

Business Plan For
**Establishment of Assembly Factory for LED Lighting
Products in Tanzania**
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Prepared for

SKYZON INTERNATIONAL GROUP LTD.
Mzinga Way, Plot. No. 1359, Msasani
P.O.Box 14111,
Dar es Salaam, Tanzania
Office N°: +255 685 564 642
Email: kim.tz@everlite.cc
sales@everlite.cc
info@everlite.cc

Prepared By

DAR ES SALAAM MERCHANT GROUP LTD
Uporoto Street, Plot. No 17, New Bagamoyo Road,
P. O Box 6133,
Dar es Salaam, Tanzania.
Office N°: +255 22 2780313
Mobile N°: +255 659 120 986
Email: info@dmg.co.tz

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ABBREVIATIONS

| | |
|----------|--|
| ACFTA | African Continental Free Trade Area |
| BRELA | Business Registration and Licensing Authority |
| CCC | China Compulsory Certificate mark |
| CKD | Completely Knocked Down |
| CTI | Confederation of Tanzanian Industries |
| EAC | East African Cooperation |
| EIA | Environmental Impact Assessment |
| ENEC | European Norms Electrical Certification |
| FCC | Fair Competition Commission (FCC) |
| GS | Gepufte Sicherheit |
| ICSID | The International Centre for Settlement of Investment Disputes |
| LED | Light Emitting Diode |
| IoT | Internet of Things |
| MIGA | Multilateral Investment Guarantees Agency |
| MLHSD | Ministry of Lands and Human Settlement Development |
| NBS | National Bureau of Statistics |
| NEMC | National Environment Management Council |
| NRTL | Nationally Recognized Testing Laboratory |
| OBM | Own Branding & Manufacturing |
| ODM | Original Designing & Manufacturing |
| OEM | Original Equipment Manufacturer Capability |
| OSHA | Occupational, Safety and Health Authority |
| SADC | Southern African Development Community (SADC) |
| SKD | Semi Knocked Down |
| TANESCO | Tanzania Electric Supply Company Limited |
| TANROADs | Tanzania Roads Agency |
| TBS | Tanzania Bureau of Standards |
| TEMESA | Tanzania Mechanical and Electrical Agency |
| TFDA | Tanzania Food and Drugs Authority |
| TIC | Tanzania Investment Centre |
| TRA | Tanzania Revenue Authority |
| VAT | Value Added Tax |

1. EXECUTIVE SUMMARY

Urban street lighting constitutes a pivotal yet financially burdensome aspect, accounting for approximately one-third of the electricity bill. In the quest for optimal energy resource utilization, the adoption of energy-efficient lighting systems becomes imperative, enabling informed energy management. However, the conventional lighting systems in Dar es Salaam are fraught with shortcomings due to outdated design norms and inefficient devices. Consequently, energy wastage, frequent device replacements, communication deficits, automation glitches, and power disruptions emerge, attributed to insufficient battery life and voltage fluctuations. Further, maintenance and component availability add to the challenges.

This Business Plan provides a clear strategy for establishing an assembly facility for Light-Emitting-Diode (LED) lighting products in Tanzania. It underscores a compelling market opportunity. Notably, there exists an evident demand-supply gap in the LED lighting sector, with no existing assembly plant or factory for LED lights production in Tanzania or the broader East African Community (EAC) region. In fact, the African continent lacks such manufacturing capabilities in full optimal scale barring South Africa. This scarcity presents a lucrative opportunity to establish an assembly plant in Tanzania. Skyzon can effectively tap into this untapped market and supply LED products to meet the escalating demand, surpassing the current import volume of 6,548,487 m³.

The demand for LED products uncovered through the interviews from TEMESA, TANROADS, DART, and local authorities, provided us with a clear view of the market. The big road network with its 601 km in Dar es Salaam, under TANROADS, is a key part of making cities brighter. This road network alone needs 30,060 LED street lights to light it up, showing a need for an LED factory. The establishment of LED factory is expected to unlock the potential to cater to a combined population of over 701 million people, distributed across the East African Community (EAC), and the Southern African Development Community (SADC). Currently, these products are imported from China,

Korea and the United Arab Emirates. Furthermore, Tanzania's eligibility for the USA's African Growth and Opportunity Act (AGOA) offers avenues for seamless trade leave alone special preferential tariff agreement with China which solidifies export potential, facilitating the tariff-free export of over 400 products to the Chinese market.

In terms of management competence, Skyzon International Group Ltd. has experienced personnel capable of running the business profitably and sustainably. Bananuka Kim Dias is an experienced Senior Investment and Business Development Consultant with a proven track record spanning over a decade. With skills in project management, strategic decision-making, negotiation, program implementation, and team leadership, He excels in driving sustained growth. He holds a Master's in Business Administration from the Open University of Tanzania and a Bachelor's in Procurement and Supply Chain Management from Kampala International University Uganda.

Tao Zhang is a highly accomplished expert in the LED lighting industry with a strong track record of leadership and achievement. With a Bachelor's Degree from Hubei Normal University, Tao has cultivated a career that spans various key roles. Notably, his tenure as Sales Manager at Hangzhou Createopto Technology Co., Ltd and subsequent positions as CEO and Founder of Ningbo Skyzon Energy Co., Ltd. underscore his expertise in the field. Tao's influence extends beyond his professional roles, as he holds prominent positions in esteemed social organizations. He's an active Committee Member of the China Illuminating Engineering Society (CIES), contributing to the advancement of lighting technology. His roles as Vice Chairman of the Ningbo Lighting and Electric Appliance Association, and various committee memberships within Ningbo's business landscape, showcase his commitment to industry development and youth entrepreneurship. Tao Zhang's dynamic leadership, extensive industry experience, and deep involvement in professional networks make him a prime candidate to drive the establishment of LED lighting products in Tanzania. His expertise and connections will undoubtedly play a pivotal role in the success of this venture.

Victor Bukula Martin Madata is a dynamic professional poised to revolutionize the LED lighting sector in Tanzania. With a Bachelor of Science (Hons) in Information Technology and Business Information Systems from Middlesex University, UK, his innovative mindset and technical proficiency make him an ideal candidate for spearheading the establishment of LED lighting products. Victor's academic journey encompasses an Advanced Diploma in Software Engineering (ADSE) and a Diploma in Information Systems Management (DISM) from APTECH Unique Academy. His commitment to excellence started early, as he earned a Certificate in Computer Application Programs from VETA at Loyola High School.

Over the projected years from 2024 to 2028, the financial trajectory appears robust and consistent. Revenue growth from TZS 6.2 billion to TZS 52.3 billion projecting a growth rate of over 7.5X during the aforementioned period. Furthermore, average year-on-year growth rate of over 70%. The company demonstrates the potential for adept control over production costs, maintaining a steady Gross Profit Margin of approximately 80%.

Furthermore, the positive potential trend observed in the Operating Margin showcases the effective management potential for operational expenditures, echoing in the projected Net Profit Margin's progressive rise, affirming the ability to translate revenue into substantial profits. The projected financial performance showcases remarkable enhancement, characterized by substantial revenue growth and notable net income increase, firmly positioning the company on a trajectory of sustained success.

The projected Balance Sheet portrays the company's robust liquidity with substantial cash reserves. Rising trade and receivables indicate potential for expanding sales momentum, while prudent collection strategies are pivotal for consistent cash flows. Vigilant inventory management is crucial to prevent overstocking. Noteworthy investments in property and equipment signal growth ambitions. The projected Cash Flow Statement, the five-year outlook anticipates consistent net income growth, contributing to a substantial increase in cash and cash equivalents.

