

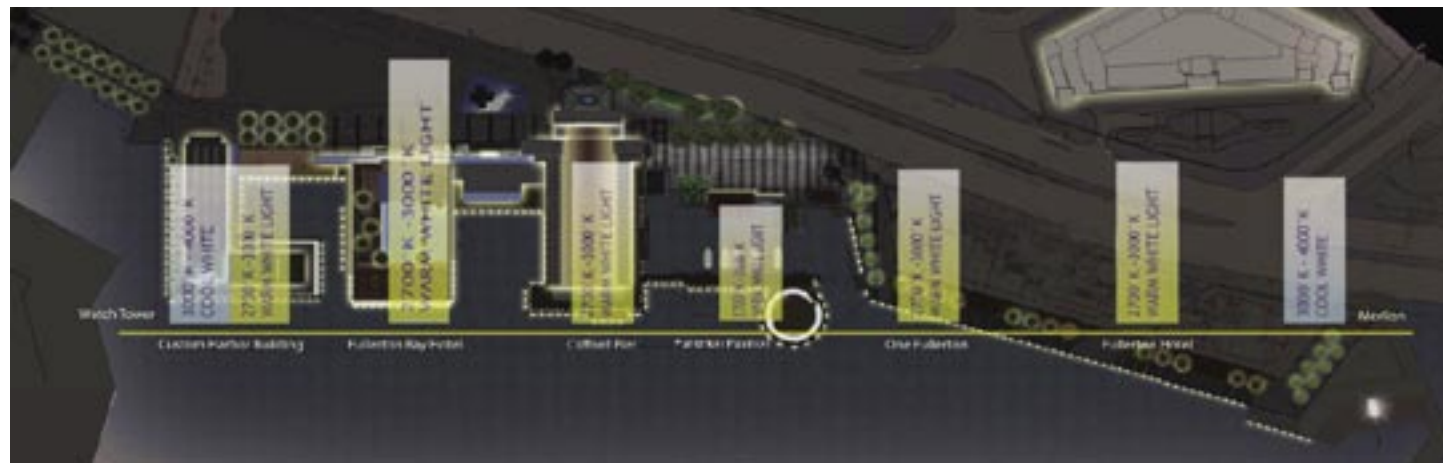
Pic: Brice Schneider



Above The Fullerton Pavilion can be reached via a pivoted bridge featuring concealed LED Linear strip lighting giving it a floating effect.

Below Rather than play excessively with RGB, Light Cibles used cool white at either end of the development with warm white in the middle.

Below right The pavilion is the latest phase of major installations at The Fullerton Heritage by Light Cibles, a series of projects that began in 2000.



JEWEL IN THE CROWN

Light Cibles has just completed the latest phase of Singapore's Fullerton Heritage waterfront project with a floating glass pavilion equipped with 700 metres of LED Linear strips.

The newest addition to The Fullerton Heritage waterfront, the Fullerton Pavilion, is Singapore's latest luxury dining destination. The Pavilion, a glass dome structure floating on water, anchors itself as the jewel in the crown that completes the picture of The Fullerton Heritage waterfront. It comprises a total of 450 square metres of high-end tenant space within its eight metre high, half-dome structure. With its facade skin almost entirely made of glass, the Pavilion provides magnificent, unblocked views of Singapore's Marina Bay skyline. The structure floats on Marina Bay waters on a platform and is connected to the rest of the Fullerton development by a pivoted bridge and deck.

With a S\$7.1 million investment, the project is a collaboration between Singapore architectural firm, DP Architects and Light Cibles, a French lighting design practice headed by father and son team Louis and Emmanuel Clair who opened an office in

Singapore in 2007 to deal with South East Asian projects locally. The practice has a lucrative history in Singapore, designing the Civic District lighting masterplan for the Urban Redevelopment Authority in 1994 before working on many other projects including all the elements of The Fullerton Heritage, starting in 2000 when they began work on the Fullerton Hotel (completed in 2001). Since then Light Cibles has completed schemes for Clifford Pier (2008) and One Fullerton (2009), as well as Landing point, Fullerton Bay Hotel, New Café and Custom House, completed in 2010.

The waterfront development's architecture, which combines both the historical and contemporary, adds vibrancy to the area's long-established cultural heritage and central business district.

