



Industry Standard UV Resistant polycarbonate with hard-coat

The Hard-Coat Difference

Raw, injection molded plastic begins to degrade immediately when exposed to the environment. Whelen's hard-coating increases the visual life of the light to 7-10 years, providing UV and scratch resistance from sand, salt, sun, and road chemicals.



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Hard-Coated Lenses

At Whelen, we utilize an industry-first innovative process to counteract the effects of environmental and chemical damages to our lenses and domes.



About Whelen Engineering

Whelen designs and manufactures reliable and powerful warning lights, White illumination lighting, sirens, controllers, and high-powered warning systems for Automotive, Aviation, and Mass Notification industries worldwide. Every part of every Whelen product is proudly designed and manufactured in America and is tested on-site to meet the toughest industry certifications. On the road, in the air, and around the world, Whelen is trusted to be seen, trusted to be heard, trusted to perform.



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We hard-coat as many as 35,000 lenses every 24 hours in our New Hampshire facility. It takes just 15 minutes for a lens to make it through the entire process.

Whelen's Hard-Coating Process

Step 1

The raw lenses and domes, composed of UV resistant polycarbonate, are placed onto custom fixtures in the loading area.



Step 2

In the cleaning station, lenses are washed with isopropyl alcohol to clean the surface and remove any debris.



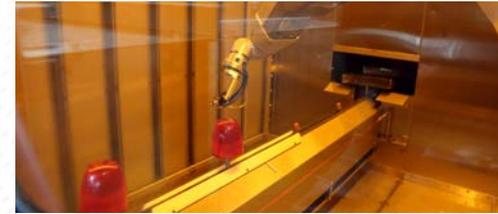
Step 3

The spray off area dries the lighthouse surface, removing any static charge.



Step 4

The six axis robot sprays the lenses with the hard-coat with an atomizing spray gun in a clean, stainless steel environment free from outside contaminants.



Step 5

The infrared heating oven heats the lenses to 160°F, breaking the chemical bond and infusing the hard-coat into the lens.



Step 6

The UV lamp oven utilizes 20 high intensity UV lamps that solidify the hard-coat.



Step 7

In the unloading area, a spectrometer measures thickness of the hard-coat, and lenses are 100% inspected and sorted.



Whelen products feature UV resistant polycarbonate lenses, but we hard-coat for added durability and reliability.

