

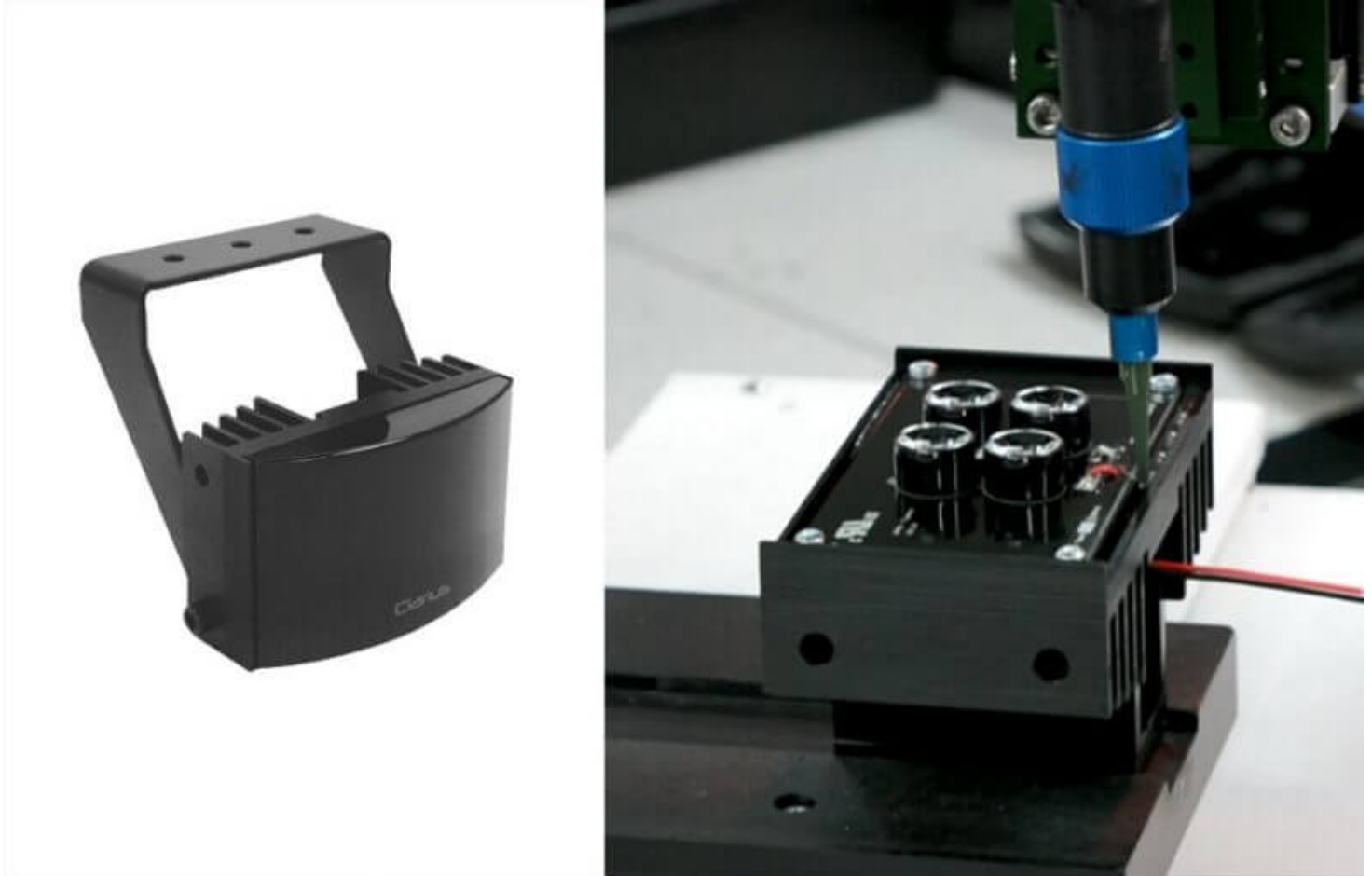
Case study: automated silicone dispensing for illuminators in the detector and security industry

Description

Our customer, [GJD](#) designs, produces and sells intruder detection products at its factory and head office in Heywood, Greater Manchester.

One of GJD's main products is its line of [white-light](#) and [infra-red LED illuminators](#), marketed under the company's Clarius® brand. Used principally in security applications, they also find other uses, including broadcast production. High performance and optimum reliability are essential when considering that many installations are subjected to rigorous weather conditions. All products in the range are IP66 rated and UL Listed.