2. COMPANY DESCRIPTION: SKYZON INTERNATIONAL COMPANY LIMITED

The Company responsible for the LED Lighting assembly plant is Skyzon International Group Ltd. located at Mzinga Way, Plot. No. 1359, Msasani P.O.Box 14111, Dar es Salaam, Tanzania with a joint venture with SUMAJKT Tanzania. The operation is under a public-private partnership model with SUMAJKT, where Skyzon holds a majority share (51%) and (49%) of SUMAJKT.

Company Background: Founded in 2008 in China, Skyzon International Group Ltd. was established with a registered capital of €2.5 Million to meet the growing demand for high-quality LED lighting solutions. With a commitment to technological advancement and sustainable practices, the company quickly gained recognition as a leader in LED lighting manufacturing.

The company's state-of-the-art facility in China spans 66,000 square meters and includes a cutting-edge Research and Development (R&D) Center covering 1500 square meters. The R&D Center has comprehensive testing facilities, enabling Skyzon Africa to design, innovate, and test lighting solutions that meet the highest quality standards.

2.1. Vision

The vision of Skyzon International Group Ltd. is to be the best outdoor lighting solution provider in the world.

2.2. Mission

The mission is to illuminate the world with sustainable and innovative lighting solutions.

The company is committed to leveraging our expertise and resources to enhance energy efficiency, create positive social impact, and contribute to the development of vibrant and sustainable communities."

2.3. Goals and Objectives:

- **Local Empowerment:** Foster local employment by hiring and training Tanzanian talent in manufacturing, R&D, and related fields, contributing to skill development and job creation.
- **Market Expansion:** Extend our market reach by establishing a robust distribution network across Tanzania, Africa and the global.
- **Sustainable Practices:** Incorporate sustainable manufacturing practices prioritising waste reduction, energy efficiency, and eco-friendly materials, contributing to environmental conservation.

Continue investing in research and development to introduce innovative LED lighting solutions that cater to evolving market demands and technology trends.

Quality Assurance: Uphold rigorous quality control measures to ensure that every LED lighting product meets or exceeds international standards, building trust among consumers

Prioritize customer needs and feedback, aiming to exceed customer expectations in terms of product quality, service, and affordability.

2.4 Key Management Personnel



Victor Madata is a dynamic professional poised to revolutionize the LED lighting sector in Tanzania. With a Bachelor of Science (Hons) in Information Technology and Business Information Systems from Middlesex University, UK, his innovative mindset and technical proficiency make him an ideal candidate for spearheading the establishment of LED lighting products. Victor's academic journey encompasses an Advanced Diploma in Software Engineering (ADSE) and a Diploma in Information Systems Management (DISM) from APTECH Unique Academy. His commitment to excellence started early, as he earned a Certificate in Computer Application Programs from VETA at Loyola High School. As the current Country Director at Skyzon International Group Limited, Victor continues to chart new horizons. His leadership journey is richly coloured by his role in the Human Rights Club at Loyola High School, where he showcased his commitment to social causes. Victor's multifaceted expertise extends beyond technical proficiency; he excels in communication, organization, and teamwork. With his compelling portfolio, industry acumen, and dedication to driving innovation, Victor stands as a driving force in the mission to establish LED lighting products in Tanzania, contributing to the nation's technological advancement and sustainable growth.



Bananuka Kim is an experienced Senior Investment and Business Development Consultant with a proven track record spanning over a decade. With skills in project management, strategic decision-making, negotiation, program implementation, and team leadership, He excels in driving sustained growth. The educational background, including a Master's in Business Administration from the Open University of Tanzania and a Bachelor's in Procurement and Supply Chain Management from Kampala International University Uganda, provides a solid foundation. His technical proficiency lies in the establishment and operation of LED factories. Mr. Kim has extensive experience in marketing including lobbying, creating product awareness, and product promotion. At B Mac and Walker Consultants Limited, as Investor Relations Director he created and maintained the relationship with the investors and gained customer engagement skills which is vital in the operation of the LED lighting factory establishment. He has also gained procurement knowledge and skills while working at the University of Dar-Es-Salaam, the knowledge which is vital in sourcing materials and equipment necessary for the operation of LED assembly factory. Mr. Kim is also a Director of Skyzon International Group Ltd as well as a member of Institute of Procurement Profession of Uganda.



Tao Zhang is a highly accomplished expert in the LED lighting industry with a strong track record of leadership and achievement, his experience in the LED lighting industry spans over 20 years. With a Bachelor's Degree from Hubei Normal University, Tao has cultivated a career that spans various key roles. Notably, his tenure as Sales Manager at Hangzhou Createopto Technology Co., Ltd and current positions as CEO and Founder at Ningbo Skyzon Energy Co., Ltd. underscore his expertise in the field. Tao's influence extends beyond his professional roles, as he holds prominent positions in esteemed social organizations. Mr. Zhang is also a Director of Skyzon International Group Ltd. He's an active Committee Member of the China Illuminating Engineering Society (CIES), contributing to the advancement of lighting technology. His roles as Vice Chairman of the Ningbo Lighting and Electric Appliance Association, and various committee memberships within Ningbo's business landscape, showcase his commitment to industry development and youth entrepreneurship. Tao Zhang's dynamic leadership, extensive industry experience, and deep involvement in professional networks make him a prime candidate to drive the establishment of LED lighting products in Tanzania. His expertise and connections will undoubtedly play a pivotal role in the success of this venture.

3. LED PRODUCTS

3.1 LED street lights (AC/DC):

The assembly line dedicated to LED street lights operates as a hub of innovation, where skilled technicians meticulously integrate advanced LED modules with power sources, one hand alternating current (DC) and the other hand direct current (DC). The process entails meticulous quality checks, precision assembly, and rigorous testing to deliver street lights that guarantee optimal illumination and energy efficiency.



3.2 LED solar street lights all incorporate (All in one):

Our assembly line for LED solar street lights operates with a focus on integration and efficiency. Here, our technicians intricately fuse solar panels, energy storage units, and LED lighting modules into a unified and self-sustaining unit. This innovative "All-in-One" approach ensures that these street lights harness solar energy during the day and illuminate urban spaces with eco-friendly LED lighting at night. The assembly process is underscored by meticulous engineering to seamlessly blend functionality with aesthetics.



