

UV adhesive cures time problem for Brandon Medical

Description

Extended curing times for adhesives can often create a bottleneck in the production process which can interrupt work flow. This was exactly the problem experienced by [Brandon Medical Ltd.](#)

Technical Director Nigel Davill explained:

We had a problem bonding three polycarbonate lenses together to make the large front lens of our [Quasar® eLite operating theatre lamp](#). The two-part epoxy we were using had an extended fixture time, so we were looking for an adhesive which allowed us to handle and position the parts easily with an unlimited open time, and then to cure quickly using UV light. The problem with this approach was that, although the parts to be bonded are visually clear, the material has UV absorbing properties – so getting the right amount of light curing energy to the joint appeared to be tricky. Fortunately, Matt Baseley and his colleagues at Intertronics came up with a simple solution that very successfully resolved things and saved us a considerable amount of time in the production process.

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Matt Baseley expanded on the Intertronics solution:

Our [Dymax 3225-T-SC](#) is highly suited to this application – it is a single part UV/visible light curing adhesive which bonds to polycarbonate and many other plastics. It is readily dispensed, in this case using a [benchtop robot](#), and typically cures in a few seconds. It has a colour change feature – this [Dymax SeeCure® product goes from blue to clear](#) when fully cured, so that dispensing and cure can be checked visually. Brandon Medical can have reassurance of the correct adhesive amount in the bondline and adequate cure. We supplied a small [LED UV curing lamp](#) with a 50x20mm emitting window, allowing it to be

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mounted on the robot which dispensed the adhesive. Its 395nm high intensity output overcame the UV absorbance of the polycarbonate, providing enough light curing energy to give Brandon Medical fast cure, with less heat introduced into the polycarbonate modules compared with broad spectrum lamps.

We're loving the outcomes from this story – a happy customer and a great example of our ability to deliver turnkey projects integrating materials and equipment, exemplifying [our value proposition](#).

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