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innovation

Breakthrough high definition LED medical lighting

Brandon Medical

A new range of high definition LED medical lighting, developed by Sagentia Innovation for Brandon Medical, became the most advanced product line of its type and was launched to the market in 2007.

Expertise and domain knowledge

- Surgical
- LED technology
- Medical lighting
- Product development

Our client asked:

Sagentia Innovation had been investigating the use of high brightness LEDs for a number of technically challenging applications. We realised the potential for the technology in medical applications and approached an existing client, Brandon Medical, with a view to introducing solid-state LED lighting into their product range. At the time the medical sector was sceptical that LEDs could deliver the performance required, but we realised – through our understanding of the technology and by thinking innovatively about how it could be used – that it had the potential to form the basis for new products that could radically change the market landscape.

The project story:

At the time medical lighting products typically used tungsten halogen bulbs to create the very bright, high quality white light required. However, these lights use complex filters to remove the high heat levels generated by the source; they are also energy inefficient, expensive to maintain, and the light itself cannot be controlled.

We took the latest developments in LED technology and applied some highly innovative and creative new developments. As a result we created a range of medical lighting products, fully compliant with all standards and regulations, that deliver superior performance in every aspect when compared to existing systems.

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Results: deliverables and outcomes

The lamps we developed are designed for use in major and minor surgical applications, in addition to general medical examination. The solid-state technology means that the lights generate no heat, produce only visible light, and require very little maintenance, as there are no bulbs to replace, and the sealed units are easy to clean. The lights are extremely efficient, using up to 60 per cent less energy than previous lighting products.

Light quality is also excellent. The resulting beam profile gives more light across the full width of the illuminated area, and the colour of the light produced is also fully adjustable. This represents a major advance in lighting control and allows medical staff to change balance, focus and colour – enhancing the red contrast, for example, results in an enhanced view of body tissue, greatly improving surgical observation.

Through this project, Brandon Medical and Sagentia Innovation have created a product range which is superior to anything offered by the competition, transforming the medical lighting market and setting the standard for the future. The new range was successfully launched at Medica 2007.