

When designing vehicles using optical software, it is important to know as precisely as possible the optical characteristics of the materials that will potentially be used. Our high-precision measuring instruments allow you to obtain the optical properties of the materials and export them for use in optical design software so that they are as close to reality as possible.

This application note presents examples of measurement results for various elements of a vehicle measured with our instruments: a dashboard measurement with the Synopsys REFLET 180S, a bodywork measurement with the Synopsys Mini-Diff V2, and an anti-glare screen measurement with the Mini-Diff VPro. It also describes an example of our measurement services, which can provide volume scattering data that enable you to leverage diffuse materials in your designs.

All measurements made with our instruments can be exported to different optical design software.

## Dashboard with the Synopsys REFLET 180S

Main features: High dynamic range, high resolution, adjustable size spot and flux

The Synopsys REFLET 180S is a  $10^{13}$  dynamic range goniophotometer that provides high resolution and significant flexibility in terms of measurement because all axes can move with a small step. Thanks to an adjustable spot size, the size of the spotlight can be adjusted to accommodate the area of interest and its texture.

The first measurement example is a grained dashboard surface (Mold-Tech). Synopsys REFLET 180S measurements of this surface can be performed to study the desired grain size, for example.

The following figure shows a measurement of the 3D BRDF of a dashboard sample with a  $5^\circ$  angle of incidence.