The pavilion reflects a complementary lighting design scheme to the rest of the development; however, its distinct nighttime transformation makes it the beacon of the

Pic: Brice Schneider



waterfront promenade. The pavilion stands out as a 'sparkling diamond' at the heart of the Fullerton Heritage development with thoughtful integration of façade lighting. A composition of vertical 'lines of light' is used as the main façade lighting element. The vertical light lines are seamlessly integrated into the framework emphasizing the structure's contemporary form and giving it an eye-catching and sparkling nighttime appearance. Emphasis on verticality is also apparent on the façade lighting design of other Fullerton Heritage buildings such as Fullerton Hotel, One Fullerton and Fullerton Bay Hotel. However distinct these buildings are, the subtle parallel on the façade lighting concepts creates an underlying connection between them.

"Our objective was to incorporate the lighting to fully enhance the architectural form without interfering with the integrity of the architectural and façade details,"

explains lighting designer Brice Schneider of Light Cibles' Singapore office. "The building should look like an illuminated crown without causing any distraction from the interiors. In order to ensure the visibility of the city skyline from inside the glass structure, the luminaires need to be invisible from every interior perspective."

Distinct architectural features are given due emphasis in the lighting design. The curvature of the structure is further enhanced by a series of vertical lines of light that are seamlessly integrated into the facade frames following the shape of the façade skin. Other key architectural elements - such as the main entrance portal, grand staircases and pivoted bridge - are also highlighted to add to the overall nighttime visual impact of the building.

Venus LED strips by German manufacturer LED Linear were indentified as the solution to the specific requirements of the project as the high flexibility of the strips allowed

the adaption to the curved shape of the façade. As the LEDs are a compact size they are seamlessly integrated into the façade frames. The polyurethane encapsulation material provides maximum resistance against harsh environmental conditions, such as humidity, water immersion, heat, abrasion and flame. Specially-designed clips were developed to allow easy installation and neat integration to structural frames.

Another important aspect concerning the lighting design within the architecture of the building is the appropriate and homogenous light intensity with the possibility of control and dimming. Special attention had to be paid to a high resistance to water ingress, marine environment and UV as well as to a high reliability and warranty on the LED products.

The PCB technology specially developed by LED Linear provides for evenly high luminous flux levels at low thermal power densities.

This technology is based on the effective use

JAPANESE

正面スキンがほとんどガラスで作られているフラートンパビリオンは、シンガポールのマリナー・ベイスカイラインの壮大な、ブロックされていないビューを提供します。構造体はプラットフォーム上で、マリナー・ベイの海に浮かび、揺動ブリッジとデッキでフラートン開発地の残りの部分に接続されています。710万ドルシンガポールの投資で、このプロジェクトは、シンガポール建築事務所、DPアーキテクトと光Cibles、親子チームのルイスとエマニュエル・クレアによって率いているフランスの照明設計事務所との間のコラボレーションです。パビリオンは外観の照明の思慮深い統合でフラートン・ヘリテージ開発地の中心にある「輝くダイヤモンド」として際立っています。垂直方向の「光の線」の組成は、外観点灯

の主な要素として使用されます。垂直方向の光のラインがシームレスにフレームワークに統合され、構造体の現代的な形を強調し、目を引くスパークリングな夜の出現を提供します。ドイツのメーカーLEDリニアによるヴェーナスLEDストリップは、プロジェクトの特定の要件に対するソリューションとして認められています。なぜなら、ストリップの高い柔軟性が外観の曲面形状に適應することができたからです。

CHINESE

Fullerton Pavilion 酒店的立面表面材质几乎全为玻璃,新加坡滨海湾的壮丽美景一览无遗。酒店建在滨海湾一个漂浮平台上,通过一座旋转桥和露天平台与 Fullerton 地产的其余部分相连。项目投资 \$710 万,由新加坡建筑事务所 DP Architects 和 Louis 与

Emmanuel Clair 父子领衔的法国照明设计事务所 Light Cibles 合作完成。位于 Fullerton Heritage 地产中心的酒店巧妙地集合了立面照明,恰似一颗“晶莹剔透的钻石”,引人注目。主立面照明元素使用了垂直“光线”组合。垂直光线与构架的无缝连接彰显了建筑的当代形态,使其璀璨的夜间景象耀眼夺目。为满足项目的具体要求,指定使用了德国制造商 LED Linear 公司生产的 Venus 牌 LED 光条,因为光条柔韧性高,适用于曲线形的立面。