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The preeflow eco-PEN 600 delivered increased the accuracy of dispensing volumes

Constantly **driving for product and process improvements**, Operations Director John Hale was seeking a way to improve the way that the **plastic lens was bonded to the extruded aluminium housing**. Previously, a silicone had been applied manually from a 310ml cartridge. This was a time-

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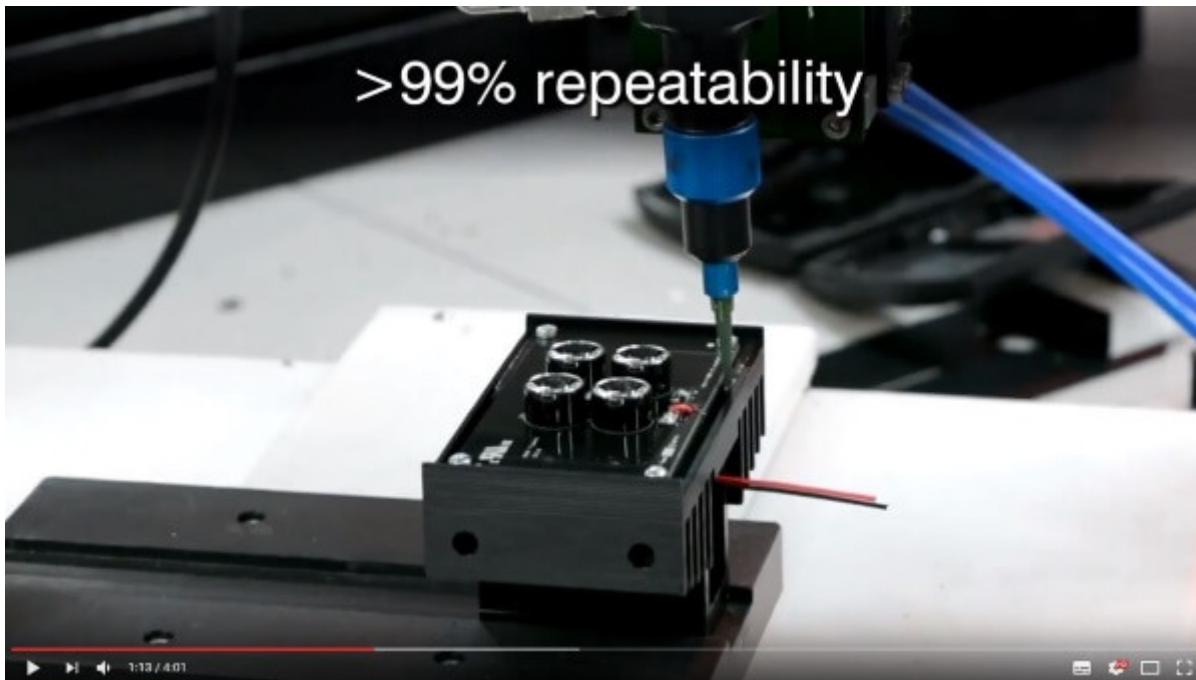
consuming, ergonomically unsatisfactory process, which also resulted in material waste and clean-ups. Operators' inclination was to apply excessive silicone to ensure an effective seal, but this was oozing out on both the outside and inside of the assembly when the lens was applied. John's initiative coincided with an approach from a multinational company to manufacture selected products for global distribution.

Concluding that **an automated silicone dispensing solution** would provide the best solution, John visited our Technology Centre in Kidlington, Oxfordshire to carry out dispensing trials with GJD's assemblies. This resulted in the purchase of a **Fisnar Dispensing Robot** with a **pneumatic dispensing valve**, fed from the cartridge. The robot and valve combination led to substantially improved efficiency. After 14 months, in the interest of better repeatability, accuracy and production rates, it was decided to further upgrade to the **preeflow eco-PEN 600 precision volumetric, positive displacement dispensing pump**, which delivered even more accurate volumes.

The eco-PEN offers $\pm 1\%$ dosing accuracy, $>99\%$ repeatability and can dispense volume flows of 1.4ml to 16ml per minute. Four months later, a second, similar system with upgraded robot was purchased and installed for a new product line, as well as providing a back-up for the original system. The **Fisnar robot** combines **precision positioning**, simple **step-by-step programming** and **compact footprint**.

The original and subsequent installations were carried out by our technical team, who also supplied and integrated the dispensing controllers and requisite tooling and bracketry. Both systems are fitted with **preeflow flowplus¹⁶ compact inline fluid pressure sensors**, providing continuous flow monitoring for guaranteed process assurance.

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Watch this video

to see how GJD found their automated silicone dispensing solution

John Hale said:

It has **really helped with consistency**: we know we're going to get the same amount of silicone dispensed and that **the product is going to be correct every time**.

Our Illuminators carry a five-year warranty, so they have to be able to stand the test of time. Making sure that the silicone is consistently applied is a critical component in our

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production process. Also, with increased demand, moving from a manual process to **an automated one has allowed us to get a lot more through production.**

I'm very happy with the equipment, the way it works and the way it has been integrated into our processes.

Commenting on Intertronics as a partner, John continued:

One of the **things that impressed us has been the support we've received.** Any investment you make, once you've made that decision, there's an element of hope that the support will be there, and I can say it certainly has been with Intertronics.

We've worked with the Intertronics team to develop the equipment to meet our needs further than when it first arrived and I've found that **it's never too much trouble.** Any of our guys can pick the phone up – they'll try to diagnose over the phone, otherwise it won't be too long until they're on site. For anyone in manufacturing, that level of support is critical to keeping things moving. We wouldn't have bought an additional system if we hadn't been **happy with the support we'd received.**

John also estimates that **material savings in the order of 30% have been achieved** since the introduction of the automated silicone dispensing system.

Download a copy of [this case study](#) or [watch the video](#).

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