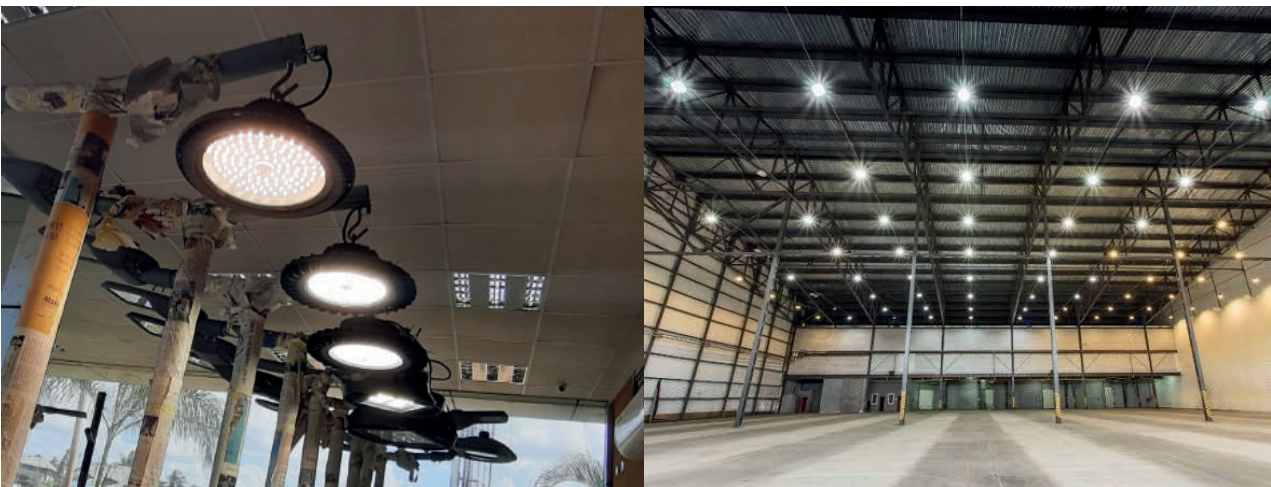
3.3 LED garden light (AC/DC):

Our assembly facility for LED garden lights harmonizes the worlds of creativity and functionality. Here, artisans assemble LED garden lights that can effortlessly insert either alternating current (AC) or direct current (DC). These garden lights are meticulously crafted to add a touch of elegance and illumination to outdoor spaces, while their dual power adaptability ensures seamless integration within diverse settings.



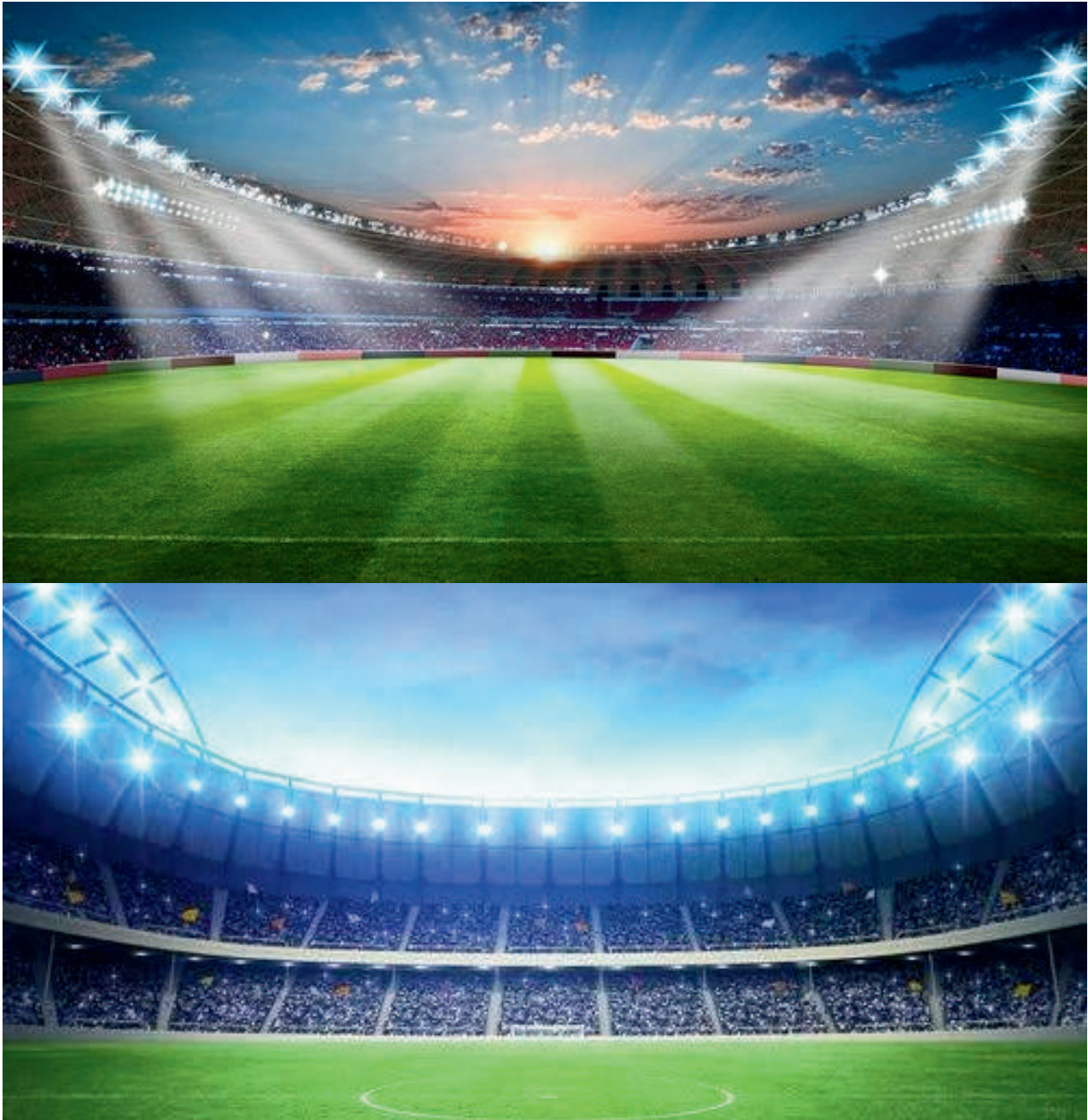
3.4 LED Industrial light:

The assembly process for LED industrial lights is characterized by precision engineering to cater to the demanding requirements of industrial environments. Our technicians skillfully integrate high-performance LED modules with durable and heat-resistant housings, resulting in industrial lights that offer exceptional brightness and longevity. Rigorous quality checks and testing procedures guarantee that these lights thrive amidst the rigors of industrial settings.



3.5 LED arena light:

In the assembly of LED arena lights, precision takes center stage. Our skilled workforce adeptly assembles LED modules into specially designed fixtures that ensure uniform and high-intensity illumination. The process involves stringent quality control measures to meet the unique demands of arenas and sports facilities, where clarity and visibility are of paramount importance.



3.6 Geographical Scope and Facility Location

The geographical scope of this pivotal feasibility study engulfs the bustling city of Dar es Salaam, Tanzania's principal commercial and economic hub. Here, within this dynamic urban expanse, lies the proposed epicenter of transformation. An LED assembly line factory that embodies the partnership between Skyzon International Group Ltd. and the National Service Corporation Sole of the United Republic of Tanzania (SUMAJKT). As a nexus of innovation, Skyzon™ operates under the banner of Everlite LED Lighting Company across the globe. This strategic localization reflects the partnership's visionary commitment to facilitating seamless distribution and unparalleled accessibility of LED lighting products across the Tanzanian landscape.

3.7 Skyzon International Group Ltd.'s Products:

A thorough analysis contrasting Skyzon's product range with the existing LED lighting products accessible in Tanzania underscores the exceptional quality of Skyzon's offerings, consequently underscoring the compelling case for the envisioned collaboration. The subsequent tabulation [Table 5] thoughtfully addresses the predicaments related to (1) luminosity, (2) robustness, and (3) affordability that TANROADs grapple with. This analysis proposes tailored employment of Skyzon's solutions for street lighting, arena illumination, industrial lighting, and garden luminance, thereby bolstering the partnership proposal.

