

# DanielStathamArchitects

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## TOKYO LIGHTS, GINZA DISTRICT, TOKYO, JAPAN

The Ginza District of Tokyo is a pulsating retail and business centre. The streets in this area have a variable use during the week accommodating traffic and shoppers during the week days and being closed only for pedestrian use and markets during the weekends so Tokyoites and Tourists can casually enjoy the activity within this space. The City Authorities asked for solutions to unify and modernise the existing lighting within Ginza. The present street furniture and street lighting strategy is dated and needs design solutions to enhance the character and performance of a nocturnal Ginza District.

Design inspirations were drawn from within Japanese culture. Zen Buddhism influenced many facets of the Japanese way of life by connecting to nature and heightening an individual's awareness of their inner spirit . This connection with nature within the design was extremely abstract and within spaces like gardens and other spaces were represented (miniature) by landscapes also called "mind-scapes".

The concept was to apply this notion and make the lighting both physically and optically become a type of "mind-scape" by appearing to perform more organically by being sensitive to light and frequency's therefore changing the physical and visual state of the space throughout a 24 hour period. The result of this would be a designed system that would save energy by only using it when necessary. Our solution to realise this narrative was to integrate sustainable technologies and materials within the designed street furniture elements and filter traditional and Modern Japanese design themes to resonate the origins of the culture.

The scheme was structured into two lighting planes. Firstly, the Street level datum and secondly, the high level datum. The horizontal street datum created a grid which adopted a tatami proportion and spacing. Within each 'tatami' pavement unit was a composite of Solar cells, low energy lighting units and translucent concrete. The high level horizontal lighting datum consists of slightly angled light 'canopies'. The light canopies have two elements:-

- 1) the vertical post
- 2) the 'organic' lighting canopy

The 'organic' lighting canopy is a unit which is responsive to solar gain and opens when sunny to harvest 'energy' and closes during dusk like a 'flower' to illuminate the street level traffic below. This is possible by designing a polyurethane pultrusion into the 'neck' of the light canopy which through contraction and expansion from heat gain control the dynamics (kinetic nature) of the lighting canopy. This result produces the organic 'opening' and 'closing' necessary to fulfil the design concept and creates a designed system that responds both to meteorology and the physical environment.

The energy in the day is stored within the national grid and at dusk is used to power the low level lighting. This solution provides a street lighting system that is not only a 'Green' product but is an elegant and contextual solution to the Ginza District.

The ideas proposed for this project are now being reviewed further within the industry with British Petroleum (BP) as part of the 'Green Solution' debate.