

ION Orchard

Singapore's Most Iconic Mall Opens



ION Orchard, Singapore's most eagerly awaited retail landmark, finally opened its doors to the public on 20 July 2009 in a soft launch. Conceptualised by leading architecture firm Benoy, ION Orchard delivers a design that goes beyond the conventional, offering tourists and locals an unparalleled shopping experience.

Located at the crossroads of Singapore's prime shopping district, ION Orchard is part of a S\$2 billion retail and residential development called Orchard Turn, which is a joint venture between CapitaLand, a leading developer in Singapore and Hong Kong's Sun Hung Kai Properties, one of the largest developers in Asia.

ION Orchard features 640,000 square feet of shopping space made up of more than 300 stores spread over eight floors and houses a collection of global flagship and concept stores of both established and new-to-market brands covering a spectrum of fashion, lifestyle, entertainment and F&B.



The most striking feature of ION Orchard is its outrageous architecture and innovative retail design. Designed by British Architects Benoy with RSP Architects Planners & Engineers as the project architects, ION Orchard's signature futuristic architecture had already bagged two prestigious awards at MAPIC 2006 for 'Best Retail Development over 20,000 square metres', and the 'Best Architectural Entry' at British real estate periodical Estates

Gazette's EG Retail & Future Project Awards.

Central to Benoy's intention for the project was to create an iconic landmark, a magnetic retail, leisure and residential destination.

Breaking new design ground, Benoy has introduced Singapore's first pure monocoque façade and canopy structure at ION Orchard. Benoy's design for ION Orchard makes direct reference to the contours and lines of fruit and nuts; the retail canopy draws on the metaphors of 'skin' and 'foliage' while the iconic tower design is based on the concept of 'roots and shoots' growing up out of the canopy below. In collaboration with Arup's façade engineering team, the canopy continues into the skin, wrapping the whole podium in mild curves, resembling a fruit peel. The powerful organic presence communicated through a uniquely free form feel, amorphous cladding and tree-like columns provoke interaction between visitor and destination.

ION Orchard offers grand civic gestures and new, flexible public spaces – including a 3,000 square metres of events space, a 500 square metres art gallery and an observation deck that encourages interaction between the building and people.

Intelligent Media Façade

ION Orchard boasts a 117-metre frontage, which is hard to miss for anyone walking along Orchard Road. Benoy has designed a fully three-dimensional free form curvilinear glass and metal façade to wrap around the retail component of the scheme, creating a highly visible shop frontage.



This new media 'skin' allows the architectural façade to become a showcase of digital artwork, a stage for contemporary artists and shared international events such as New Year countdowns.

Layered across the walls of ION Orchard is a media architecture borne from cutting edge technology. The design includes a large low resolution 'seed façade' and a smaller high resolution LED façade.

The fluid, electric and magnetic intelligent media façade functions as a multi-sensory canvas and allows the mall's retailers to project



a whole new breed of animated advertisements, showcasing their latest collections in ways never before seen. The media wall adds a new layer of visual experience and vitality to the public events space.

The entire podium monocoque facade is fitted with two types of LED lights to illuminate the podium at night. Developed with Arup's facade engineering team on the technical design requirements, at the "skin" area, they are mounted onto a plate at the outer end of pipes at approximately 1.5 metres nodal "modules" and at the "seed" areas, the horizontal LEDs are mounted on

aluminum frames (where the cables are contained within) designed to fit into each triangulated modules.

The high resolution LED wall with a horizontal pitch of 20mm and a vertical pitch of 25mm is located in panel directly behind the double glazed facade at closest possible distance (~5-10mm to the glass surface) to avoid back reflection to the inside. The 16 metres high and 20 metres wide display allow high resolution broadcast of TV events.

The "seed" LED facade with a horizontal pitch of 50mm and a vertical pitch of 200mm is

well located directly behind the double glazed facade at closest possible distance. Here, LED strips houses in slim aluminum profiles blending in with the facade colour. The location of the LED's inside of the facade has been chosen under careful consideration of maintenance aspects for facade (cleaning from outside) and LED itself. The double glazed facade proves not to distort the LED messaging.

Waterdrop

A double curved glass fully transparent Waterdrop has also been designed as an iconic MRT station entrance to the events



space. The double curved glass are individually formed to achieve the shape and mounted onto curved metal frame secured to the floor.

Clear double curved glass was chosen to visualise a "waterdrop". As water is essential for trees and orchards, so it was found fitting in the overall design concept. It was also intended to let the MRT entrance be visually as little intrusive for the event space.