3.8 Acceptability of LED products

Table 1 compares High-Pressure Sodium (HPS) and LED lighting sources within the context of DART infrastructure. HPS requires 250W, while LEDs operate at a significantly lower 110W. Similarly, LED's capacity stands at 92.29W, contrasting with HPS's higher 279.8W. The luminous flux of HPS is 25,000 lumens compared to LED's 6,000 lumens. However, LEDs exhibit commendable efficiency, delivering 85 lumens per watt, while HPS stands at 100 lumens per watt. Moreover, LEDs boast an impressive lifespan of 50,000 hours, overshadowing HPS's 10,000 hours, and they operate at a safer and cooler temperature of 40°C, in stark contrast to HPS's high 350°C.

These findings highlight the significant advantages that LED lighting sources hold over traditional HPS sources, particularly in terms of energy efficiency, luminous output, durability, and operational safety. These attributes align with the primary objective of the feasibility study. The data strongly indicates that LEDs offer a promising and optimal solution for road lighting applications, thus justifying their potential suitability and viability for use in Tanzania and elsewhere.

Table 1. The Specification of DART agency Light Sources as compared to LED lighting sources

| Type | HPS (High Pressure Sodium) | LED (Light Emitting Diode) |
|--------------------|----------------------------|----------------------------|
| Active power (W) | 250W | 110W |
| Capacity (W) | 279.8 | 92.29 |
| Luminous flux (lm) | 25,000 | 19800 |
| Efficiency (lm/W) | 100 | 180lm/w |
| Lifespan (hour) | 10,000 hours | 100,000 hours |
| Temperature | 350°C | 80°C |

Source: Research survey findings 2023

Table 2 shows a comparison of Light Emitting Diode (LED) lumen output values that are equivalent to those of high pressure Sodium (HPS) lamps, catering to different configurations of pole spacing and the number of lanes. The table outlines three key configurations for pole spacing: 100 ft, 200 ft, and 300 ft, and it further breaks down the results based on the number of lanes: 2, 3, and 4. The HPS wattages used for the comparison are 70W, 100W, and 150W which is commensurate with findings by Davidovic & Kostic (2022).

It has been observed that as the pole spacing increases from 100 ft to 300 ft, the lumen output values for both HPS and LED tend to decrease. This suggests that larger pole spacings require higher lumen outputs to maintain adequate illumination levels. Furthermore, there is a consistent pattern of higher lumen outputs for LED across all configurations and lane numbers when compared to HPS lamps. This demonstrates the superior efficiency of LED technology in terms of lumen generation (Bürmen, et al; 2008).

When considering the impact of the number of lanes on lumen outputs, it's apparent that as the number of lanes increases, the required lumen outputs also rise. This is consistent with the notion that more lanes necessitate higher illumination to ensure safe and comfortable driving conditions. Furthermore, it's notable that the relationship between HPS and LED lumen outputs remains consistent across different configurations and lane numbers. LED lights consistently outperform their HPS counterparts, providing equivalent or even higher lumen outputs while consuming less power, which highlights the energy-saving potential and superior performance of LED lighting systems in various roadway scenarios

Table 2. Road LED lighting Lumen Output Values Equivalent to High Pressure Sodium (HPS) for Different Configurations

| Number of lanes | HPS wattage (W) | Pole spacing | | |
|-----------------|-----------------|--------------|-------|-------|
| | | 100ft | 200ft | 300ft |
| 2 | 70 | 3521 | 3647 | 3640 |
| | 100 | 5300 | 5491 | 5490 |
| | 150 | 9026 | 9369 | 9373 |
| 4 | 70 | 3459 | 3420 | 2746 |
| | 100 | 5187 | 5125 | 4125 |
| | 150 | 8794 | 8706 | 7004 |

Source: Research survey findings 2023

3.9 Investment and Technology

The company is prepared to invest over \$5.8 million across various important areas, including establishing an exclusive brand name - SKYZON, obtaining patents, acquiring quality and testing certifications, leveraging expertise and know-how, receiving over 10 years' worth of Research and Development (R&D) support, creating series for more than 55 housing designs, designing over 20 series outdoor LED lights, receiving support for exhibitions in Tanzania and the region, offering professional training, setting up an assembly line, establishing a laboratory, creating a professional showroom, forming a local company in Tanzania with experts, engineers, and accountants, providing marketing assistance, and supporting advertising efforts.

3.10 Product Range

The product range encompasses a diverse array of energy-efficient LED lighting solutions, including outdoor street lights, residential lighting options, and innovative technological advancements.

Table 3. Skyzon's Product Range

| Item | Skyzon Code | Series | Model | Size | Power | |
|------|------------------|------------------|-----------------------|--------|---------|---------|
| 1 | SKYZON-ASLO8S | Solar All in one | ASLO8 | S | 1700lm | |
| 2 | SKYZON-ASLO8M | | | M | 3400lm | |
| 3 | SKYZON-SL68MINI | SMD Street Light | SL68 | MINI | 20-40 | |
| 4 | SKYZON-SL68S | | | S | 50-90 | |
| 5 | SKYZON-SL68M | | | M | 100-120 | |
| 6 | SKYZON-SL68L | | | L | 150-220 | |
| 7 | SKYZON-SL18MA | | | SL18 | MA-SMD | 20-100 |
| 8 | SKYZON-SL18LA | | | | LA-SMD | 100-200 |
| 9 | SKYZON-SL18MB | | MB-COB | | 20-60 | |
| 10 | SKYZON-SL18LB | | LB-COB | | 80-160 | |
| 11 | SKYZON-SL11 MINI | | SL11 | MINI | 20-40 | |
| 12 | SKYZON-SL11S | | | S | 50-90 | |
| 13 | SKYZON-SL11M | | | M | 100-120 | |
| 14 | SKYZON-SL11L | | | L | 150-200 | |
| 15 | SKYZON-SL20AS | | | SL20A | S | 20-50 |
| 16 | SKYZON-SL20A | | | | M | 50-100 |
| 17 | SKYZON-SL20QA | | L | | 100-200 | |
| 18 | SKYZON-SL58SA | | SMD UrbanGarden Light | SL58 | SA | 20-60 |
| 19 | SKYZON-SL58SB | | | | SB | 20-60 |
| 20 | SKYZON-SL58A | A | | | 30-150 | |
| 21 | SKYZON-SL58B | B | | | 30-150 | |
| 22 | SKYZON-SL58C | C | | | 30-150 | |
| 23 | SKYZON-SL58D | D | | | 30-150 | |
| 24 | SKYZON-GLO1 | GL01 | | PCB | 20-100 | |
| 25 | SKYZON-GLO1 | | | Module | 20-100 | |
| 26 | SKYZON-GL02 | | | GL02 | 2060 | |
| 27 | SKYZON-SL30S | Shoebox | | SL30 | S | 20-100 |
| 28 | SKYZON-SL30M | | M | | 120-200 | |
| 29 | SKYZON-SL30L | | L | | 200-300 | |
| 30 | SKYZON-CL30 | Canopy | CL30 | | 60-150 | |
| 31 | SKYZON-SLI0S | COB Street Light | SL10 | S | 30-80 | |
| 32 | SKYZON-SLI0M | | | M | 90-120 | |
| 33 | SKYZON-SLI0L | | | L | 150-200 | |
| 34 | SKYZON-SL08(1S) | | SL08 | 1S | 20-50 | |
| 35 | SKYZON-SL08(1L) | | | 1L | 50-100 | |
| 36 | SKYZON-SL08(2) | | | 2 | 100-160 | |
| 37 | SKYZON-SL08(3) | | | 3 | 150-240 | |
| 38 | SKYZON-SL09MINI | | | SL09 | MINI | 10-30 |
| 39 | SKYZON-SL09(1S) | | | | 1S | 30-50 |
| 40 | SKYZON-SL09(1L) | | 1L | | 50-80 | |
| 41 | SKYZON-SL09(2) | | 2 | | 100-120 | |
| 42 | SKYZON-SL09(3) | | 3 | | 150-180 | |
| 43 | SKYZON-SL09(4) | | 4 | | 200-240 | |

