The information presented in this section, unless otherwise indicated, is derived from various official government publications and other publications and from the market research report prepared by Frost & Sullivan, which was commissioned by us. We believe that the information has been derived from appropriate sources and we have taken reasonable care in extracting and reproducing the information. We have no reason to believe that the information is false or misleading in any material respect or that any fact has been omitted that would render the information false or misleading in any material respect.

The information has not been independently verified by us, the Sponsor, the Joint Lead Managers, the Underwriters, or any of our or their respective directors, officers or representatives or any other person involved in the Share Offer (excluding Frost & Sullivan) nor is any representation given as to its accuracy or completeness. Accordingly, you should not place undue reliance on such information or statistics.

REPORT COMMISSIONED FROM FROST & SULLIVAN

We commissioned Frost & Sullivan, an independent market research and consulting company, to conduct an analysis of, and to prepare a report on the global, Asia and Hong Kong LED lighting solutions industry for the period from 2011 to 2021. The report prepared by Frost & Sullivan for us is referred to in this Prospectus as the Frost & Sullivan Report. We paid Frost & Sullivan a fee of HK$450,000 which we believe reflects market rates for reports of this type. Founded in 1961, Frost & Sullivan has 40 offices with more than 2,000 industry consultants, market research analysts, technology analysts and economists globally. Frost & Sullivan's services include technology research, independent market research, economic research, corporate best practises advising, training, client research, competitive intelligence and corporate strategy. Frost & Sullivan has been covering the Chinese market since the 1990s. Frost & Sullivan has four offices in China and direct access to the knowledgeable experts and market participants in the fitting-out, renovation, alteration and addition industry and its industry consultants, on average, have more than three years of experience.

We have included certain information from the Frost & Sullivan Report in this Prospectus because we believe this information facilitates an understanding of the global, Asia and Hong Kong LED lighting solutions industry for the prospective investors. The Frost & Sullivan Report includes information on the global, Asia and Hong Kong LED lighting solutions industry as well as other economic data, which have been quoted in the Prospectus. Frost & Sullivan's independent research consists of both primary and secondary research obtained from various sources in respect of the global, Asia and Hong Kong LED lighting solutions industry. Primary research involved in-depth interviews with leading industry participants and industry experts. Secondary research involved reviewing company reports, independent research reports and data based on Frost & Sullivan's own research database. Projected data were obtained from historical data analysis plotted against macroeconomic data with reference to specific industry-related factors. On this basis, our Directors are satisfied that the disclosure of future projections and industry data in this section is not biased or misleading. We believe that the sources of this information are appropriate sources for the information and we have taken reasonable care in extracting and reproducing this information. We have no reason to believe that this information is false or misleading in any material respect or that any fact has been omitted that would render such information false or misleading in any material respect.

Except as otherwise noted, all of the data and forecasts contained in this section are derived from the Frost & Sullivan Report, various official government publications and other publications.

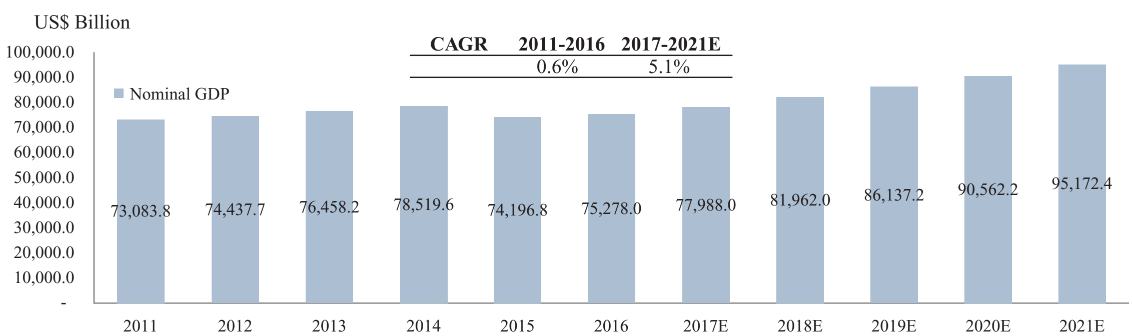
In compiling and preparing the research, Frost & Sullivan assumed that the social, economic and political environments in the relevant markets are likely to remain stable in the forecast period, which ensures the stable and healthy development of the global, Asia and Hong Kong LED lighting solutions industry. In addition, Frost & Sullivan has developed its forecast on the following bases and assumptions: the respective global, Asia and Hong Kong economies are likely to maintain stable growth in the next decade and the global, national and regional social, economic and political environment is likely to remain stable in the forecast period. Additionally, the global, Asia and Hong Kong LED lighting solutions industry are expected to grow based on the macroeconomic assumptions of the economy. Additional key industry drivers include: smart lighting in brand building, integration of LED lighting to smart building facilities and rising awareness of environment protection.

OVERVIEW OF MACROECONOMIC ENVIRONMENT

Global Nominal GDP

The global nominal GDP increased from US$73,083.8 billion in 2011 to US$75,278.0 billion in 2016 at a CAGR of 0.6%, driven by the global economic recovery and supported by fiscal and monetary stimuli in major economies. In the forecasted period, the nominal GDP is expected to increase to US$95,172.4 billion in 2021 from US$77,988.0 billion in 2017 representing a CAGR of 5.1%. The positive economic forecast is supported by gradual economic improvement in emerging markets.

Global Nominal GDP (2011-2021E)

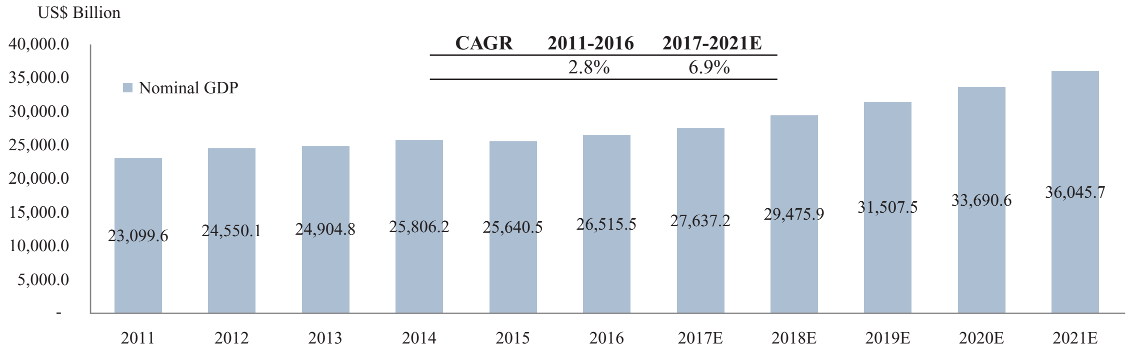


Source: International Monetary Fund, Frost & Sullivan

Asia & Pacific Nominal GDP

With Asia as the engine of the global economy, the Asia and Pacific nominal GDP experienced steady growth from US$23,099.6 billion in 2011 to US$26,515.5 billion in 2016, at a CAGR of 2.8%. It is expected that the nominal GDP in Asia and Pacific will reach US$36,045.7 billion in 2021 at a CAGR of 6.9%. The estimated growth reflects the forecast of rising domestic demand that is expected to be a major driver of activity across most of the region.

