

FACT SHEET

SPECTRA

Introduction

Step into majestic wonder and be awed by *Spectra – A Light & Water Show*, a nightly 15-minute performance that features laser, light, water movements and graphics, set against the backdrop of Marina Bay Sands.

Launched on 2 June 2017, *Spectra* is set to an original orchestral soundtrack composed by Singaporean music producer and composer Kenn C., with the involvement of local and international visual media artists and cutting-edge technology.

A world-first, this state-of-the-art multimedia experience at the Event Plaza is dramatic in scale and unique in style. The crown jewel is a 12-metre-high laminated glass-and-stainless-steel prism that bursts to life in tune with the music and lights throughout the show. Lasers beam down nightly from the pinnacle of Marina Bay Sands, connecting to the prism as it sets off water jets, spectacular lights and lava effects. The multimedia experience can be viewed 50 meters across the waterfront promenade, complementing the stunning nightscape of Marina Bay.

The show is staged every night at 8pm and 9pm (Sundays to Thursdays), with a third show at 10pm on Fridays and Saturdays.

Fast Facts on Spectra

- Built in collaboration with Australia-based experience design agency Imagination, the show utilises a huge selection of water fountain techniques, including pyramids, gyroscopic, archs and straight jets, as well as lava and mist effects.
- It features a new soundtrack composed and remixed by local award-winning producer and music arranger Kenn C.
- A production that took two years to create, the show is a world-first, anchored by a 12-metre-high laminated glass prism that forms the “heartbeat” of the show.
- Spectra follows a story arc that reflects Singapore’s journey as a multicultural society into the cosmopolitan city she is today. The visual imagery used is a metaphorical representation of Singapore society and its complex, deep-rooted history and cultural background (Acts 1 and 2). A forward-looking theme, involving images of a futuristic city, aims to inspire the audience to strive for a better Singapore (Acts 3 and 4).

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- The versatility in the show's technology has allowed *Spectra* to be used in special events, including a specially-themed *Star Wars: The Last Jedi* light and water show in 2017, which adapted *Spectra*'s lasers, light and water movements with movie visuals, all set against the iconic film score.
- In April 2018, *Spectra* was used in the *Avengers: Infinity War* red carpet fan event with Robert Downey Jr., Benedict Cumberbatch, Karen Gillan, director Joe Russo and executive producer Trinh Tran. Beyond the light, laser and water projections that were used to announce the arrival of talent, *Spectra* was also worked into the show narrative for the event, with director Russo asking thousands of fans to call out the catchphrase "Avengers Assemble", to reveal the "Soul Stone", the 12-metre-high glass prism that is part of *Spectra*.

The Technology

- *Spectra* sets itself apart from other light and water shows because of its diverse range of water fountain techniques, and its use of new underwater 500-watt LED fixtures – specially developed for the show - that allow the lights to show perfect whites and richer colours. In total, *Spectra* uses more than 110 types of lights and lasers.
- The show also uses state-of-the-art technology, including a synchronization software called timecode, so that the soundtrack will be able to trigger, millisecond by millisecond, all of the lasers, lighting, projections and water effects in perfect harmony each time.
- Lighting positions were carefully chosen to give the maximum effect in conjunction with water, laser and projection effects. The lights are positioned on specially created floating pontoons as well as additional projection screen barges located around the bay area.
- Low power, high-output beam lights are used above water for maximum impact. To keep these lights safe from outdoor elements, each light is individually enclosed in a special case called eco-domes which keep it dry and protects the equipment from the sun's UV rays during the day.
- The lights used are energy efficient, with the main lighting fixture able to produce a light output similar to a 4,000 watt search light, even though it has a small unit output of energy at 470 watts.
- The glass prism sits atop a polished stainless steel skeleton which is submerged underwater. As it sits submerged, the water can reflect all over the prism's exterior for an additional effect. Stainless steel is also used for the structure to withstand outdoor weather conditions and for its ability to reflect light.

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- The show has an improved high-powered and full-range sound system, with three primary loudspeakers positioned on the water fountains in the bay, as well as side and rear speakers mounted on either side and behind the audience for a more immersive audio experience.