FRANÇAIS

Avec une façade presque entièrement composée de verre le Pavillon Fullerton offre une des vues les plus impressionnantes sur la baie de Singapour et sa ligne de gratte-ciels. La structure repose sur les eaux de la baie grâce à une plateforme et a été reliée

au reste du projet de développement de Fullerton par une passerelle et un ponton mobiles. Avec un investissement de 7,1 millions de \$\$, ce projet est une collaboration entre la firme d'architectes de Singapour tenue par le père et le fils Louis et Emmanuel Clair. Le pavillon se détache comme un « diamant étincelant » au cœur du projet de développement Fullerton Héritage, avec une intégration intelligente de l'éclairage de la façade. Une composition de « lignes de lumière » verticales est utilisée pour l'éclairage de la façade principale. Ces lignes s'intègrent avec harmonie dans le cadre général pour mettre l'accent sur la forme contemporaine de la structure et lui donner une apparence capable d'attirer tous les regards de nuit. Les bandes de LED Venus du producteur allemand LED Linear ont été identifiées comme la meilleure solution aux exigences spécifiques du projet, la grande flexibilité des bandes permettant une adaptation parfaite aux formes courbées de la façade.

Pic: Alistair Chia

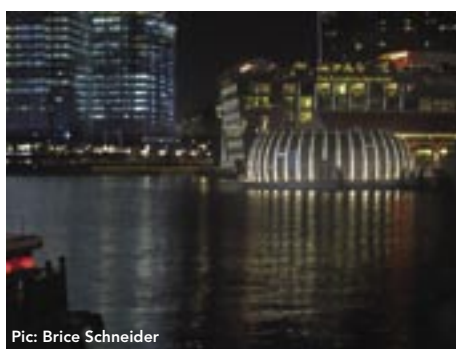


Multiple vertical lighting segments enhance the form of the architecture reflecting on to the water making it the jewel in the crown of The Fullerton Heritage project.

PROJECT DETAILS

The Fullerton Pavilion, Singapore

Client: Sino Land company Limited – Far East Organisation
Architect: DP Architects
Lighting Design: Light Cibles



Pic: Brice Schneider



Pic: Brice Schneider

LIGHTING SPECIFIED

LED Linear: 16m Vario LED Flex Venus RGB for the main entrance of the Fullerton Pavilion; 290m Vario LED Flex Basic White for the Fullerton Pavilion mullion / façade lighting; 220m Vario LED Flex Venus W827/ A SV for pathway lighting, panoramic terrace and the taxi river kiosk; 140m Vario LED Aton 2 W827/A IP67 for access ramp and Pivoted Bridge
Lumascap: 24 x LED VEDI uplighter
iGuzzini: 5 x LED bollard - panoramic terrace planter
Simes: 14 x Step lighting 1.5W warm white emergency staircase
Ligman: 34 x Jet 20 20W metal halide warm white

of the PCB surface and its small structural height.

“We put large copper plates underneath the LED, directly where the heat is generated. Those dissipate the heat quickly and widely,” explains Michael Kramer, managing director of LED Linear.

Throughout the installation three different lighting fixtures from the Venus series were used: warm-white Vario LED Flex Venus front view strips were introduced as the main lighting features of the curved façade skin. Integrated into the vertical frames, the LED strips are subdivided into five sections following the glass modules and spanning the entire height of the facade. This allows individual control of every individual section of the LED strips to maximise the dynamic

potential of the lighting scenarios.

Concealed warm-white LED strips - the Vario LED Flex Venus side view and the Vario LED Aton2 in aluminium profile series - were also introduced to the external circulation including the grand staircases and pivoted bridge. This lighting approach provides safe and glare-free illumination of the circulation areas without taking attention away from the dome structure.

RGB LED strips Vario LED Flex Venus RGB TV were applied to the main entrance portal. Schneider explains, “We set up a RGB-version with different colours around the main entrance. That way we are able to colour-coordinate with specific events or with the interior design.”

Both white and RGB LED strips can be

controlled and dimmed individually to allow programming of variable lighting scenarios. These scenes are intended to provide smooth transitions, creating a fully dynamic yet elegant lighting show.

