LEXAN™ CXT RESINS

Crystal clear, high flow and high temperature resistant resin

CHALLENGE

Develop a transparent and crystal clear material solution for cost efficient production and assembly of large build number of transparent lenses. Thermoplastic resins can offer cost efficient production of large build numbers versus thermoset, but often do not offer sufficient heat for soldering (e.g. PMMA or PC resins) or amber color (e.g. PEI or PSU resins).

SOLUTION

The new LEXAN™ CXT resins offer a unique balance of:
- High heat (Tg up to 195°C)
- High flow in broad processing window without discoloration
- High transmission in visible (> 87% at 3 mm) and IR regions (> 89% at 3 mm)
- High refractive index (nD > 1.60)
- Stable color and transmission during part life time (heat, humidity, light)

FEATURES

<table>
<thead>
<tr>
<th>HIGH HEAT</th>
<th>OPTICAL</th>
<th>HIGH FLOW</th>
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<tr>
<td>BENEFITS</td>
<td>OPTICAL</td>
<td>BENEFITS</td>
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<tr>
<td>Assembly via (cold) soldering without distortion</td>
<td>Optimal light transmission</td>
<td>Enhanced freedom in tool design</td>
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<td>Over-molding with second resin</td>
<td>Consistent &amp; stable optical properties</td>
<td>Cost &amp; time efficient molding processes</td>
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<td>Performance retention during part life time</td>
<td>Design freedom for optical performance</td>
<td>Lower reject rates &amp; defects</td>
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<td>Improved productivity and/or lower system cost while retaining quality</td>
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POTENTIAL APPLICATION SPACES

**FLASH LENS**
- Soft reflow and heat aging
- Low abusive Yellowness Index
- High flow for complex tooling

**SENSOR LENS**
- Low temperature soldering
- High transmission at VIS and IR wavelength
- High flow for complex tooling

**HIGH HEAT FILMS**
- (E.g. touch screen sensor)
- Annealing at high temperature
- High transmission and low retardation
- Extrusion with low deposit

**AUTO CAMERA LENS**
- Heat ageing at 140°C
- High transmission and low initial Yellowness Index
- High refractive index

**RESPIRATORY MASKS**
- Over-molding with second resin
- Water clear and consistent color
- FDA / food compliant

**AUTO INNER LENS**
- High heat for part requirements
- Tight color tolerance
- Low color shift after molding

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