



Thermal shock

Definition of term

The term thermal shock is used to describe the fast, sudden change of temperature in a material. This leads to tension both on the part surface and over the cross-section, particularly where glass suddenly changes from hot to cold, for example. The material is damaged permanently if the difference in temperature exceeds a certain value.

Damage pattern

Crack in the cover lens



Reasons for failure

Reasons for failure can be:

- Use of non-approved bulbs (capacity too high)
- Pre-damage to the cover lens surface caused by gravel throw
- Sudden cooling of the outer surface of the cover lens e.g. through gushes of water or snow when driving through puddles or snowdrifts
- Superposition of assembly tension (installation) with temperature-related tension during operation of the headlight.