Asia & Pacific Nominal GDP (2011-2021E)

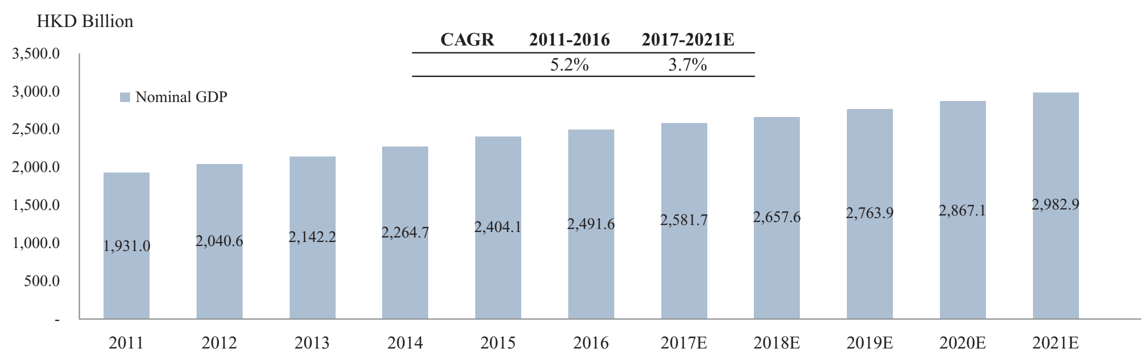


Source: International Monetary Fund, Frost & Sullivan

Hong Kong Nominal GDP

Hong Kong experienced steady growth in nominal GDP from 2011 to 2016 due to visibly improved performance and strengthened domestic demand, as well as near full employment in the labour market. In 2016, the nominal GDP of Hong Kong reached HK$2,491.6 billion at a CAGR of 5.2%. With the continued growth of the economy, nominal GDP is expected to rise at a relatively stable level in the coming years at a CAGR of 3.7% from 2017 to 2021, reaching HK$2,982.9 billion in 2021.

Hong Kong Nominal GDP (2011-2021E)



Source: International Monetary Fund, Frost & Sullivan

OVERVIEW OF LUXURY RETAIL MARKET

Definition and Classification

Retailing involves the process of selling consumer goods or services to customers through multiple sales channels of distribution to earn a profit, such as e-commerce platform, department stores, standalone retail outlets and shopping malls. The retail market could be divided into the mass market and luxury market tiers.

The luxury goods industry can be divided into two product types: Jewellery and Fashion. Brands in the luxury segment are characterised by exclusive distribution, a storied heritage, good quality product offering at premium prices in their respective categories.

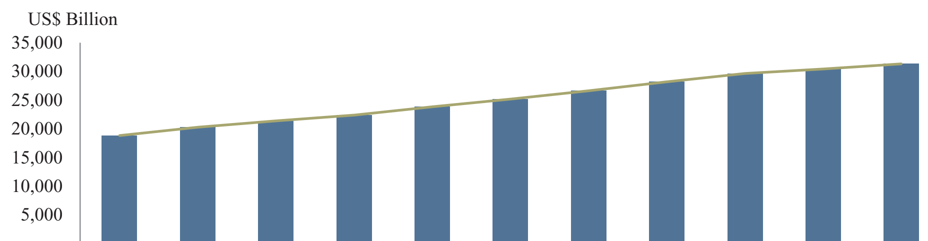
Jewellery generally refers to gold products, platinum or karat gold gem-set jewellery and diamond products. Product design, quality and value, trustworthiness and authenticity are the key focuses in the collection. Fashion includes leather, accessories and shoes, apparels, perfume and cosmetics. Usually brands with strong reputation and targeting wealthy populations are categorised as luxury fashions.

Global Retail Market: Market Size and Breakdown

Retailers continue to play an important role in the supply chain and received an impetus from the global economy during the historical period. The global retail market reached US$25,200.0 billion in 2016, recording a CAGR of 6.0% from 2011. With the stable economic performance across the globe, the global retail market is expected to climb to US$31,300.0 billion in 2021 at a CAGR of 4.2% from 2017 to 2021. With the stable development of the global economy, the global luxury retail market recorded positive growth from US$249.9 billion in 2011 to US$346.5 billion with a CAGR of 6.8%. Driven by the sustained increase in global disposable income, the global luxury retail market is expected to reach US$440.1 billion in 2021.

Global Retail Market Size by Segment, 2011-2021E

CAGR	2011-2016	2017-2021E
Total	6.0%	4.2%
Global Non-luxury Retail Sales	6.0%	4.2%
Global Luxury Retail Sales	6.8%	4.5%



	2011	2012	2013	2014	2015	2016	2017E	2018E	2019E	2020E	2021E
Global Non-luxury Retail Sales	18,550.1	19,936.1	21,118.7	22,103.6	23,473.8	24,853.5	26,231.5	27,811.6	29,188.2	29,971.5	30,859.9
Global Luxury Retail Sales	249.9	263.9	281.3	296.4	326.2	346.5	368.5	388.4	411.8	428.5	440.1
Global Retail Sales	18,800.0	20,200.0	21,400.0	22,400.0	23,800.0	25,200.0	26,600.0	28,200.0	29,600.0	30,400.0	31,300.0

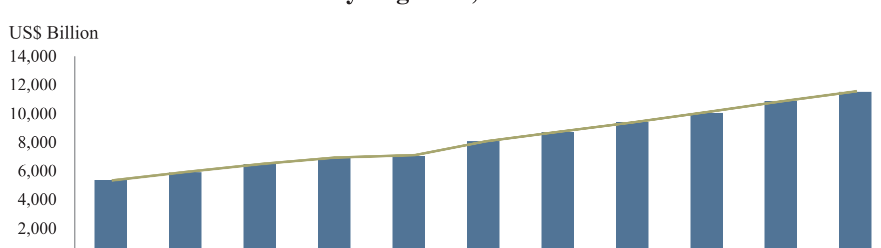
Source: Frost & Sullivan

Asia Retail Market: Market Size and Breakdown

The Asia market has long been the growth engine for global retail sales. The Asia retail market reached US$8,183.4 billion in 2016, recording a CAGR of 8.3% from 2011. The sustained economic growth in the region continued to support the growth of the luxury retail sales that recorded a CAGR of 9.1% from 2011 to 2016. The Asia retail market is expected to rise at a CAGR of 7.1%, from US$8,831.7 billion in 2017 to US$11,639.4 billion in 2021. It is forecasted that the luxury retail market would outperform the total retail market and reach US$675.1 billion in 2021, at a CAGR of 11.2% from 2017 to 2021.

