LIGHT DETECTION AND RANGING: LiDAR

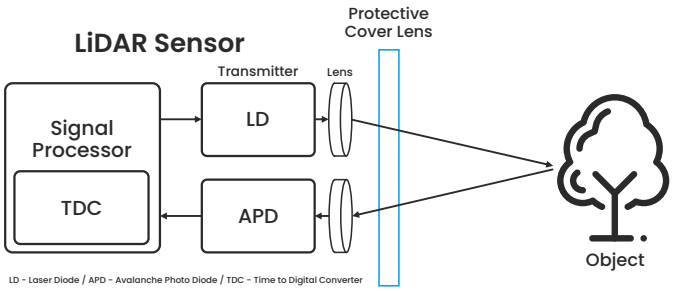
Panel Graphic offer a wealth of expertise in high-spec component coatings. Having served across a range of industries including Automotive, Aerospace, Marine and Medical, we bring experience & innovation to every project.

THE FUTURE - NOW

LiDAR is becoming a key sensor in a wide range of domestic and industrial applications thanks to its unique capabilities of mapping, ranging and classification. LiDAR sensors already support several autonomous operations and is one of the key enablers in the deployment of reliable, fully automated vehicles.

A WINDOW OF PROTECTION

The LiDAR sensor cover is an essential part of the optical path, and plays a determining role in overall system performance. In order to perform efficiently and consistently, and to provide longevity in the field, **the protective window must meet various requirements.**



FUNCTION

Important demands such as stability, transmission spectrum as well as optical form tolerances have to be satisfied. Beam deflection of the LiDAR cover window has a **direct impact on the quality of the sensor signal.**

ENVIRONMENT

Vehicles have to face harsh environmental conditions. Sensors are exposed to high risk impact such as gravel, dust, dirt, humidity and extreme weather. Product concept and development must incorporate these considerations with integration and protection of the sensors. **Resistant, durable and functional cover solutions become mandatory to ensure safe, reliable and uninterrupted operations.**

Optiguard™ Coatings
CLARITY, VERSATILITY AND STRENGTH

Panel Graphic can advise throughout conception, prototyping, pre-production and serial production to help you achieve optimum performance and efficiency for your component. With extensive experience in supply chain management and proven world class QMS we are your perfect partner.

MATERIALS

The majority of OEM's opt for injection moulded or flat polycarbonate covers due to its inherent toughness and excellent light transmission, while also being lightweight cost effective.

PROTECTION & PERFORMANCE

Panel Graphic's **Optiguard™** Coatings offer a range of tailored solutions for LiDAR cover glass protection. Anti-Reflection hard coating with **zero surface defects** comes equipped with **Abrasion resistance** and **Chemical resistance** technology to aid water deflection, providing a flatter, smoother surface condition. This prevents detrimental laser scatter while simultaneously increasing the overall light transmission of the polycarbonate substrate.

Our long life coating solutions include **10 year weatherability guarantees** coupled with **excellent protection against UV degradation**. Many are listed on official regulations (e.g. AMECA, ECE) and have been given approval by global automotive OEMs and TIERs.