

GREEN DOT AWARDS

Kent Gration - Integration Studio/Wambamboo
Constellation Pendant Light

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Company/Designer Description

Kent Gration established Integration Studio in 2004 specializing in the areas of graphic, product and furniture design, addressing social and environmental issues using a multi-faceted design approach. In 2005 Kent completed a Master of Design with an Academic Award for Excellence from the Queensland College of Art researching environmentally aware furniture and product design. Kent believes that good design should last forever but needn't last forever in the environment.

Wambamboo is Kent Gration's premier range of bamboo furniture which addresses growing environmental concerns regarding mass-production and the overuse of non-renewable polluting materials in the furniture industry. The inspiration behind the range came from his affinity with the ocean and concern over the ever increasing amount of plastic waste that finds its way into marine ecosystems.

Bamboo poles, cross-laminated boards and veneers are incorporated into each piece to showcase the versatility of bamboo as a high-end renewable material. All pieces are hand-crafted and made using CNC cut components, recyclable materials, non-toxic glues and water-based finishes. The sophisticated treatment of the material reveals inherent DNA-like vertical and horizontal laminated grain patterns, representing innovation in design and material usage.

Kent has exhibited the range at the Salone Satellite Milan, 100% Futures/100% Design London, ICFE New York and numerous exhibitions in Australia. The Costello seat won the prestigious Melbourne Fringe Furniture 2007 Premier Award for "Best Sustainable Design" and a Silver Award in the 2008 Queensland Design Awards, and is now part of the permanent collection of the Salone Del Mobile/Salone Satellite. The range has won many awards including four Design & Design awards (Index Books) for the Costello Seat, Krypton Light, Constellation Pendant Light, Tectonic and the O+ Side Table which is also part of the permanent collection of the Sydney Powerhouse Museum.

Pieces have featured in many international publications including Architectural Digest Milan, The New York Times, Dwell China and among Inhabitat's Top 10 Sustainable Highlights and the "Essential 100" Guide to 100% Design London.

Kent recently won the inaugural Queensland Premier's Emerging Design Leader Award, enabling him to exhibit his Constellation Lighting series at the Asia Pacific Design Triennial (Unlimited) - Brisbane and 100% Design Shanghai. This exchange assisted in furthering the environmental and sociological importance of design within the Asia-Pacific region.

Creator of the Project: Kent Gration

Category Product - Constellation Pendant Light
Kent Gration - Wambamboo/Integration Studio



Constellation Pendant Light

DETAILED EXPLANATION

A. What the entry is and its intended use

The Constellation Pendant Light is intended for commercial and residential lighting applications. The light is available in a variety of heights and sizes to suit most ceiling heights and vertical clearances.

B. How the entry is manufactured and delivered to consumers.

The product uses CNC manufactured components from a single layer (5mm thick) moso bamboo lamelle. Repeated straight components are combined to create a visually refined yet complex pendant light with a 5% waste ratio.

Components are produced locally (Brisbane, Australia) and shipped flat-packed or assembled (if a consumer requests this option) within Australia. Overseas purchases will require sourcing of site specific CNC manufacturers to reduce the embodied energy of freight. Components are then packaged un-assembled into a 70cm x 8cm diameter recycled/recyclable carton board tube, where the consumer assembles the delivered piece (slot-together construction).

C. How the entry exhibits excellence in sustainability and environmental responsibility

The design of the Constellation Pendant Light incorporates repeated straight components which combine to create a visually refined yet complex pendant light. Waste generated during CNC production (low-impact production method) is the cut kerf (5%), further improving upon the environmentally-aware ethos of using moso bamboo - a rapidly renewable material. By assessing the necessary amount of material required for a product's intended function, the light is designed to allow for a maximum amount of light array with minimum diffusion, whilst still creating a decorative fitting.

The product uses FSC certified Moso bamboo, a rapidly renewable material with a 5-6 year harvest cycle, with the major plant system left intact after harvesting for future growth (100+ years). Although the embodied energy of freighting bamboo materials from Hangzhou, China to Brisbane, Australia is higher than using endemic Australian materials (which aren't comparable in terms of growth cycle and after-harvest practices), Integration Studio is researching local commercially-produced endemic bamboo (within an 800km radius) which will be available in the next 4-5 years to address this issue. If the pieces were purchased and produced locally according to market demand in China/SE Asia the embodied energy would be lessened dramatically.

The Constellation Pendant Light along with all other pieces in the Wambamboo range are designed for small-run designer/maker production. A considered approach to material sourcing/availability, production processes and price ratio is taken into account, whilst pieces are only produced when an order is confirmed to address the issue of over-production and over-utilisation of resources within the furniture and lighting industry.

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Packaging: Was there significant consideration given to the reduction of packaging? For any packaged items, what type of material was used? Is it recyclable and/or compostable?