Asia Retail Market Size by Segment, 2011-2021E

CAGR	2011-2016	2017-2021E
Total	8.3%	7.1%
Asia Non-luxury Retail Sales	8.3%	6.9%
Asia Luxury Retail Sales	9.1%	11.2%



	2011	2012	2013	2014	2015	2016	2017E	2018E	2019E	2020E	2021E
Asia Non-luxury Retail Sales	5,234.6	5,743.2	6,208.5	6,712.8	6,781.2	7,784.1	8,390.1	8,931.7	9,626.3	10,319.7	10,964.4
Asia Luxury Retail Sales	258.2	286.4	313.0	339.9	345.6	399.3	441.6	489.9	549.5	612.2	675.1
Asia Retail Sales	5,492.8	6,029.6	6,521.5	7,052.7	7,126.8	8,183.4	8,831.7	9,421.6	10,175.8	10,931.9	11,639.4

Source: Frost & Sullivan

Hong Kong Retail Market: Market Size and Breakdown

Retailing has long been one of the pillars of the Hong Kong economy and the retail sales experienced continued growth from HK$464,395.2 million in 2011 to HK$597,181.3 million in 2016, at a

CAGR of 5.2%. Hong Kong retail sales is expected to climb to HK$758,549.0 million in 2021, sustained by increasing disposable income and economic growth. The Hong Kong luxury retail market recorded a stable growth from HK$106,810.9 million in 2011 to HK$133,768.6 million in 2016 with a CAGR of 4.6%. Supported by positive economic growth, it is forecasted that Hong Kong luxury retail sales would increase to HK$182,051.8 million in 2021 at a CAGR of 6.3% from 2017 to 2021.

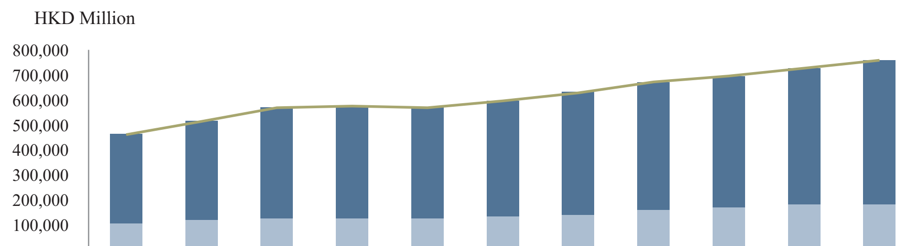
Overview of Retail Decoration Market

Retail decoration generally refers to performing fitting-out works and particularly encompasses stone and marble works, drawing, partitioning, wood works, marble works, stone works, painting, carpentry and joinery works, floor carpeting, plastering works, steel and metal works, installation of drainage and wares, fittings, fixture and equipment, glazing works, painting works and wall papering, as well as decorative lightings, such as facade and interior fixtures, in retail spaces.

Luxury retail decoration refers to decoration services, especially for the physical retail store of premium goods. In the scope of this report, luxury retail decoration specifically refers to the service of layout design, millwork/furniture fabrication, showcase manufacturing, facade construction and interior fixtures, as well as lighting solutions.

Hong Kong Retail Market Size by Segment, 2011-2021E

CAGR	2011-2016	2017-2021E
Total	5.2%	4.7%
HK Non-luxury Retail Sales	5.3%	4.2%
HK Luxury Retail Sales	4.6%	6.3%



	2011	2012	2013	2014	2015	2016	2017E	2018E	2019E	2020E	2021E
Hong Kong Non-luxury Retail Sales	357,584.3	394,510.9	443,709.3	450,647.6	443,110.6	463,412.7	488,178.5	514,635.2	530,006.1	544,461.3	576,497.2
Hong Kong Luxury Retail Sales	106,810.9	120,516.4	126,611.2	127,105.7	126,440.3	133,768.6	142,543.1	157,212.3	167,370.3	181,487.1	182,051.8
Hong Kong Retail Sales	464,395.2	515,027.3	570,320.5	577,753.3	569,550.9	597,181.3	630,721.6	671,847.5	697,376.4	725,948.4	758,549.0

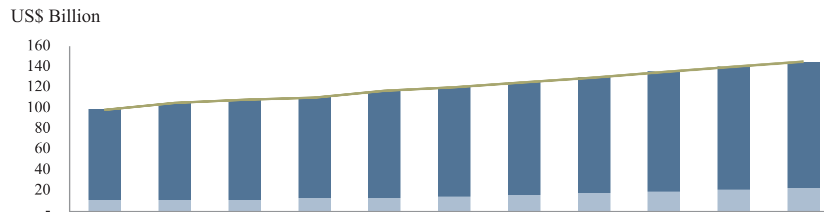
Source: Frost & Sullivan

Global Retail Decoration Market: Market Size and Breakdown

Aided by the progressive growth of the retail industry, the global retail decoration market increased at a steady pace from US$96.8 billion in 2011 to US$118.8 billion in 2016, demonstrating a CAGR of 4.2%. It is expected that the retail decoration continues to support the growth of retail industry and maintain the developing pace with it. In 2021, the global retail decoration market is forecasted to reach US$143.4 billion at a CAGR of 3.8% from 2017.

Global luxury retail decoration market has risen from US$9.5 billion in 2011 to US$13.9 billion in 2016 with a CAGR of 7.9%, and it is estimated that the global luxury retail decoration industry will follow the growing pace of the performance of luxury goods market and will likely reach US$21.2 billion in 2021 at a CAGR of 8.5%.

Global Retail Decoration Market Size by Segment, 2011-2021E



CAGR	2011-2016	2017-2021E
Total	4.2%	3.8%
Global Non-luxury Retail Decoration	3.7%	3.1%
Global Luxury Retail Decoration	7.9%	8.5%

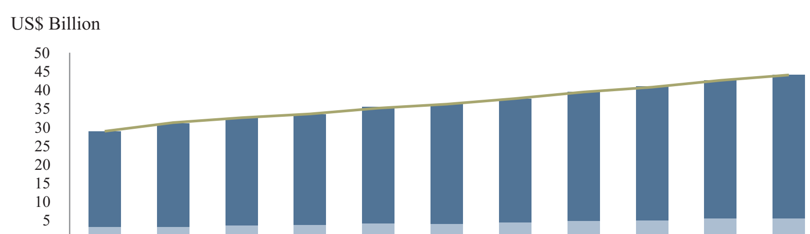
	2011	2012	2013	2014	2015	2016	2017E	2018E	2019E	2020E	2021E
Global Non-luxury Retail Decoration Market Size	87.3	93.0	95.8	98.2	103.0	104.9	108.3	112.6	114.6	119.2	122.2
Global Luxury Retail Decoration Market Size	9.5	10.8	10.9	11.5	12.6	13.9	15.3	16.9	18.9	19.4	21.2
Global Retail Decoration Market Size	96.8	103.8	106.7	109.7	115.6	118.8	123.6	129.5	133.5	138.6	143.4

Source: Frost & Sullivan

Asia Retail Decoration Market: Market Size and Breakdown

Driven by the rising average disposable income, the Asia retail decoration market has recorded fast growth, from US$29.0 billion in 2011 to US$36.3 billion in 2016, demonstrating a CAGR of 4.6%. In 2021, the Asia retail decoration market is forecasted to reach US$44.2 billion at a CAGR of 4.0% from 2017. The rise in Asia retail decoration is supported by the rapid development of the luxury retail decoration, which recorded a CAGR of 7.1% from 2011 to 2016 and is expected to reach US$5.8 billion at a CAGR of 5.4% from 2017 to 2021.