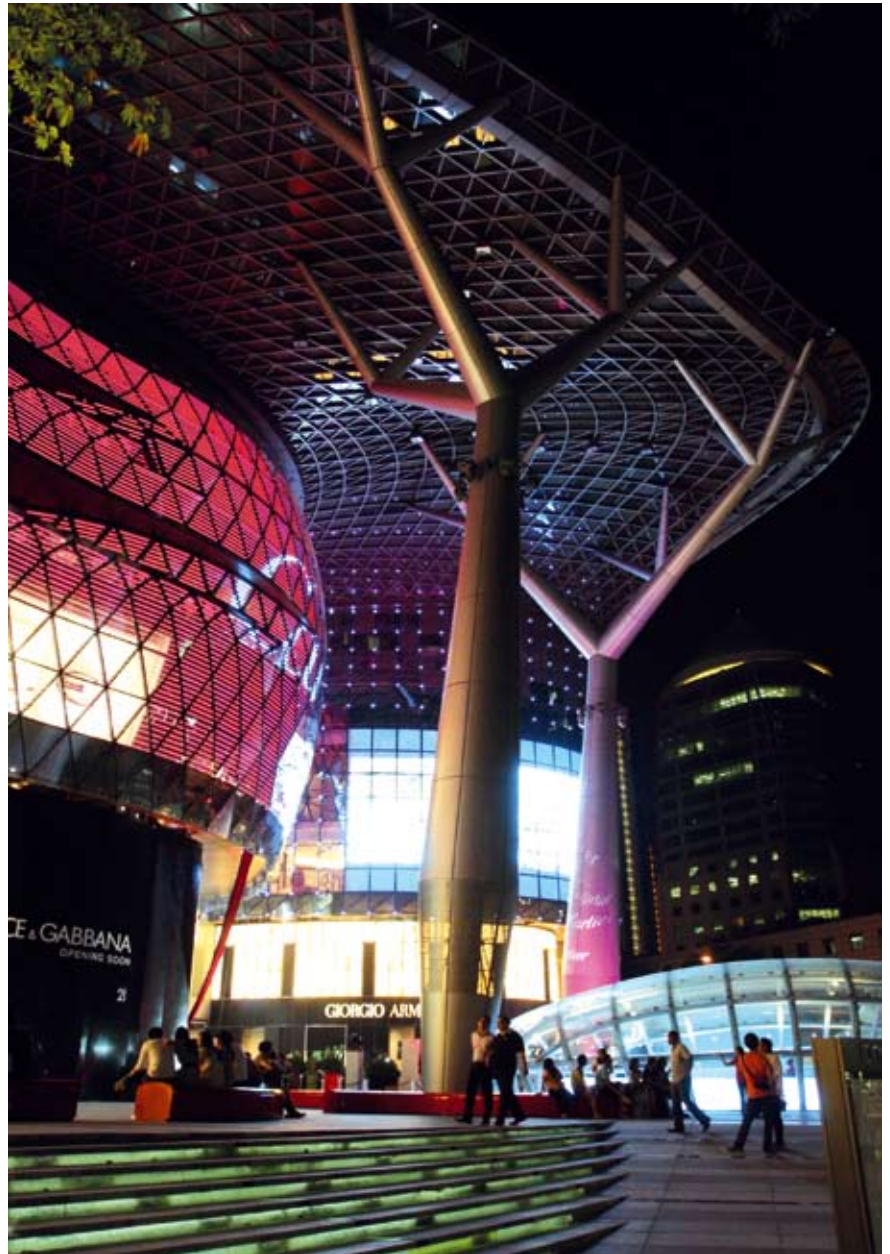
For safety reason, the double curved glass panels had to be laminated ones. Inner face of the outer pane and outer face of the inner pane have to meet exactly parallel in 1.52mm distance to avoid de-lamination. This proved to be a great challenge for the

glass supplier. A maximum of two panels only have the same size, for all panels two individual moulds - for inner and outer pane - had to be produced

ION2

ION Orchard also introduces a large new civic space, and the deliberately carved back from the street; that delivers a central urban meeting space, capable of staging public events of varying sizes beneath Singapore's first pure monocoque façade and canopy structure. At 33,000 square feet, ION2 is the largest sheltered public square on Orchard Road. Double-height shop fronts with active frontage along the new public square and the street complete Orchard Road and deliver the





retail infrastructure it needs to become one of the world's great shopping streets.

ION Sky

A double-storey observation deck named ION Sky will be Singapore's first and only observation deck 218 metres above ground level. The observation deck will be directly linked by express lifts to the art gallery on level four of the retail podium, providing an infrastructure for integrating cultural programmes between the two areas.

ION Art

More than just a mall, ION Orchard celebrates the arts and culture. ION Art, a 5,300 square foot space on level four, is dedicated to the exhibition of exclusive arts and cultural

events. This curvilinear art gallery will be an important new cultural space for the area. This venue will be integrated with retail and will break down barriers between interior and exterior space, a figurative gesture that will physically take culture closer to the public realm. The art gallery will enhance the visitor experience of the overall venue by offering a diverse range of cutting-edge programmes and exhibitions – from renowned international artists to up-and-coming local talent.

All in all, ION Orchard stands as a model of design and innovation, conceived as an urban seed that will lead to the dynamic imagination of Orchard Road, bringing forth a new urban realm to the city centre.