| | | | | | |
|----|----------------|-----------------|------|---------|----------|
| 44 | SKYZON-HB06S | SMD Highbay | HB06 | S | 100-160 |
| 45 | SKYZON-HB06M | | | L | 180-250 |
| 46 | SKYZON-HB10S | | HB10 | M | 60-150 |
| 47 | SKYZON-HB10M | | | L | 150-200 |
| 48 | SKYZON-HB12S | | HB12 | S | 50-100 |
| 49 | SKYZON-HB12M | | | M | 120-160 |
| 50 | SKYZON-HB12U | L | | 180-200 | |
| 51 | SKYZON-HB09S | COB Highbay | HB09 | S | 60-100 |
| 52 | SKYZON-HB09L | | | L | 120-180 |
| 53 | SKYZON-FL02S | SMD Flood Light | FL02 | S | 100-200 |
| 54 | SKYZON-FL02M | | | M | 250-400 |
| 55 | SKYZON-FL02L | | | L | 450-600 |
| 56 | SKYZON-FL18(1) | | FL18 | 1 | 150-400 |
| 57 | SKYZON-FL18(2) | | | 2 | 400-800 |
| 58 | SKYZON-FL18(3) | | | 3 | 800-1200 |
| 59 | SKYZON-FLO110 | COB Flood Light | FLO1 | 1 | 10 |
| 60 | SKYZON-FLO130 | | | 2 | 20-30 |
| 61 | SKYZON-FLO150 | | | 3 | 40-50 |
| 62 | SKYZON-FLO1100 | | | 4 | 60-100 |
| 63 | SKYZQN-FLO1200 | | | 5 | 120-200 |

4. CUSTOMER AND THE MARKET

4.1 Customer Survey Results

In order to update the feasibility, study the consultant visited the following businesses; Shops, companies, engineering firms, and government organizations as indicated below:

Table 4: The stakeholders consulted in validation of the feasibility study information

| Number | Stakeholder | Number of Respondent interviewed |
|--------|--|----------------------------------|
| 1 | Tanzania Mechanical and Electrical Agency, TEMESA | 01 |
| 2 | Tanzania Roads Agency, TANROADs DSM regional office | 02 |
| 3 | Municipal councils of Kinondoni, Ubungo, Kigamboni, Ilala and Temeke | 05 |
| 4 | Confederation of Tanzanian Industries (CTI) | 01 |
| 5 | Tanzania Revenue Authority (TRA) | 01 |
| 6 | Business Registration and Licensing Authority (BRELA) | 01 |
| 7 | National Bureau of Statistics (NBS) | 01 |
| Total | | 12 |

The presented table 4 provides the results of a survey focused on respondents' familiarity and knowledge regarding energy-efficient lighting technologies, particularly LED lighting. The survey aimed to understand the level of awareness and understanding among participants about different aspects related to LED lighting adoption, ranging from design and consumer adoption to the energy and cost-saving potential of using LED street lights compared to traditional lighting options.

The first question inquired about the respondents' familiarity with recent increases in energy-efficient technology adoption. The majority (90%) indicated that they were familiar with these advancements, demonstrating a significant level of awareness among the respondents.

The second question assessed the respondents' knowledge of traditional lighting technology. An impressive 90% claimed to be knowledgeable about these traditional lighting forms, highlighting a general understanding of conventional lighting technologies commonly used in everyday life. Notably, only 9% admitted having very little knowledge, suggesting a broad awareness of the subject.

Moving on to LED lighting adoption, the third question delved into the likelihood of respondents choosing LED light bulbs over traditional options. A substantial 85% expressed a likelihood of choosing LED bulbs, underscoring the growing preference for energy-efficient alternatives.

The survey then shifted focus to the respondents' familiarity with newer forms of energy-efficient lighting, including LED street lights, LED solar street lights, LED garden lights, LED industrial lights, and LED arena lights. The results indicated that respondents held varying degrees of familiarity, with 61% claiming to be very knowledgeable, 14% having moderate knowledge, and 7% acknowledging limited understanding. This suggests that while a significant portion of the participants are well-informed, there is room for further education and promotion of these newer lighting technologies to enhance market acceptance.

The survey's fifth question explored respondents' familiarity with the applications of LED lighting in modern settings. While 86% reported some level of familiarity, with 41% claiming to be very familiar, there is still a substantial portion that might benefit from a clearer understanding of LED lighting's versatile applications.

Next, the survey focused on respondents' awareness of the energy and cost-saving potential of using LED street lights in place of traditional options. Notably, 79% of the participants indicated they were either very knowledgeable or close to it, underlining that consumers are well-informed about the financial benefits offered by LED street lighting solutions.

Lastly, the survey examined respondents' familiarity with the environmental conservation aspect of LED street light bulbs. An overwhelming 90% expressed their awareness of this benefit, reflecting a positive sentiment towards the environmental advantages of adopting LED lighting solutions.

5. MARKET STRATEGY

5.1 Marketing and Sales Strategy:

A market analysis studies the attractiveness and opportunity of a particular market within an industry. In this analysis, we were able to use data and market trends to project the near future of LED lighting and the level of opportunity available for a business entering this market. Our project's focus was on the LED street lights, LED garden lights, LED industrial lights, LED arena lights, and some conventional lights in the market. In narrowing our focus, we aimed to gain a more complete and detailed understanding of the commercial lighting market as it pertains to LED lighting technologies. We wanted to know the existing brands in the local market. The highest-selling energy product in the market is LED bulbs with 47%. Other conventional light products are still available with 27% for indoor lighting and 14% curved fluorescent lamps among others.

With regards to outdoor lighting, research shows that few vendors have LED lighting for street lights, arena lighting or similar.

However, with the longer lifespan of SKYZON's LEDs street lights, it is likely to lead others in the market. Most conventional street lights in the market were identified to have a factory warranty of one year or less. The provision of 3 years factory warranty for LEDs is another competitive advantage that users may embrace.

The research on price differences was in the same way with satisfactory results. Based on analysis of the market price, it is possible to estimate production prices. However, other parameters should be considered in reaching conclusions about production prices.

5.2 Pricing Strategy

5.2.1 Understanding Production Costs:

To develop a solid pricing strategy, it's essential to have a clear understanding of production costs. This will involve calculating direct costs encompassing materials, labor, manufacturing, and overhead expenses. It's crucial to differentiate between variable costs that fluctuate with production levels and fixed costs that remain consistent. Additionally, if applicable, research and development costs should be factored in. By comprehensively assessing these components, businesses can accurately determine the break-even point at which total costs align with total revenue guiding informed pricing decisions that ensure profitability and sustainability.

5.2.2 Analyzing Competitor Pricing:

To establish a competitive pricing strategy, a thorough analysis of competitor pricing is essential. This involves researching competitors operating within the LED lighting segment. By identifying products that share similar features and quality levels, businesses can gauge market benchmarks. Comparative price points offer insight into the broader market range, aiding in setting competitive rates. Evaluating competitors' pricing strategies, such as premium pricing for high-end offerings or value pricing for affordability, further contributes to crafting a well-informed pricing approach that aligns with market dynamics and customer expectations.