Asia Retail Decoration Market Size by Segment, 2011-2021E



CAGR	2011-2016	2017-2021E
Total	4.6%	4.0%
Asia Non-luxury Retail Decoration	4.3%	3.7%
Asia Luxury Retail Decoration	7.1%	5.4%

	2011	2012	2013	2014	2015	2016	2017E	2018E	2019E	2020E	2021E
Asia Non-luxury Retail Decoration Market Size	25.8	27.7	28.7	29.5	31.0	31.9	33.1	34.7	35.7	37.1	38.3
Asia Luxury Retail Decoration Market Size	3.2	3.5	3.7	3.9	4.3	4.5	4.7	5.1	5.3	5.5	5.8
Asia Retail Decoration Market Size	29.0	31.2	32.4	33.5	35.3	36.3	37.8	39.7	41.0	42.6	44.2

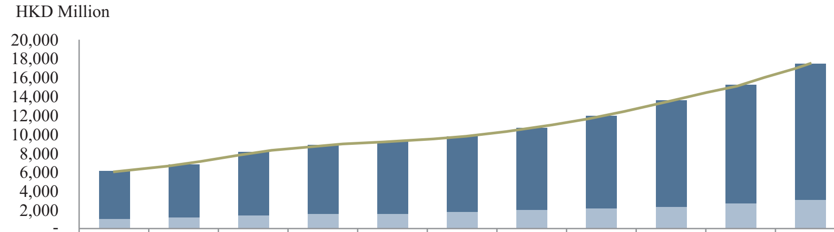
Source: Frost & Sullivan

Hong Kong Retail Decoration Market: Market Size and Breakdown

Benefiting from the healthy development of the retail market in Hong Kong, the needs for retail decoration has grown from HK$6,031.1 million in 2011 to HK$9,862.5 million in 2016 at a CAGR of 10.3%. It is expected that the Hong Kong retail decoration market would rise at a CAGR of 13.2%, reaching HK$17,538.5 million by 2021. The Hong Kong luxury retail decoration market has risen from HK$1,025.3 million in 2011 to HK$1,686.5 million in 2016 with a CAGR of 10.5%. With the supportive tourism policies and stable economic growth, the Hong Kong luxury retail decoration market is forecasted to reach HK$2,964.0 million in 2021, at a CAGR of 12.7% from 2017.

Hong Kong Retail Decoration Market Size by Segment, 2011-2021E

CAGR	2011-2016	2017-2021E
Total	10.3%	13.2%
HK Non-luxury Retail Decoration	10.3%	13.3%
HK Luxury Retail Decoration	10.5%	12.7%



	2011	2012	2013	2014	2015	2016	2017E	2018E	2019E	2020E	2021E
HK Non-luxury Retail Decoration Market Size	5,005.8	5,611.9	6,768.0	7,372.2	7,721.5	8,176.0	8,833.2	10,032.1	11,275.4	12,696.1	14,574.5
HK Luxury Retail Decoration Market Size	1,025.3	1,190.4	1,405.9	1,510.0	1,570.3	1,686.5	1,834.9	2,025.7	2,293.1	2,600.4	2,964.0
HK Retail Decoration Market Size	6,031.1	6,802.3	8,174.0	8,882.1	9,291.8	9,862.5	10,668.1	12,057.9	13,568.5	15,296.5	17,538.5

Source: Frost & Sullivan

OVERVIEW OF LED LIGHTING MARKET

Definition and Segmentation of LED Lighting Solutions

LED lighting solutions include the provision of customised indoor (interior fixtures) and outdoor (facade) LED lighting solutions and services, which are typically part of the decoration for a building or retail store. LED lighting is applied in different locations (i.e. indoor and outdoor) by different user groups (i.e. residential, commercial, industrial and others). Compared to other traditional lighting sources such as incandescent light bulbs, LED light bulbs last 25 times longer and use at least 75% less energy. Nowadays, LED lighting is more commonly used in the high-end residential and commercial segments such as luxury retail stores to highlight the appearance of buildings and stores in order to improve visual effects and customers' experience. The following segmentations are based on type of user group, location and industry.

By User Group	By Location	By Industry	By Purpose
• Commercial lighting	• Indoor lighting	• Mass retail	• General lighting
• Industrial lighting	• Outdoor lighting	• Luxury retail	• Task lighting
• Public lighting		• Food and Beverage	• Accent lighting
• Residential lighting		• Entertainment & hospitality (e.g. hotels, casinos, theme parks etc.)	• Decorative lighting

Source: Frost & Sullivan

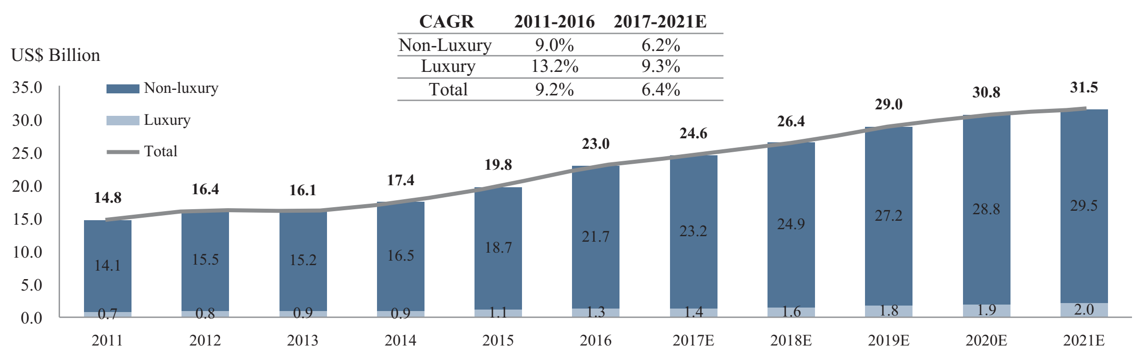
Global Market Size of LED Lighting Solutions for Retail Market

The increasing consumer demand for energy-efficient lighting systems, reduction in prices of LEDs, and high penetration of LEDs in the retail market are expected to drive the growth of global LED lighting solutions market. The global LED lighting solutions market for the retail market is expected to be valued at US$31.5 billion by 2021 at a CAGR of 6.4% from 2017 to 2021. In particular, growth in the luxury retail market is expected to be higher than the non-luxury retail market with a market size of US$2.0 billion by 2021 growing at a CAGR of 9.3% from 2017 to 2021.

