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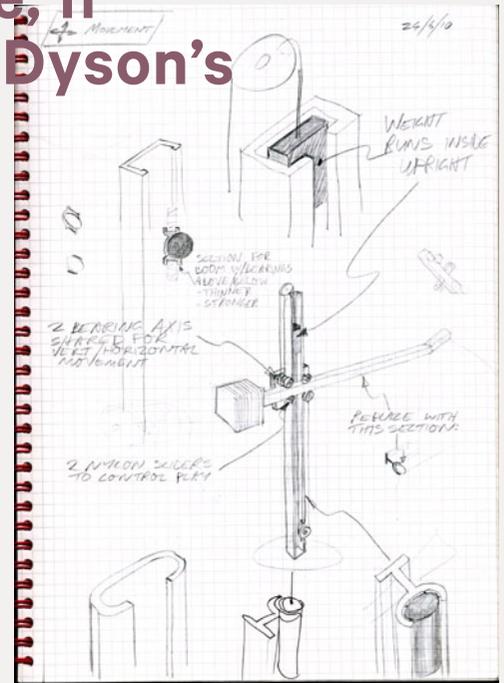
The Legacy Light



The CSYS moves fluidly from front to back and up and down while also rotating on its axis.

How many Brits does it take to change a light bulb? None, if we're talking about Jake Dyson's CSYS task lamp.

Words Shonquis Moreno
Photos courtesy of Jake Dyson



An early sketch of the CSYS.



A heat pipe inside the lamp leaches the heat generated by the LEDs away from its source, prolonging the life of the light-emitting diode.

Jake Dyson had two babies last autumn. One was produced with his wife; the other is a task light with both the quality mechanics and refinement of a Swiss watch, and the extended lifetime LEDs were always meant to have. We're not sure which of the two required the greatest creativity in its engineering.

During the London Design Festival, one bare, white booth contained only a handful of table lights; two lab beakers filled with water (hot and cold); and a skinny, copper tube. Dyson stood behind a white table demonstrating how this simple cylindrical object – a heat pipe developed for use in satellites and microprocessors and embedded in all lights on show at the stand – can leach the heat generated by LEDs quickly and evenly away from its source without requiring extra energy, prolonging the life of the light-emitting diode. CSYS's great virtue is its extreme longevity: 'It's the first task light we know of that incorporates this technology,' says Sam James, one of Dyson's two co-designers. 'What it means is that you should never need to change the LED.' At least not for 37 years – or more.

Take that, disposable consumerism. London-based Dyson, son of inventor and

entrepreneur James Dyson of vacuum cleaner fame, has his father's gift – and doggedness – for finding and exploiting new solutions to age-old problems. Tackling weak light output, bad colour rendition, cold temperature and the wholly unnecessary early life failure of LED products, Dyson *files* worked for 18 months with both Sam James and Doug Inge to create CSYS, a dimmable LED task lamp with long life, warm light, good looks and silky precision. The lamp launched in the UK last December, and will hit Europe and the US this spring.

At just 20 mm thin, the CSYS resembles a metal ruler and exudes a warm light that can be adjusted via an unobtrusive touch-sensitive button.

Its refined, industrial look is a sophisticated conflation referencing its forebears: the construction crane and the drawing board. The CSYS moves far more fluidly than any crane, though, from front to back and up and down while also rotating on its axis. (Its name, CSYS, is a nod to the Cartesian coordinate system.)

CNC-milled components and a counterweight system with a series of pulleys and ball bearings – influenced by the designers’ office drawing board – sturdily balance the horizontal arm (there’s no sagging with age, either) and lubricate its almost weightless motion. ‘The movement concept is simple,’ says Inge, ‘but any wobble or roughness is amplified by the length of the arms, so precision and hard-wearing materials were key.’

Electronics were crucial for high efficiency, so the designers brought in a specialist who tailored everything to the CSYS, including the LED circuit board. Electricity is delivered to the LED head in an unconventional fashion: Dyson’s Flexible Flat Cable (FFC) threads through the body of the light, doubling as the cable for its pulley system.



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To ensure an even pool of light – with no hot spots, glare or facets – the team recessed each LED into a miniature cone reflector, making the light source invisible unless viewed from directly below. As for the touchpad-like method of dimming: ‘It just seemed like the most intuitive method to use. Holding to dim feels very natural, and CSYS remembers your last setting. Each time you dim, the light level will also switch direction, so if you reduce the brightness too much you can press and hold again for the light level to increase,’ says James. ‘It really is great fun to use.’

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‘You should never need to change the LED’