5.2.3 Assessing Perceived Value:

This will involve gaining insight into how customers perceive the quality, features, and benefits of the product. By identifying unique selling points (USPs) that set the product apart from competitors, the company will position itself strategically in the market. Customer feedback, reviews, and testimonials will offer valuable perspectives on the product's strengths and weaknesses. Equally important is understanding the emotional and functional value that the product will bring to customers, helping to ascertain the optimal price point that resonates with their perceptions and needs.

Since the pricing strategy is not set in stone; it will evolve as market conditions change and as you gather more data about customer behavior and preferences. Assessment will be done regularly to check the effectiveness of the strategy and make adjustments as needed to maintain competitiveness and profitability.

6. COMPETITION

6.1 Main Competitors

To establish a competitive pricing strategy, a thorough analysis of competitor pricing is essential. This involves researching competitors operating within the LED lighting segment. By identifying products that share similar features and quality levels, businesses can gauge market benchmarks. Comparative price points offer insight into the broader market range, aiding in setting competitive rates. Evaluating competitors' pricing strategies, such as premium pricing for high-end offerings or value pricing for affordability, further contributes to crafting a well-informed pricing approach that aligns with market dynamics and customer expectations.

6.2 Description of the SWOT analysis

In order to successfully enter a new market, it's crucial for a business to thoroughly understand the current market situation. Table 1 presents a SWOT analysis highlighting the strengths, weaknesses, opportunities, and threats of entering the commercial LED lighting market. This analysis is based on thorough field study research covering market demand, product pricing, tax considerations, and environmental impact. The research provides valuable insights into consumer preferences, helps in crafting competitive strategies, and ensures sustainable and environmentally friendly practices. This combined knowledge empowers the business to make informed decisions and navigate the new market confidently.

Table; 5 Description of SWOT Analysis

| STRENGTHS | WEAKNESS |
|--|---|
| <ul style="list-style-type: none"> • Experienced R&D Department • In-House Branding and Production • Innovative Design and Production • OEM Custom Manufacturing Expertise • Production Capacity • Reputation/Service • Guarantee/Warranty • International Standards • Product durability and longevity • Cost effective • In collaboration with SUMAJKT having a Memorandum of understanding (MoU) • Environmental friendly technology (Low emission) • A smart city that uses different types of electronic data collection sensors to supply information which is used to manage assets and resources efficiently • Completed projects in 44 countries around the World • Use less energy (lower watt) • Major producer and export of LEDs worldwide • Intelligent light systems with automatic Adjustment | <ul style="list-style-type: none"> • Higher initial investment • Limited Brand recognition in the Tanzanian Market • The unavailability of the supportive industry. • Unavailability of skilled labour. |
| OPPORTUNITIES | THREATS |
| <ul style="list-style-type: none"> • Solar LED street lights are suitable for areas without access to electricity. • Potential to win government contracts • Generate job opportunities • Potential for exporting to East African Community (EAC) member nations • Avic City and other upcoming enclosed residential areas in Dar es Salaam • Dodoma's new city plan • Proposed airfields and expansions of existing airports • Rising energy prices • Innovation • Exporting to Southern African Development Community (SADC) nations due to the absence of LED assembly utilizing new technology and manufacturing facilities. • Fresh urbanization strategies for major urban centers, encompassing developments in National Housing Corporation (NHC) communities. • Planned stadiums (Dodoma) | <ul style="list-style-type: none"> • More affordable technology could potentially be accessible. • There's a period of adjustment before individuals embrace and begin utilizing new technology. |

7.0 COMPLIANCE, LEGAL AND REGULATORY CONSIDERATIONS:

7.1 List of Licenses, Permits and Certifications

- Certificate of incorporation (for local companies) or compliance (for foreign companies)
- Certificate of incentives (for TIC-approved projects)
- Business license
- Taxpayer identification number (TIN) certificate
- Income tax clearance certificate

7.2 Taxation, Incentives

An Incentive Package is accessible to holders of TIC Certificates of Incentives, offering a range of services related to permits, licenses, and approvals through the TIC One Stop Facilitation Centre. These services currently encompass immigration, labor, Tanzania Revenue Authority (TRA), Ministry of Lands and Human Settlements, Tanzania Bureau of Standards (TBS), Business Registration and Licensing Authority (BRELA), National Environment Management Council (NEMC), Occupational Safety and Health Authority (OSHA), Tanzania Food and Drugs Authority (TFDA), and Tanzania Electric Supply Company Limited (TANESCO).

Furthermore, this package ensures recognition of private property and protection against non-commercial risks. Tanzania's active participation in the World Bank's Multilateral Investment Guarantees Agency (MIGA) and The International Centre for Settlement of Investment Disputes (ICSID) further solidifies these protections. The benefits include a 0% Import Duty on Project Capital Goods, Computers, Computer Accessories, Raw Materials, Replacement Parts for Agriculture, Animal Husbandry, Fishing, Human and Livestock Pharmaceuticals, and Medicaments, as well as Motor Vehicles in Completely Knocked Down (CKD) form, and inputs for Manufacturing Pharmaceutical Products.

Import Duties of 10% apply to Semi-processed/Semi-finished goods, and 25% for final consumer goods. Value Added Tax (VAT) on taxable goods and services is set at 18%. Ventures sanctioned by the Tanzania Investment Centre (TIC) receive TIC Certificates of Incentives, encompassing benefits such as a 100% capital allowance deduction during income-earning years for the mentioned investment types, unrestricted repatriation of investment revenues for foreign investors, safeguards against expropriation and nationalization,

resolution of disputes through negotiation or arbitration, and permission for interest deduction on capital loans with the removal of the five-year loss carry-forward threshold.

7.3 Process and requirements for legal documents.

For new investors, the process of gaining entry, registration, and business approval, as well as accessing fiscal incentives for eligible investment projects, involves specific steps. These procedures are overseen by the Tanzania Investment Centre (TIC), where representatives from entities like the Tanzania Revenue Authority (TRA), Ministry of Lands and Human Settlement Development (MLHSD), Business Registration and Licensing Agency (BRELA), Ministry of Industry, Trade and Marketing, Directorate of Trade, as well as immigration and labor departments, collaborate. This collaborative approach streamlines the approval and registration processes, ensuring simplicity and clarity.

TIC serves as the primary point of contact for investors. Formal applications are directed to the Registry Department, requiring essential documents for processing, including:

- Three copies of the venture's feasibility study or business plan
- Three copies of the TIC application form (issued for a fee of US\$ 100)
- Audited accounts for the last three years in the case of rehabilitation or expansion
- A brief profile of investor(s)
- Project implementation schedule
- Copy of the business' memorandum and articles of association
- Certified copy of the certificate of company incorporation for local companies and certificate of compliance for foreign-based companies
- Proof of sufficient financial capital for the project
- Proof of land ownership for the project site
- Company executive board resolution to register the project with TIC
- Cover letter accompanying all the above

Upon successful registration with TIC, both local and foreign investors receive a certificate of incentives. The TIC business licensing desk manages investor applications, represents them, and monitors the issuance of permanent licenses and temporary business permits.

Please note that a mandatory Destination Inspection applies to commercial imports with a FOB value of US\$5,000 and above. Additionally, a pay and refund scheme for excise duty on fuel bought by eligible companies has been introduced.