The following market size of LED lighting for luxury retail market specifically refers to the revenue generated from the interior lighting and facade lighting solutions of the luxury retail segment in Hong

Kong, including both new installation and retrofit installation. Trading of LED products is not included in the market size as LED lighting solutions service providers offer customers tailor-made LED products and related consulting services, which differ from general LED products available on the market. Hence, the prices of these tailor-made LED products are sold at around 10 times higher than average LED prices. The calculation of market size also takes into account of LED penetration in the luxury retail segment, which is considered to be higher than the overall LED penetration and other non-luxury retail segments.

Global LED lighting Solutions for Retail Market (2011-2021E)



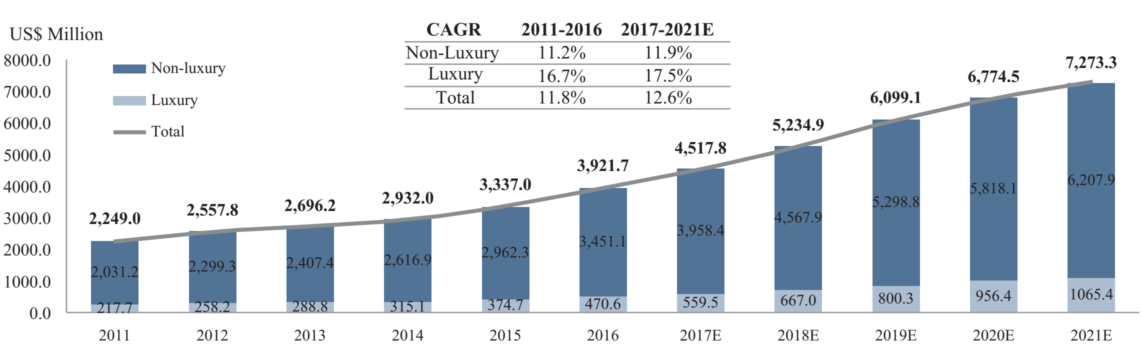
Source: Frost & Sullivan

Market Size of LED Lighting Solutions for Retail Market in APAC

Over the past five years, the growth in the LED lighting solutions for the luxury retail market in APAC has been mainly driven by the increased purchasing power in strong economies such as China, Hong Kong, Japan and South Korea, which are one of the top consumer markets for luxury goods in the world. Driven by the strong growth in the luxury retail market in APAC, LED lighting solutions has also recorded a substantial CAGR of 16.7% from US$217.7 million in 2011 to US$470.6 million in 2016.

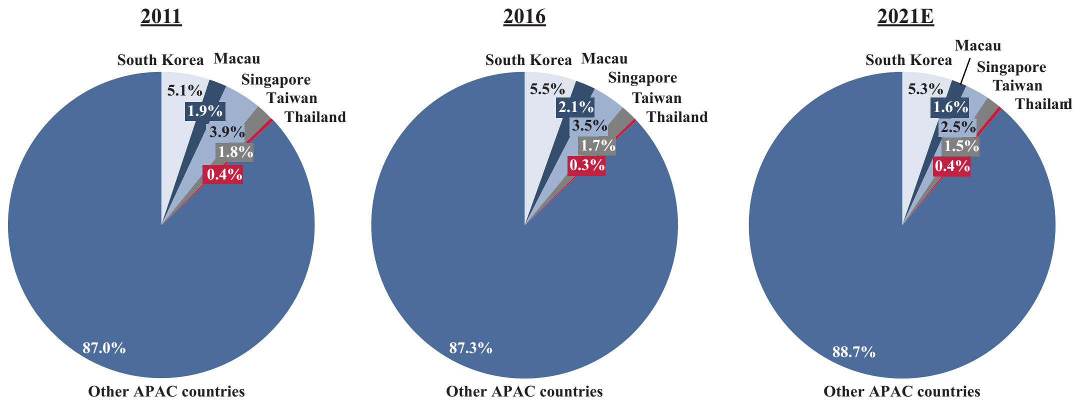
APAC is expected to lead the growth in LED lighting solutions in the world, contributed by the fast-growing Southeast Asian and South Asian luxury retail market. In 2016, APAC accounted for about 36.8% of the global sales revenue generated in the luxury LED lighting solutions market. It is estimated that growth rate for the next five years from 2017 to 2021 will accelerate to a CAGR of 17.5%, reaching US$1,065.4 million by the end of 2021.

LED Lighting Solutions for Retail Market in APAC (2011-2021E)



Source: Frost & Sullivan

LED Lighting Solutions for Luxury Retail Market in APAC



Note: Other APAC countries in the above chart excludes Hong Kong but includes mainland China, Japan and Australia etc. Hong Kong is separately presented on the global chart.

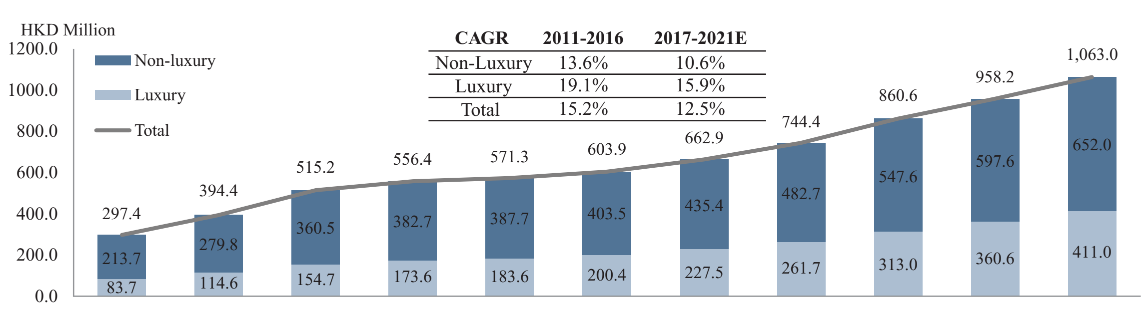
Source: Frost & Sullivan

Market Size of LED Lighting Solutions for Retail Market in Hong Kong

Following the huge drop in retail sales revenue from 2014 to 2015 in Hong Kong due to the fall in the number of tourists from mainland China, LED lighting for luxury retail segment also experienced continued slowdown in the total revenue, with year-on-year growth rate falling from 12.3% in 2014 to only 5.7% in 2015. However, the period of 2011-2016 overall saw explosive growth in the LED lighting solutions market of 19.1% due to the increasing use of LED lighting in the luxury retail segment. From 2017 to 2021, total revenue is expected to remain its fast growth at a CAGR of 15.9%, reaching HK$411 million by 2021, due to the increasing LED penetration rate in the luxury retail segment in Hong Kong and falling cost of LED products.

Hong Kong is one of the main shopping paradises in the world with a large number of both luxury and non-luxury retail stores. With 60% of the tourists being mainland Chinese who have high purchasing power, the luxury retail market has seen huge growth for the past years. Hence, luxury retail stores have put emphasis on interior design with the use of LED lighting products to attract customers. Not only has this driven the local luxury retail sales, it has also favoured the LED lighting solutions market for the luxury retail market. In 2016, Hong Kong accounts for about 2% of the global LED lighting solutions market.

