

AR Coating Equipment for LiDAR Applications



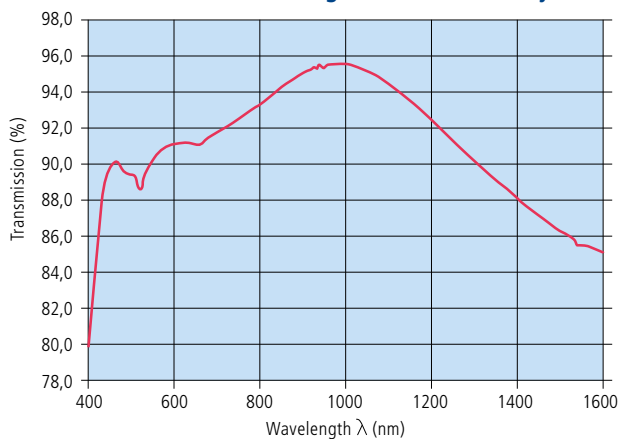
LiDAR, or “light detection and ranging”, is an imaging method which focuses a pulsed laser at an object and measures the time it takes for its backscattered light to return to the sensor. High resolution 3-D spatial mapping can be created in this way when the laser is scanned across a wide field of view. LiDAR has been used since the 1960s for mapping applications in geology and atmospheric physics, but is now indispensable to Advanced Driving Assistance Systems (ADAS) in autonomous vehicles for real-time mapping of traffic and road objects.

Most autonomous driving LiDAR systems rely on lasers with near-infrared (NIR) wavelengths typically at 905 nm, 1064 nm, 1310 nm or 1550 nm. When backscattered laser light returns to the sensor, some amount will be reflected by the cover glass before it reaches the detector.

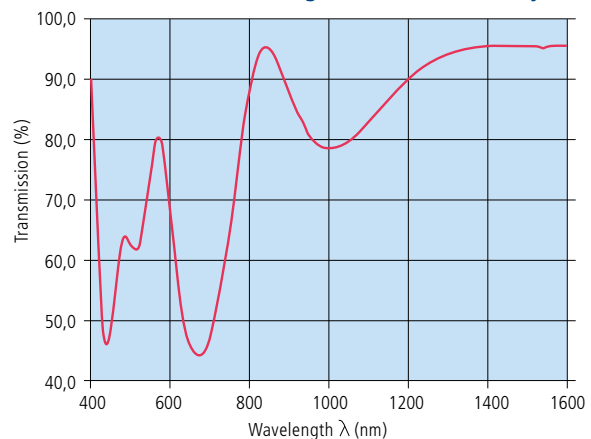
This diminishes the amount of transmitted light, and thereby reduces the accuracy of the image. It is therefore crucial to minimize the amount of reflected light with the use of anti-reflective (AR) coatings to optimize the safety and performance of the vehicle.

AGC Plasma Technology Solutions, a unit of AGC Inc. (Asahi Glass Company), offers a comprehensive range of state-of-the-art thin film coating equipment and solutions for LiDAR applications. This includes AR coatings, as well as protective coatings to shield the sensor from rain and debris. AGC is the world’s number one producer of automotive glass and works with leading car manufacturers to integrate next-generation automotive technology platforms.

AGC Anti-Reflective Coating for 905 nm LiDAR Systems



AGC Anti-Reflective Coating for 1550 nm LiDAR Systems



BENEFITS

- Highest single band or wideband transparency for optimal imaging accuracy
- Neutral color appearance
- Protective coatings against rain, dirt, and debris for extended product lifetime
- Complete coating equipment systems from world’s number one automotive glass producer

Technical Specifications

Technical Specifications	
Coating Types	Anti-Reflective, Mirrors, Anti-Scratch, Hydrophobic, Oleophobic
Transparency	>95% in NIR
LiDAR Wavelengths	905 nm (CMOS detectors), 1550 nm (InGaAs detectors), UV-Vis
Coating Equipment Platforms	Horizontal Inline, Vertical Inline, Roll-to-Roll
Deposition Technologies	Magnetron Sputtering PVD, PlasmaMAX™ PECVD
Substrate Materials	Flat Glass, Curved/3-D Glass, Sapphire, Polymer Film
Substrate Sizes	Up to 3.2 meters width

AGC Plasma Technology Solutions is the industrial coatings unit of the world’s largest glass producer AGC Inc. (Asahi Glass Company) and a one-stop provider for plasma-based vacuum coating equipment. The group leverages decades of thin-film coating experience on large area glass products to innovate and develop new industrial solutions from proof-of-concept to mass production. AGC Plasma Technology Solutions operates R&D and production facilities across the United States, EU, and APAC.

Headquarters

AGC Glass Europe S.A.

Avenue Jean Monnet 4
1348 Ottignies-Louvain-la-Neuve
Belgium

AGC Business Development Americas

11175 Cicero Drive, Suite 400
Alpharetta, GA 30022
USA

www.agc-plasma.com