“As easy as it is to get carried away by modern lighting technology, warm white light is predominantly chosen over colour-changing RGB lighting solutions throughout the pavilion structure,” states Schneider. “Colour temperature and intensity of lighting are carefully employed to complement the elegant surroundings of The Fullerton Heritage development. Dynamic lighting effects are introduced during special events and occasions with rather graceful transitions.”

www.light-cibles.com

DEUTSCH

Mit seiner beinahe ausschließlich aus Glas bestehenden Fassadenhaut bietet der Fullerton Pavilion eine großartige, ungestörte Aussicht auf die Marina Bay Skyline von Singapur. Die Struktur treibt in den Gewässern der Marina Bay auf einer Plattform und ist mit dem Rest der Fullerton-Entwicklung durch eine schwenkbare Brücke und ein Deck verbunden. Das Projekt mit einer Investition von 7,1 Millionen \$ ist eine Zusammenarbeit zwischen der Architekturfirma DP Architects and Light Cibles aus Singapur und einem französischen Beleuchtungsdesignbüro unter der Leitung von Vater und Sohn Louis und Emmanuel Clair. Der Pavillon hebt sich als ‘funkelnder Diamant’ mitten auf dem Fullerton Heritage Ausbau mit durchdachter Integration der Fassadenbeleuchtung ab. Eine Zusammenstellung vertikaler ‘Lichtlinien’ wird als wesentliches Fassaden-Beleuchtungselement verwendet. Die vertikalen Lichtlinien sind nahtlos in das Gefüge

integriert, das die zeitgenössische Form der Struktur unterstreicht und ihr nachts eine ins Auge springende und funkelnde Erscheinung verleiht. Venus LED-Streifen des deutschen Herstellers LED Linear wurden als Lösung für die spezifischen Anforderungen des Projekts identifiziert, da die hohe Flexibilität der Streifen die Anpassung an die geschwungene Form der Fassade ermöglicht.

ITALIANO

Con la sua facciata quasi interamente in vetro, il Fullerton Pavilion offre magnifiche vedute panoramiche della Marina Bay di Singapur. La struttura galleggia sulle acque di Marina Bay su una piattaforma ed è collegata al resto del complesso di Fullerton da un ponte girevole. Con un investimento di 7,1 miliardi di dollari di Singapur (4,38 miliardi di euro), il progetto rappresenta una collaborazione tra uno studio di architettura di Singapur, DP Architects, e Light Cibles, un gruppo di professionisti francesi specializzati nella progettazione della luce

guidato da Louis e Emmanuel Clair, padre e figlio. Il padiglione spicca come un “diamante scintillante” al centro del complesso di Fullerton Heritage con un’attenta integrazione dell’illuminazione della facciata. Come principale elemento di illuminazione della facciata è stata utilizzata una composizione di “linee di luce” verticali che, perfettamente integrate nella cornice, enfatizzano lo stile contemporaneo della struttura conferendogli, di notte, un aspetto vistoso e scintillante. Le strisce luminose a LED Venus, del produttore tedesco LED Linear, sono state identificate come la soluzione alle specifiche esigenze del progetto, in quanto l’elevata flessibilità delle strisce ha permesso il loro adattamento alla forma arrotondata della facciata.

ESPAÑOL

Con su fachada hecha casi enteramente en cristal, el Fullerton Pavilion brinda magníficas y abiertas vistas del contorno de Marina Bay de Singapur. La estructura flota en las aguas de Marina Bay sobre

una plataforma y se encuentra conectada al resto del desarrollo de Fullerton mediante un puente pivote y un deck. Con una inversión de \$7.1 millones, el proyecto es una colaboración entre la firma de arquitectura de Singapur, DP Architects, y Light Cibles, profesionales Franceses de diseño en iluminación a cargo del equipo de padre e hijo, Louis y Emmanuel Clair. El pabellón se destaca como un diamante destellante en el corazón del desarrollo Fullerton Heritage con una atenta integración de la iluminación de la fachada. Como principal elemento de iluminación de la fachada se utiliza una composición de líneas verticales de luces. Las líneas verticales de luces se encuentran homogéneamente integradas en el marco dándole énfasis a la forma contemporánea de la estructura y dándole una apariencia vistosa y destellante en el horario nocturno. Las tiras de Venus LED del fabricante Alemán, LED Linear, fueron identificadas como la solución a los requerimientos específicos del proyecto ya que la alta flexibilidad de las tiras permitieron la adaptación a la forma curva de la fachada.