Preparation for a fee of US\$1,000 is advised if your project qualifies for and is granted the Certificate of Incentives. However, certain items like Tiles, Furniture, Air conditioners, bedding, Crockeries, Cutleries, Electronic Equipment, Non Utility Vehicles (e.g., saloon cars, Sport Utility Vehicles, station wagons), fridges & Freezers, Polyvinyl Chloride (PVC) & High-density polyethylene (HDPE) Pipes, imported trailers, Cement, Steel Reinforcement Bars, Roofing Sheets, Telecommunications (except for Capital Goods for installation of Telecommunication towers), Rehabilitation and Expansion projects are not eligible for tax exemption.

VAT Exemption is not applicable to Deemed Capital Goods. However, VAT deferment is granted on project capital goods like Plant & Machinery if certain conditions are met. Zero-rated VAT applies to exports.

7.4 Compliance Requirements

7.4.1 Environmental Impact Assessment (EIA):

Before commencing any project or activity with potential environmental impacts, the business venture must undergo an EIA as stipulated by the Environmental Management Act (2004). This assessment will identify potential environmental risks and mitigation measures, ensuring that the venture's activities do not harm the environment.

7.4.2 Waste Management:

The business must adhere to waste management regulations outlined in the Environmental Management Act. Proper disposal and treatment of hazardous waste are crucial to prevent environmental pollution. The venture should establish waste management protocols and engage with licensed waste management services.

7.4.3 Protected Areas and Biodiversity:

The Wildlife Conservation Act (2009) and Forest Act (2002) dictate that the venture must not operate within protected areas or forests without proper authorization. Any activity that could impact biodiversity or exploit resources in these areas requires compliance with these acts.

7.5 Labor Regulations:

7.5.1 Employment and Labor Relations Act (ELRA):

The venture needs to establish employment contracts that align with the ELRA guidelines. This act defines the rights and obligations of both employers and employees, including termination procedures and employment relationships.

7.5.2 Occupational Health and Safety:

The Occupational Safety and Health Act (2003) mandates that the venture provide a safe working environment for its employees. This includes adhering to safety and health standards, conducting risk assessments, and implementing necessary safety measures.

7.5.3 Minimum Employment Age:

The venture must ensure compliance with the ELRA by not employing individuals below the age of 14. Any employment of minors must adhere to specific restrictions and conditions set forth in the act.

7.6 Health and Safety Compliance:

7.6.1 Occupational Safety and Health Act (2003):

The venture must establish safety committees and adhere to reporting requirements for workplace accidents. Compliance with safety standards and guidelines is essential to prevent accidents and injuries.

7.6.2 Personal Protective Equipment (PPE):

The venture must provide employees working in hazardous conditions with appropriate PPE and ensure their proper usage. This includes educating employees on the correct use and maintenance of PPE.

7.6.3 First Aid and Medical Facilities:

The business must establish first aid facilities and ensure access to medical treatment for employees in case of workplace injuries. Prompt medical care is crucial for maintaining employee well-being.

8. FINANCIALS

8.1 Income Statement (Tshs)

Over the forecasted span from 2024 through 2028, the company stands poised to unfold a consistent and robust financial trajectory. Revenue is poised to grow from TZS 6.2 billion to TZS 52.3 billion in 5 years while projecting a year-on-year average growth of around 70%. The Gross Profit Margin is set to remain unwavering at approximately 80%, reflecting adept control over production expenses. It's worth noting that the Operating Margin charts a positive course, emblematic of the company's skilled navigation of operational outlays. This trajectory is echoed in the ascending arc of the Net Profit Margin, progressively ascending over this period, cementing the company's prowess in converting its revenue stream into substantial profits. Without question, the company's fiscal performance is primed for a notable uplift, characterized by substantial gains in revenue and net income, further reinforcing its standing on an unwavering course of enduring prosperity.

Table 6: Statement of income

| | 2024 (Projected) | 2025 (Projected) | 2026 (Projected) | 2027 (Projected) | 2028 (Projected) |
|--|-------------------------|-------------------------|--------------------------|--------------------------|--------------------------|
| REVENUE | 6,178,922,610.00 | 11,122,060,698.00 | 17,795,297,116.80 | 30,252,005,057.00 | 52,941,008,922.48 |
| Cost of sales | 1,235,784,522.00 | 2,224,412,139.60 | 3,559,059,423.36 | 6,060,401,019.71 | 10,588,201,784.50 |
| Gross Profit | 4,943,138,088.00 | 8,897,648,558.40 | 14,236,237,693.44 | 24,201,604,037.29 | 42,352,807,137.98 |
| General and Administrative Expenses | 368,341,189 | 515,677,664 | 825,084,263 | 1,237,626,395 | 1,732,676,952 |
| Other expenses | 184,170,594 | 257,838,832 | 412,542,132 | 618,813,197 | 866,338,476 |
| Income from operations | 4,390,626,305 | 8,124,132,062 | 12,998,611,299 | 22,345,164,445 | 39,753,791,709 |
| Finance costs | 0 | 0 | 0 | 0 | 0 |
| Income before income taxes | 4,390,626,305 | 8,124,132,062 | 12,998,611,299 | 22,345,164,445 | 39,753,791,709 |
| Provision (recovery) for Income Taxes | | | | | |
| Current income taxes | 988,627,617.60 | 1,779,529,711.68 | 2,847,247,538.69 | 4,840,320,807.46 | 8,470,561,427.60 |
| Deferred income taxes | 0 | 0 | 0 | 0 | 0 |
| Net income for the Year | 3,401,998,687.05 | 6,344,602,350.03 | 10,151,363,760.05 | 17,504,843,637.77 | 31,283,230,281.51 |

8.2 Balance Sheet (Tshs)

The company's financial landscape unveils a foundation of robust liquidity fortified by substantial cash reserves. As trade and receivables trend upward, an indication of burgeoning sales takes shape, necessitating vigilant collection endeavors. Prudent efforts towards diligent collection will be essential.

Concurrently, careful vigilance over inventory expansion is imperative to avert any risk of overstocking. Notably, strategic investments in property and equipment stand as markers of ambitious growth aspirations, aligning with the company's upward trajectory. The consistent potential presence of steady goodwill as per market dynamics signifies an enduring reputation of stability. The progressive increase in income tax payable mirrors heightened profitability, and the positive trajectory of retained earnings underscores a foundation of solid financial stability.

