremely durable. Convex and concave geometries are also possible as well as curved two-dimensional forms.
How ultra-thin glass makes its way into your vehicle

1

The glass is produced eco-friendly in Germany. Thanks to the unique production process a wide range of thicknesses are available.

2

Next, the glass sheets are customized and the edges are polished. At this point, a chemical toughening process is also possible.

3

A screen printing process is used to print on the glass if required. All colors are possible.

4

In the final step, the ultra-thin, tempered, and in some cases, printed glass is moved to a support structure with the help of an adhesive.
Light can conjure up new emotions and moods within seconds. This is also true for automotive interiors. An illumination concept for a sports car can either facilitate an adrenaline rush or provide comfort – appropriate for the luxury driving mode in an automatic transmission – with soft lighting tones.

It offers a wide range of emotional possibilities, and for car manufacturers of every class a valuable means for more closely aligning their brands and driving concepts with the driver’s own world of emotions and moods.

SCHOTT has made its light solutions for automotive interiors even more effective. The new SCHOTT MultiLight allows for a mix of uniformly illuminating contour light guides – the proven automotive sidelights – and spots, achieving entirely new possibilities for interior lighting situations. In SCHOTT’s MultiLight solution all of the light guides flow together in an RGB light source. This cuts down the time and effort needed for integration while reducing the purchasing costs.

SideLights, which have been installed in several models of leading auto manufacturers, continue to impress with their uniform distribution of light and a variable diameter of less than 1.2 mm. Color stability is guaranteed in lengths up to three meters.
„In the future, car interiors will be full of screens – imagine an amplified smartphone. Car manufacturers will look to chemical and material suppliers on how to implement these upcoming innovations into their interior designs.”

Professor Dr. Ferdinand Dudenhöffer, University of Duisburg-Essen (Germany)
Let’s work together to achieve a special ambience for automotive interiors.

What is your next milestone?

Contact

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SCHOTT AG

Links

SCHOTT MultiLight
SCHOTT Lighting & Imaging – Automotive
SCHOTT’s ultra-thin glass