LED Lighting Solutions for Retail Market in Hong Kong (2011-2021E)



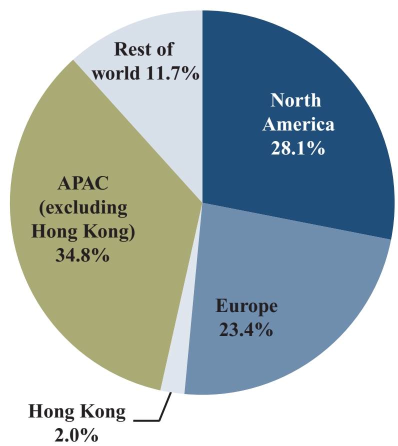
Source: Frost & Sullivan

Global LED Lighting Solutions for Luxury Retail Market by Region

This segment in Hong Kong accounted for 2.0% of the global market share in 2016. Led by the APAC market, with a market share of 34.8%, which was driven by its rapid economic growth, commercialisation and increasing demand for luxury goods. Other leading territories include North America and Europe.

The chart below sets forth the global LED lighting solutions for luxury retail market by region in 2016:

Global LED Lighting Solutions for Luxury Retail Market by Region (2016)



Source: Frost & Sullivan

Global Market Drivers

Smart Lighting in Brand Building. To provide customers with unique shopping experience, smart lighting technology is increasingly used in image building and brand recognition. Highlighting the corporate colours and logo, and implementing a common lighting concept in all outlets are becoming the mainstream among the retailers, especially for luxury brands. Lighting has long been one of the important factors to shape customers' perception of brand and products. With the advanced lighting solutions, such as LEDs, more customised lighting systems are present in the retail shops to showcase the products and services in the best conditions such as brightness, colour combination and angle, etc. Lighting is now becoming an indivisible part of sales and marketing arms in retailing, which would create growth opportunities for the LED lighting solutions providers.

Integration of LED Lighting to Smart Building Facilities. Energy-efficient lighting system with centralised control is becoming an integral part of the modern building facilities. The cost-effective LED lighting solutions, from initial conception, execution and completion, are being implemented in an increasing number of retail decoration projects to be integrated with other smart building facilities. In comparison with traditional lighting solutions, LED lights have a longer useful life and higher efficiency that lowers power consumption and costs. For example, the LED lighting control system dims the lights according to a schedule so that during daylight hours lights are dimmed to match lower lighting requirements and provides further energy savings.

Rising Awareness of Environment Protection. The society is now exploring better solutions to many environmental challenges that are faced by various industries, from manufacturing to retailing.

Besides innovation, creativity, quality and prices, environmental protection is also a concern of the public across borders and industries. Solid work is seen in the luxury retail industry in the area of improving environmental performance and developing the systematic measures to assess the effectiveness of related policies. The leading retail brands require the contractors or suppliers to have controls in place to prevent the light hazard by the use of LED products which are more efficient and environmentally friendly. Some of them have set guidelines on the selection of LED products, from photo-biological risk, colour temperature, Unified Glare Rating to surfaces remittance angle. Restricted substances list for LEDs products have been circulated to their suppliers. The rising awareness of environmental protection gives rise to LED lightings, which promotes energy saving and minimises waste disposal. The accelerated LED technology is reflected by falling LED prices, expanding capabilities and increasing efficient manufacturing. LEDs have a better quality of light distribution and focus light on one direction as opposed to other types of lighting, therefore achieving the same level of brightness and reducing energy consumption. Also, the longer life span and lower carbon emission of LEDs help further reduce waste disposal.

Customisation in LED products. With the advanced technology in LED lighting solutions, the focus of industry is shifting to customisation. Customised services are now required in the whole engineering and production process. Electrical and software engineers prototype the product ideas by providing the full product design, from modelling, injection molds, circuit design, light optics to heat and power management. The LED lighting solution providers with customised and integrated services would differentiate from other players and benefit from the rising trends in customised LED products, especially in retail decoration.

Refurbishment and/or Renovation Cycle

In general, residential buildings require renovation, alteration and addition works after every 10 to 20 years' use. Commercial buildings represent a much higher frequency which is estimated around five to 10 years since the large consumer flow continues draining the facilities resource and the move and leave of the shops generate constant market need. The decoration and refurbishment cycle of retail shops, in which LED lighting solutions may be required, ranges from two to seven years, as a result of the change in shop concept and term of the tenancy agreement of stores leased by the customer. In light of the expected cycle in the renovation and refurbishment of retail shops, together with the increasing competition in luxury retail sales, the industry of LED lighting solutions are likely to be bolstered.

Hong Kong Market Drivers

Supportive Policies and Industry Standardisation in LED Solutions. Increasing global environmental awareness and concern has created a demand for and the supply of environmentally friendly products. The Hong Kong Green Label Scheme (HKGLS) sets environmental standards and awards its "Green Label" to products that are qualified regarding their environment attributes and/or performance. LED lighting is also qualified to be an environmentally responsible product, thus promoting a more sustainable pattern of consumption, and to be further promoted in commercial uses and residential decoration. With the continual push by industry in accelerating LED deployment in Hong Kong and the standardisation of LED products, the market potential for LED lighting in Hong Kong is tremendous. To make it easier for the public to choose energy efficient products, EMSD (Electrical & Mechanical Services Department) operates a voluntary Energy Efficiency Labelling Scheme for appliances and equipment used both at home and office as well as for vehicles. The scheme aims to inform the customers of the product's level of energy consumption and efficiency rating to promote the benefits of the environmental friendly electrical appliances, including electric storage water heaters, television sets, electric rice-cookers, electronic ballasts, LED lamps. The policy would further raise public awareness of energy-saving products and promote the use of them in Hong Kong.

Emerging Demand from Retail Shops Renovation. Renovation is increasingly used to shape user experiences and engage customers on a deeper level through upgrading and refurbishment of the retail shops, which includes expansion, addition and maintenance of the facilities and layout. To cater to the ever-changing market demand and the styles of products, renovation works are performed for the retail shops in certain cycles to retain existing customer base and diversify the customer portfolio at the same time. LED lighting is now becoming the indispensable part of retail shops, of which the luxury retail shops saw a growing demand in recent years, to enhance the attractiveness of product display. Visually stimulating facade and a clean interior and strategic retail layout makes a remarkable difference to customer influx and sales. With the increasingly frequent renovation of retail shops, LED lighting solutions are expected to receive the impetus from the retail market.

Increasing Use of Facade in Shopping Malls and Flagship Stores. Hong Kong has long been marked by its major financial institutions and upmarket shops as well as high-end, luxury boutiques. Places, namely Central, Causeway Bay and Tsim Sha Tsui, are the centres of shopping for medium and high-end goods, gold ornaments, clothes, and cosmetics, as well as dining; everybody can find something they like there. The flourishing luxury shopping malls and colourful facade are the icon in these regions. The mix of LED lightings and facade in the stores of various famous brands was an indispensable part of retail decoration, especially for the flagship stores and luxury retail shopping malls. The demand for lighting solutions, therefore, is derived from the retail decoration and underpinned by the shortening renovation lifecycle in Hong Kong.