The light, including electrical components easily assembles and disassembles, flat-packing into a 70cm x 8cm diameter recycled/recyclable carton board tube with minimal vacant space. A light bulb is not included with the product due to the diameter of a suitable bulb being larger than the packaged components. In doing so, this reduces packaging size and allows the consumer to choose a bulb depending upon their lighting and reduced-energy consumption needs. A suitable bulb can be requested (100mm - 125mm ø spherical bulb).

The tubular packaging then has a long-term second use as a home-made telescope, reducing the likelihood of the packaging becoming land-fill. The telescope is created by using the provided concave and convex lenses - referencing the product's astrological and culturally universal inspiration (stars, sun and moon).

Materials + End of Life: How will this product be re-used, recycled, re-purposed over time?

The bamboo components are biodegradable, but can be either re-processed as charcoal or particle board products, or used as an alternative fuel. All other components are recyclable. These include: stainless steel cable, terminal ends, chicago screws and ceiling canopy/plate.

Recyclable PVC components include the lampholder and cord grips, whilst cotton-braided electrical cord is used to reduce PVC content. The light bulb recommended for the product is a 18W CFL with the option for a 4.1W LED spherical bulb.

Functionality: How does it serve the consumers desire to be environmentally responsible?

The consumer is able to take an instrumental role in being environmentally responsible for the assembly of the product, directly reducing the embodied energy of delivering an assembled item. They are also given the option of using CFL and LED energy-saving lighting products in the piece, which takes into account changes in lighting technology.

