Enabling functional integration in mobility and beyond.
Black, near infrared transparent polycarbonate film for sensor applications.
Functional integration with Makrofol® ST

Mobility is changing very rapidly, and tomorrow’s driving experience will be different from what it is today. With our Makrofol® ST352 near infrared (NIR) transparent film, we support the development of embedded sensors, which are essential for autonomous and assisted driving technologies. In particular, with Makrofol® ST352, we address the need for a tinted film in LiDAR (Light detection and ranging) applications, such as front modules for electric vehicles.

Components and benefits of Makrofol® ST352 1-1:

- High optical quality film based on polycarbonate with a deep black visual appearance
- High light transmission in the NIR range
- Well-defined low-light transmission in visible range (VIS)
- A co-extruded film with an additional one-side cap layer for UV protection
- Smooth and glossy surface (1-1) on both sides, lined with protective masking
- Further processes in cutting, high pressure or thermoforming, film insert molding (FIM), printing and coating steps are possible

Makrofol® ST352 can also be applied beyond mobility applications, including consumer electronics and appliances, embedded sensors, as well as smart home devices.

Typical parameters

<table>
<thead>
<tr>
<th>Film thickness</th>
<th>Transmission (VIS) ≤ 5%</th>
<th>Transmission (NIR) ≥ 89% at 905 nm</th>
<th>Gloss Top / reverse side: ≥ 99</th>
<th>Masking Polyolefin both sides</th>
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<td>375 / 500 µm</td>
<td>(details upon request)</td>
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Key Features

- Transmissive in near-infrared
- Black film
- UV protected
- High formability

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1) Please see the “Guidance on Use of Covestro Products in a Medical Application” document.

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