

Toyota's Comments on 5/8/09 ARB's Proposed Cool Cars Rule

Toyota's Overall Opinion

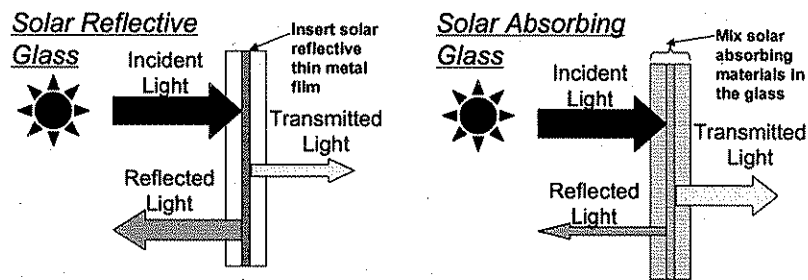
- **Front Windshield**
 - Solar absorbing glass ($T_{ts} \leq 60\%$) should be allowed
 - Prevents potential radio wave interference, customer choice and mass production issues
 - Phase in: 30% at 12MY, 60% at 13MY, 100% at 14MY
 - A technology review in 2 years to consider a higher performance standard from 15MY
 - Allows sufficient lead time to develop mass production technologies and address radio wave interference concerns
- **Plastic Windows**
 - Plastic windows should be exempted from the regulation
 - Accelerates introduction of plastic windows which have fuel efficiency merits
 - At a minimum, ARB should allow higher T_{ts} for plastic windows as EO approval
- **Rooflite**
 - $T_{ts} \leq 40\%$ should be allowed
 - Provides method of meeting customer expectation without substantial weight gain to vehicle

Toyota's Experience with Solar Reflective Glass Windshields

- In Japan, we adopted solar reflective glass on the windshield of some vehicles in 1989-1994
- We moved away from the use of solar reflective windshield due in large part to the many obstacles caused by solar reflective glass to radio waves. For example:
 - Impacted communication with the VICS (Vehicle Information & Communication System) service
 - Concerns regarding how speed detection systems using IR cameras may not operate because the IR was cut by the solar reflective glass
 - As more and more radio wave systems were being adopted, we moved away from solar reflective glass to avoid the interference obstacles it caused and prevent inconvenience for our customers

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Summary

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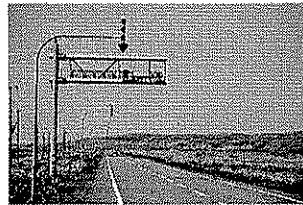
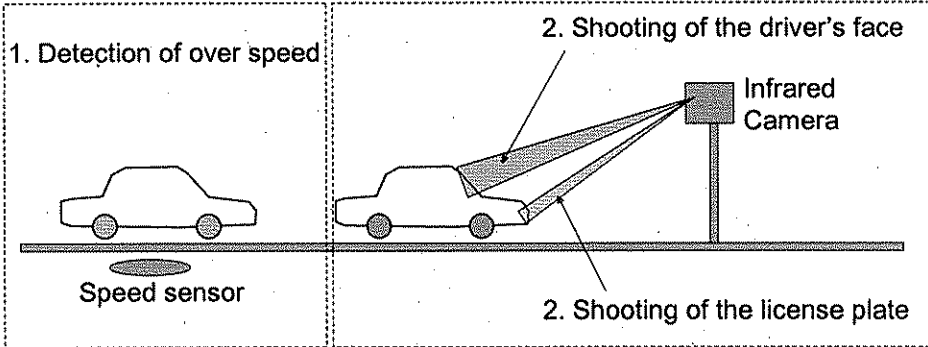
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Appendix

Automatic Speed Supervisor with IR Camera



Example of the systems (Japan)

V I C S Vehicle Information & Communication System