Design: a high-level of design aesthetic

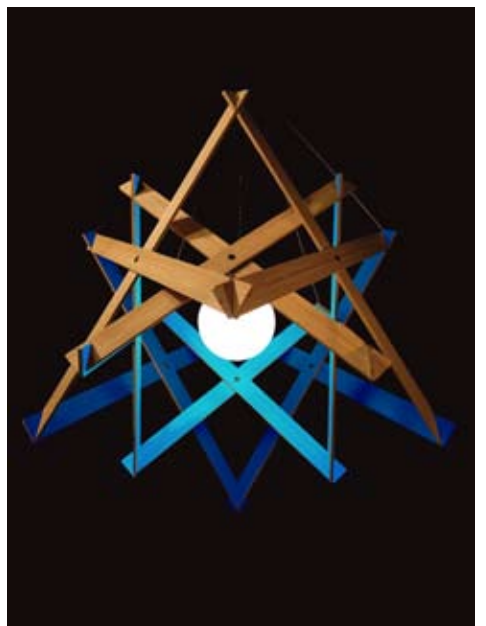
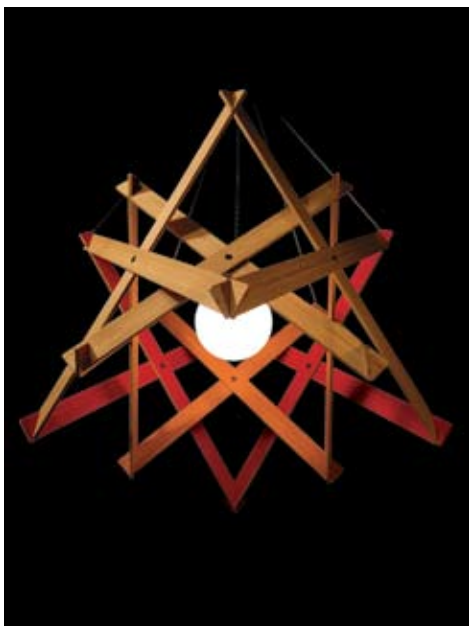
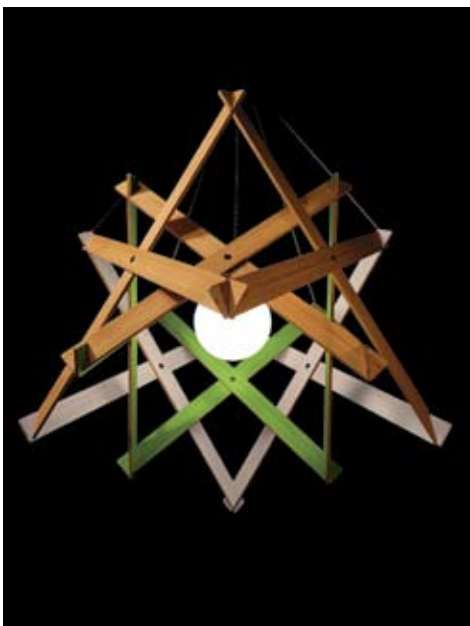
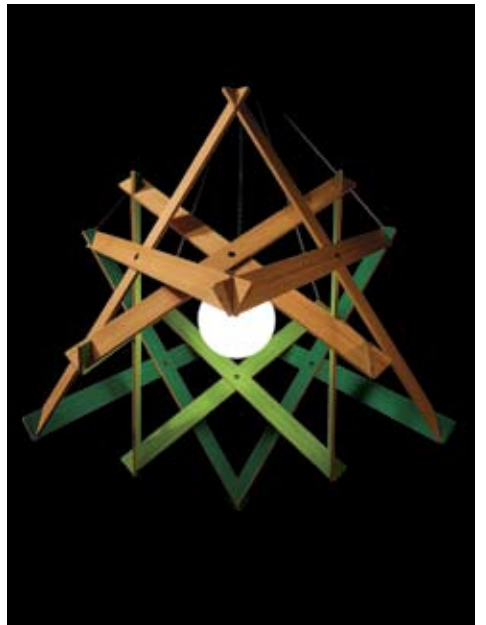
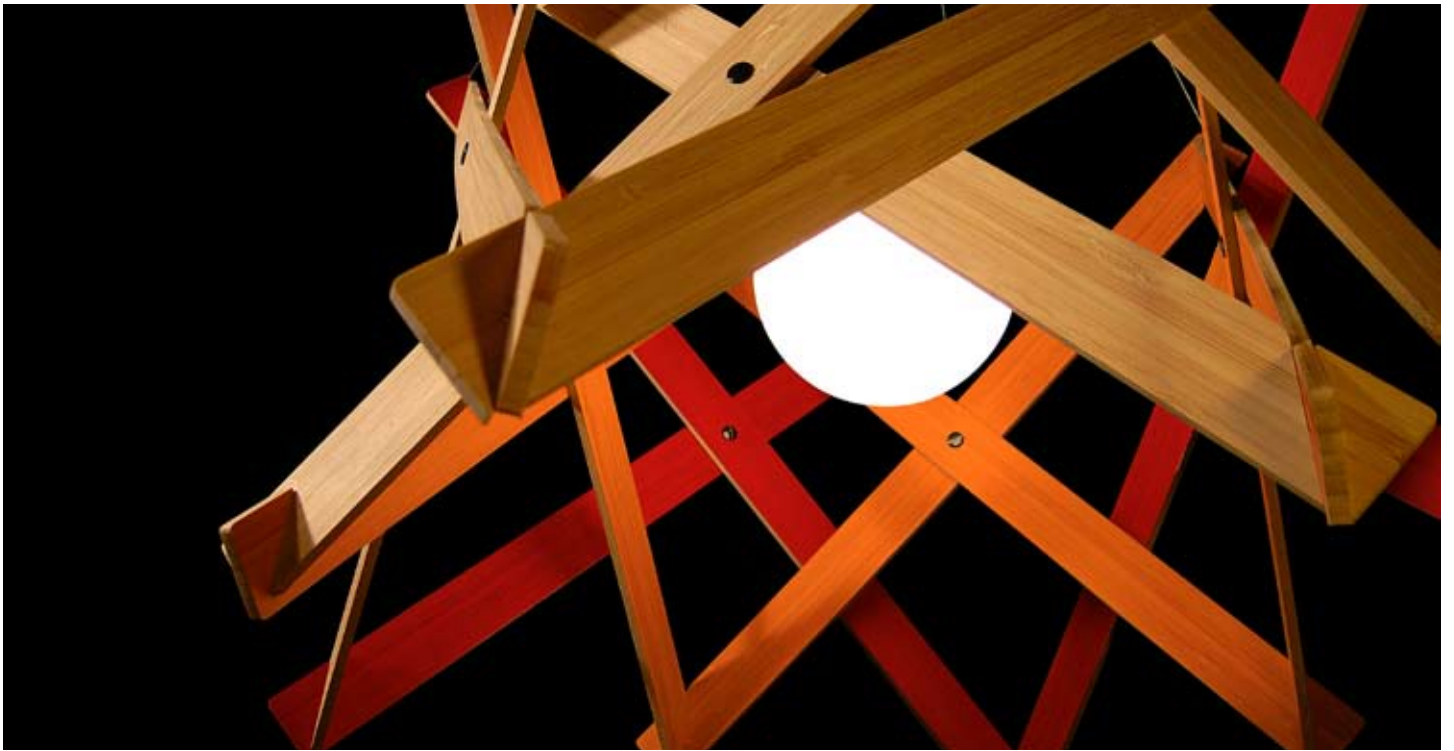
The pendant light is conceptually inspired by Australia's tyranny of distance, and most notably our country's geographical isolation. As designers based in Australia, we must travel vast distances in order to promote our own work, as well as experience and appreciate invaluable collaborations, whilst establishing creative networks which are beyond our cultural vernacular. The light highlights the use of a material endemic to the Asia-Pacific region (Moso Bamboo, China) combined with Australian design.

The light is aesthetically inspired by the celestial connection between people from different places, times and cultural backgrounds, and how we are all connected and guided by the same points of reference - the stars, sun and moon. When viewed from different angles the pendant light projects an array of vector formations, reflective of celestial bodies seen in the night sky.



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Constellation Pendant Light Installation
 Asia-Pacific Design Library/State Library of Queensland



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Constellation Pendant Light
Supernova Colour Options