Key Market Trends

Supportive LED Policies. The government is now launching policies in supporting the LED industry through financial subsidies, incentives and resources to raise the LED companies manufacturing capacity and promote the use of LED lighting in commercial segment. The focus of the policies is shifting to lighting product innovation and smart lighting application, with the rise of the Internet of Things (IoT). The supportive government policies continue to create growth opportunities for LED lighting solutions providers.

Increasing Market Penetration of LED Lighting. It is observed that the market penetration rate of LED lighting is on the rise. Lowering LED chip prices and cost effective production has further promoted the use of LED lightings, replacing the traditional lighting products. The LED lighting experiences the highest growth in the commercial segment. By switching to LED lighting, the users would benefit from saving money and experiencing an increase in energy efficiency. The market is embracing LED lighting solutions due to the improving reliability and performance that can be achieved as well as the increased time to market.

LED Technology Becoming an Indispensable Factor in Retail Lighting. When it comes to lighting, LED is becoming a vision for the future. With the cost-effective power consumption and long life span, the LED technology is used in the retail lighting where the quality of light is needed. LED solutions are enabling a wide number of applications, as well as providing the best possible light quality, which is critical in the retail design and layout. The high performance and advanced technology of LEDs is forecasted to revolutionise the lighting of the future and LED lighting would play a more important role in retail design and layout.

Tendency in Flagship Stores Upgrading. Prudent approaches are now adopted by luxury brands in expanding, especially in emerging markets. Instead of opening new stores, the luxury brands are consolidating the retail points by transferring the strategic focus to upgrading their flagship and core stores. Faced with increasing competition and decelerated growth in some regions, more budget has been allocated to the renovation and refurbishment of existing physical stores to maintain the competitiveness. As a result, luxury retail decoration industry, including LED lighting solutions, is expected to benefit from this development.

Market Constraints

Pressure from Expansion of Online Shopping Platform. The last decade has witnessed the rapid growth of online shopping platforms which have reshaped the shopping habits of customers and the competitive landscape of retailing. The success of online shops, such as Jumei.com and VIPshop, has promoted the retailers to formulate new strategies in sales and distribution networks. An increasing number of luxury brands have begun to establish online shops, exerting pressure on the physical retail stores and possibly impacting the needs for retail decoration, including LED lighting solutions. However, the impact on the luxury shopping experience is expected to be minimal, as it cannot be replaced by current technology.

Relatively High Average Prices and Inconsistent Standard. Besides the high efficiency and the environmentally friendly design, LED lighting also commands high prices. Despite the advanced technology and increased competition, the prices of LED lighting solutions remain relatively high, which could hinder the popularity of the market. Moreover, there is no universal standard for the blend of colours, diode sizes, lens sizes and angles, making it less user-friendly. The inconsistent standard and high price would impede the market penetration for LED lighting.

Transforming Cost Structure of Retailing. With consumers increasingly enabled by technology, their shopping habits and preferences have changed dramatically, which represents the new era of retailing. In response, the integrated and customer-centric sales and marketing model has emerged. The cost structure for retailing is changed accordingly. Technology is undoubtedly playing a more important role for the new age retailers who focus on tighter channel integration, transparent inventory visibility, seamless order management, complete customer visibility and smarter merchandising, as well as digital customer engagement. The rising trend also changed the cost structure of retailers, creating uncertainty over the traditional cost allocation, such as retail decoration cost while the budget on flagship stores is on the rise.

Entry Barriers

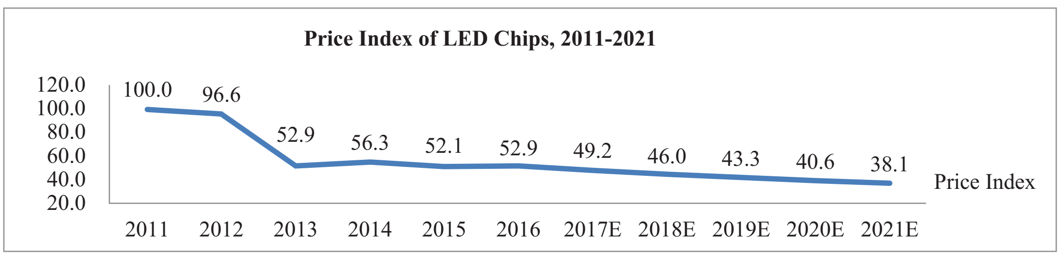
Difficulty in Changing to a Solution Provider. In the traditional LED lighting market, products are usually produced in a standardised style and shape to target the mass market and the market players are mainly manufacturers, wholesalers and retailers. In contrast, the modern LED lighting market put emphasis on tailor-made solutions and other value-added services. This has driven current market players to strive for better development of products and services to meet customer needs. However, it is considered difficult for new entrants who lack industry experience and know-how to shift from traditional lighting companies to a total solution provider.

Industry Expertise and Project Management Capability. A LED lighting solution provider is required to have sufficient experience in project management and LED specific know-how in order to provide the best customised solutions for their customers. From material sourcing, product to installation instructions and after-sales service, they are expected to provide professional advice and consultations for their customers to achieve the best visual outcome. However, these are seen as one of the main entry barriers as new market entrants tend to lack project management capability and experiencing in working with top retail stores and other large-scale customers.

Connections with Local Retail Stores and Main Contractors. In Hong Kong, LED lighting is mostly used in retail stores where presentation and atmosphere of the shop are crucial to increasing customer retention and optimise customer experience which would stimulate purchase. Hence, it is vital for LED lighting solutions service providers to develop a sustainable business relationship and network in the retail segment in order to secure deals and projects, especially with the local retail stores and main contractors or design companies who sub-contract lighting decoration. It would be relatively difficult for new market entrants to compete with the incumbent companies who have already had these local connections.

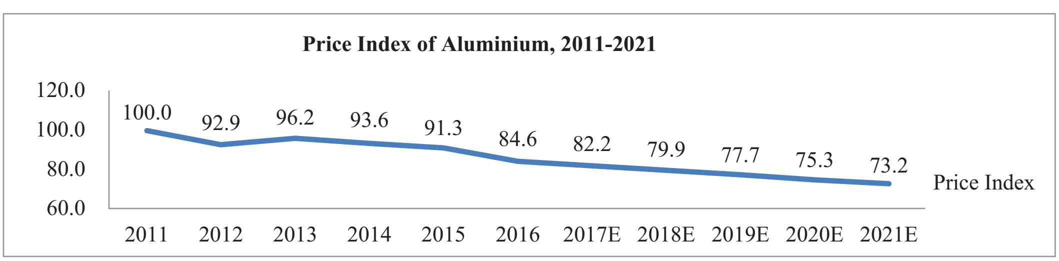
Cost Factors

LED chips are one of the major raw materials for the LED lighting solution market. The price Index refers to prices for LED chips globally. During the past five years, the average price of LED chips underwent a noticeable downturn, from price index 100 in 2011 to 52.9 in 2016. With the increasing production capacity and technology advancement in LED chips, the price index is forecasted to drop from 52.9 in 2016 to 38.1 in 2021.



