



Absolute  
Action  
Ashmolean  
Museum  
Oxford, UK

## Absolute Action

*brings light to the world's  
oldest public museum*

Absolute Action now illuminates the show-cases at the Ashmolean Museum in Oxford, England with their LED Fibre Optic Light Sources



Photographs: ©Dan Paton.  
www.danpaton.net

Absolute Action is honoured to have been commissioned to undertake a comprehensive upgrade to the lighting in all the show-cases at the Ashmolean Museum, in Oxford, England, with its new LED Fibre Optic Light Sources. As the first public museum in the world, the Ashmolean Museum was opened in 1683 and displays art and artefacts from most of the world's civilisations. The current building dates from 1845 and underwent a large renovation to introduce 39 new galleries in 2009, with some 500 fibre optic lighting systems being installed in the display cases. The last few years have seen a dramatic improvement in the efficiency and quality of LED lamps, and the Museum decided to replace their existing energy-hungry and maintenance-heavy halogen-powered light generators. In 2015, The Ashmolean partnered with Absolute Action to find the best solution for this lighting upgrade.

Drawing on their decades of experience with fibre optic technology,

Absolute Action developed an LED lighting system that could be retrofitted into the existing halogen lamp boxes and be compatible with all the existing fibre optic components at the museum. Absolute Action chose Soraa's VIVID LED optical Light Engines for their excellent light quality and colour rendering, and were able successfully to adapt them optically for efficient coupling with the fibre harnesses. Soraa's renowned GaN on GaN TM technology, with its high 95+ CRI, ensured that the excellent light quality was maintained, whilst also enhancing the actual lighting performance.

In addition to outstanding colour rendering was the longevity of the Soraa LEDs. With a rated life of 50,000 lamp maintenance (previously every 1500 hours) would be eliminated for in excess of 10 years, resulting in genuinely huge savings in lamp purchases and maintenance time.

To ensure that fibre harnesses which had suffered heat damage over time – some 15% of the total – could be restored and remain fully and durably functional, Absolute Action developed procedures and even special tools to enable on-site restoration work to be successfully accomplished, inducting the museum maintenance staff themselves in the critical processes and procedures of this restoration work.

*Absolute  
Action develop  
an Led Light  
Source  
using, Soraa  
Light Optical  
Engines, which  
delivers huge  
energy savings  
to the  
Ashmolean  
Museum*

The upgraded light sources delivered at least as much, if not more, light from much less energy (26W) and have enabled case-by-case intensity control further to improve the visual display where appropriate. Stability in the cabinet display environments has been greatly improved, which has not only delivered better conservation display conditions, but also reduced loads on air handling units.

This lighting upgrade project has been accomplished with minimal waste and disruption and maximum benefit to the museum, which is set to save a staggering 75% in the lighting energy costs alone. A very high proportion of the hardware from the original fibre optic systems was retained for re-use and/or repaired, thus delivering an exemplary exercise in sustainability throughout. Participants have been involved in the production of a short video highlighting work on this project, which can be viewed on You Tube – <https://www.youtube.com/watch?v=laFKj3KJ5Gc>

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