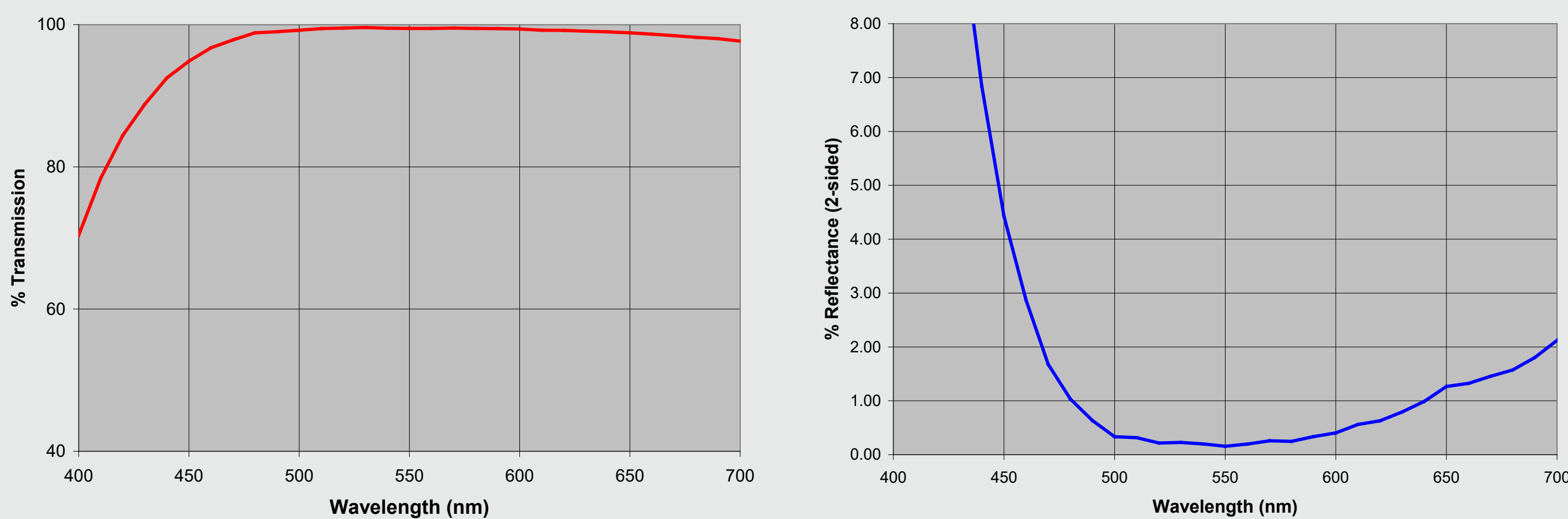


## Development and Licensing of AR Coating Products

YTCA's patented optical coating technologies pioneered the developments and applications of Anti-Reflective (AR) coatings by integrating the optical performance, hardness, abrasion resistance, anti-smudge and environmental durability together. Project received Toyota Engineering Award of Innovation for instrument display used in 1<sup>st</sup> generation of Prius. Applications include meter/electronic devices panels, museum/art displayer and ophthalmic lens coatings.

Optical Transmittance and Reflectance of a 4-layer AR coated plastic panel



Instrument panel for Toyota Prius

Items	Typical Test Results
<b>Total reflectance (CIE%)</b>	<b>~0.6%</b>
<b>Total light transmittance (CIE%)</b>	<b>&gt;99%</b>
<b>Adhesion (cross-hatch) test</b>	<b>No visible change</b>
<b>Pencil Hardness</b>	<b>≥4H</b>
<b>Solvent rub</b>	<b>No visible change</b>
<b>Contact Angle</b>	<b>≥100°</b>
<b>Haze (%)</b>	<b>&lt;0.2%</b>

### HIGHLIGHTS

- Solution based coating process produced by dip-coating or spin-coating processes
- Coatings are cured by rapid thermal curing and/or UV curing processes
- Applicable substrates: plastic (PMMA, PC, PET, etc), glass and metallic
- Large variety of product portfolio ranging from abrasion resistant hardcoat, one-layer anti-glaring, anti-smudge to two-to-four-layer AR coatings
- Tailor to specific product needs to meet performance and processing cost
- Offer non-exclusive technology transfer and license.



**CONTACT INFO: INFO@YTCA.COM**