Source: Frost & Sullivan

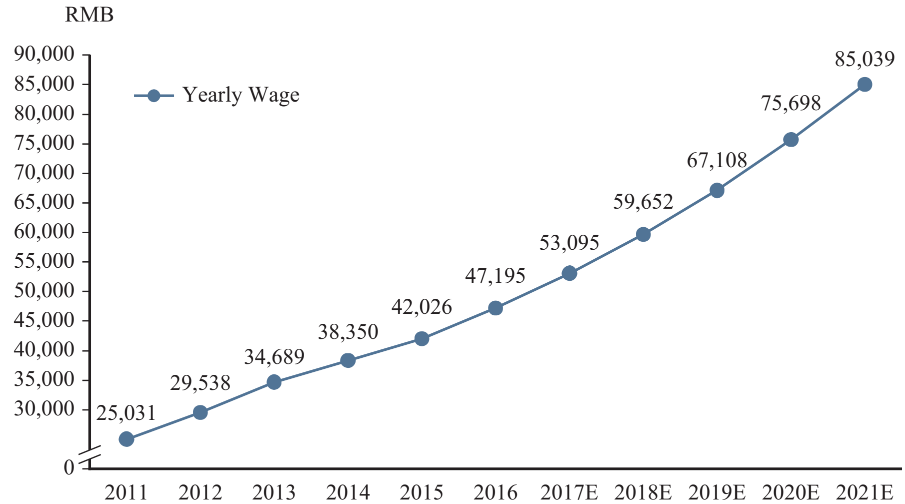
Aluminium are the major raw materials for the LED lighting fixtures. The price index of aluminium, decreased from 100 in 2011 to 84.6 in 2016. It is expected that the price index would continue to decrease from 84.6 in 2016 to 73.2 in 2021, given the sustained rise in the production of aluminium.



Source: Frost & Sullivan

The average yearly wage of employed persons in manufacturing industry in the PRC has demonstrated a significant growth in recent years, which was primarily due to strong demand for workers and professionals in relevant industries and elevated minimum salary standard by central and local government in the PRC. Driven by the upgrading and transformation of the manufacturing sector in the PRC, the growth in average yearly wage is expected to continue.

Yearly Wage of Employed Persons in Urban Areas by Industry (the PRC), 2011-2021



Source: Frost & Sullivan

COMPETITIVE LANDSCAPE OF LED LIGHTING SOLUTIONS MARKET

Market Concentration

The LED lighting solutions market is highly fragmented and competitive in Hong Kong, APAC and the globe. Market players can be diversified across interior design firms, lighting consulting firms, freelance interior designers and suppliers for LED lighting products who expand their service scope to total lighting solution. It is estimated that there are more than 2,000 companies providing LED lighting solutions in Hong Kong, roughly 15,000 and 100,000 market players in APAC and the globe respectively. These LED lighting solutions providers compete in all market segments including residential, commercial, industrial and public, without any major players dominating the market. Some of them have particular business focus on certain segments. In particular, among these LED lighting solutions providers, there are approximately 15 or more LED lighting solutions providers in Hong Kong, more than 200 in APAC and more than 1,000 in the globe who provide LED lighting solutions for the luxury retail clients. In 2016, our Group accounted for approximately 8.1% (HK$16.2 million) of the luxury LED lighting solutions market in Hong Kong, which is one of the leading players in the region.

Client Concentration

It is an industry norm for most LED lighting product and service providers in the luxury retail market to rely on a few major customers, including LVMH Group, Richemont and Kering, which demonstrate strong international presence. Luxury brands launch their stores globally at strategic locations which places much emphasis on fitting-out and layout, acting as the main contributor to the LED lighting solutions industry in the luxury retail sectors. In response to the fast-changing retail sales environment, luxury brands are relocating their stores to areas where they can have comparative advantages. LED lighting solutions companies will be engaged in the opening of new stores as well as relocation and reinstatement work of their existing stores.

Due to the nature of the industry, it is common for LED lighting solutions providers to rely on a few clients, mainly luxury retail brands, and such client concentration is not uncommon in industry in which a few leading luxury retail brands account for substantial market shares.

Credit Period / Payment Terms

The credit period of clients is usually determined based on business relationship, credit records and current market conditions, including the currency conversion involved in the cross-border transaction and hierarchical structure of multinational companies in processing payment, which might lead to the delays in payment.

It is an industry trend that the main contractor will settle their payable to sub-contractors after they complete the projects substantially or when they receive payments from the end-customers.

Nature of Competition

As luxury brand owners put emphasis on visual alignment of their retail stores across the globe, when it comes to decorating their retail stores, they generally prefer to appoint an experienced, credible and reputable main contractor to work with store designers. Store designers would then choose between provide lighting consulting service by themselves and sub-contracting it to lighting solutions providers. As the LED lighting solutions market is a niche market and a sub-segment of interior decoration, LED manufacturing giants in the upstream segment such as Philips, Osram and Cree as well as other interior design firms are also capable of providing integrated and comprehensive service including lighting solutions service. Therefore, customer referral and contractual agreement are two common industry practises in the LED lighting solutions industry across the globe.

The following table sets forth the profiles of key active market players in the LED lighting solution market in Hong Kong:

Company Name	Headquarters	Business Portfolio	Customer Type	Geographic Coverage
Hong Kong				
Flora Innovative	Hong Kong	A lighting consulting company which provides customised total lighting solutions	Public spaces, Hospitality, Retail, Commercial, Educational, Transportation, Food and beverage	Asia
IMS 512	Hong Kong	A company which provides total lighting solutions, including design of customised indoor and outdoor LED lighting products, on-site consulting services, after-sales maintenance and project management	Office and luxury retail	Hong Kong, Asia, USA, Italy
SGF	Headquarters: USA Office: Hong Kong	A company which provides total lighting solutions, including indoor and outdoor LED lighting product design, customisation, installation and after-sales maintenance	Retail, Residential, Commercial, Public spaces	Asia, North America
LightLinks	Hong Kong	A lighting consulting company which provides customised total lighting solutions	Retail, Residential, Hospitality Commercial, Public spaces	Asia
TinoKwan Lighting	Hong Kong	A lighting consulting company which provides customised total lighting solutions	Hospitality, Retail, Commercial, Food and beverage	Asia

Note: Names on the list are active players in the LED lighting solution market but not exclusively for the luxury retail segment. Active players are companies that are constantly referred between buyers and customers from the industry‘s perspective. Ranking is not provided due to the following reasons: (i) given that this is a niche market where information is highly non-transparent and fragmented for conclusion and analysis; (ii) ranking that is conducted solely on competitors in the luxury retail segment is perceived to be misleading and biased; (iii) comparisons between market players in the overall LED lighting solutions market are also considered unfair and not comparable since each company offers a different range of segments, products and services.

Source: Frost & Sullivan