Table 7: Statement of income

| ASSETS | 2024 (Projected) | 2025 (Projected) | 2026 (Projected) | 2027 (Projected) | 2028 (Projected) |
|--------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Current Assets | | | | | |
| Cash & Cash equivalents | 1,484,645,723 | 760,196,275 | 1,356,741 | 1,628,089 | 2,116,516 |
| Trade and Other receivables | 1,123,589 | 1,685,383 | 2,359,536 | 2,831,443 | 3,680,877 |
| Inventories | 2,247,177 | 3,370,766 | 4,719,073 | 5,662,887 | 7,361,752 |
| Prepaid expenses | 1,123,589 | 1,685,383 | 2,359,536 | 2,831,443 | 3,680,877 |
| Total Current Assets | 1,489,140,078 | 766,937,806 | 10,794,885 | 12,953,862 | 16,840,021 |
| Non-current Assets | | | | | |
| Property plant & equipment | 6,162,502,111 | 7,395,002,532 | 10,353,003,546 | 15,011,855,142 | 22,517,782,712 |
| Intangibles | 7,551,452,000 | 8,306,597,200 | 7,813,087,631 | 6,340,994,288 | 4,639,565,551 |
| Goodwill | 238,970,000 | 238,970,000 | 238,970,000 | 238,970,000 | 238,970,000 |
| Total Non-current assets | 13,952,924,111 | 15,940,569,732 | 18,405,061,177 | 21,591,819,430 | 27,396,318,264 |
| TOTAL ASSETS | 15,442,064,188 | 16,707,507,539 | 18,415,856,062 | 21,604,773,293 | 27,413,158,284 |
| LIABILITIES | 0 | 0 | 0 | 0 | 0 |
| Current liabilities | 0 | 0 | 0 | 0 | 0 |
| Income tax payable | 988,627,618 | 1,779,529,712 | 2,847,247,539 | 4,840,320,807 | 8,470,561,427 |
| Total current liabilities | 988,627,618 | 1,779,529,712 | 2,847,247,539 | 4,840,320,807 | 8,470,561,427 |
| Non-current liabilities | | | | | |
| Long term debts | 0 | 0 | 0 | 0 | 0 |
| Total Non-current liabilities | 0 | 0 | 0 | 0 | 0 |
| TOTAL LIABILITIES | 988,627,618 | 1,779,529,712 | 2,847,247,539 | 4,840,320,807 | 8,470,561,427 |
| EQUITY | 0 | 0 | 0 | 0 | 0 |
| Share capital | 13,860,260,000 | 13,860,260,000 | 13,860,260,000 | 13,860,260,000 | 13,860,260,000 |
| Retained earnings | 593,176,571 | 1,067,717,827 | 1,708,348,523.01 | 2,904,192,484.43 | 5082336857 |
| Total liabilities and Equity | 15,442,064,188 | 16,707,507,539 | 18,415,856,062 | 21,604,773,291 | 27,413,158,284 |

8.3 Cash Flow Statement (Tshs)

Over the five years, the company has the potential to consistently experience growth in net income, contributing to a substantial increase in cash and cash equivalents. Operating activities have the potential to generate a positive cash flow, indicating effective management of day-to-day operations. The company will also invest in property, plant, and equipment, while asset sales will provide additional sources of funds. This financial analysis showcases the company's ability to generate and manage cash flows effectively while pursuing strategic investments and growth opportunities.

Table 8: Cash Flow Statement (Tshs)

| OPERATING ACTIVITIES | 2024 (Projected) | 2025 (Projected) | 2026 (Projected) | 2027 (Projected) | 2028 (Projected) |
|---|-------------------------|-------------------------|--------------------------|--------------------------|--------------------------|
| Net income for the year | 3,401,998,687.05 | 6,344,602,350.03 | 10,151,363,760.05 | 17,504,843,637.77 | 31,283,230,281.51 |
| Adjustment for: | 0 | 0 | 0 | 0 | 0 |
| Depreciation of property, plant | 307,293,912.70 | 307,293,912.70 | 307,293,912.70 | 307,293,912.70 | 307,293,912.70 |
| Finance costs | 0 | 0 | 0 | 0 | 0 |
| Loss/Gain on sale of assets | 0 | 0 | 0 | 0 | 0 |
| | 307,293,912.70 | 307,293,912.70 | 307,293,912.70 | 307,293,912.70 | 307,293,912.70 |
| Cash payments | 0 | 0 | 0 | 0 | 0 |
| Payments to suppliers | 247,156,904.4 | 444,882,427.9 | 711,811,884.7 | 1,210,080,203.9 | 2,117,640,356.9 |
| Payments to employees | 47,794,000.00 | 52,573,400.00 | 57,830,740.00 | 63,613,814.00 | 69,575,195.40 |
| Other expenditures related to operations | 61,789,226.10 | 111,220,606.98 | 177,952,971.17 | 302,520,050.99 | 529,410,089.22 |
| Income tax | 988,627,617.80 | 1,779,529,711.68 | 2,847,247,538.89 | 4,840,320,807.46 | 8,470,561,427.60 |
| Total cash payments | 1,345,367,748.10 | 2,388,206,146.58 | 3,794,843,134.53 | 6,416,534,876.39 | 11,107,587,069.12 |
| Total inflows/outflows from operating activities | 1,749,337,026.25 | 3,649,102,290.75 | 6,049,226,712.82 | 10,781,014,848.69 | 19,788,349,299.69 |
| INVESTING ACTIVITIES | 0 | 0 | 0 | 0 | 0 |
| Purchase of property, plant and equipment | 697,646,205.53 | 797,028,486.62 | 920,253,058.85 | 1,079,590,971.46 | 1,369,815,913.70 |
| Sale of property, plant and equipment | 1,395,292,410.85 | 1,594,056,972.82 | 1,840,506,117.69 | 2,159,181,942.91 | 2,739,631,826.37 |
| Total cash inflows/outflows from investing activities | 697,646,205.32 | 797,028,486.20 | 920,253,058.85 | 1,079,590,971.46 | 1,369,815,912.66 |
| FINANCING ACTIVITIES | 0 | 0 | 0 | 0 | 0 |
| Repayments of finance leases | 0 | 0 | 0 | 0 | 0 |
| Repayments of loans | 0 | 0 | 0 | 0 | 0 |
| Total cash inflow/outflow from financing activities | 0 | 0 | 0 | 0 | 0 |
| Net increase in cash/cash equivalents | 2,446,983,231.57 | 4,446,130,776.95 | 6,969,479,771.67 | 11,860,605,620.14 | 21,168,165,212.35 |
| Cash and cash equivalents at the beginning of the year | 0 | 2,446,983,231.57 | 6,893,114,008.52 | 13,862,593,780.19 | 25,723,199,600.33 |
| Cash and cash equivalents at the end of the year | 2,446,983,231.57 | 6,893,114,008.52 | 13,862,593,780.19 | 25,723,199,600.33 | 46,881,364,812.68 |

8.4 Financial Analysis

Table 9: Financial Analysis Results

| | 2024 (Projected) | 2025 (Projected) | 2026 (Projected) | 2027 (Projected) | 2028 (Projected) |
|---|-------------------------|-------------------------|--------------------------|--------------------------|--------------------------|
| OPERATING ACTIVITIES | | | | | |
| Net income for the year | 3,401,998,687.05 | 6,344,602,350.03 | 10,151,363,760.05 | 17,504,843,637.77 | 31,283,230,281.51 |
| Adjustment for: | 0 | 0 | 0 | 0 | 0 |
| Depreciation of property, plant | 307,293,912.70 | 307,293,912.70 | 307,293,912.70 | 307,293,912.70 | 307,293,912.70 |
| Finance costs | 0 | 0 | 0 | 0 | 0 |
| Loss/Gain on sale of assets | 0 | 0 | 0 | 0 | 0 |
| | 307,293,912.70 | 307,293,912.70 | 307,293,912.70 | 307,293,912.70 | 307,293,912.70 |
| Cash payments | 0 | 0 | 0 | 0 | 0 |
| Payments to suppliers | 247,156,904.4 | 444,882,427.9 | 711,811,884.7 | 1,210,080,203.9 | 2,117,640,356.9 |
| Payments to employees | 47,794,000.00 | 52,573,400.00 | 57,830,740.00 | 63,613,814.00 | 69,975,195.40 |
| Other expenditures related to operations | 61,789,226.10 | 111,220,606.98 | 177,952,971.17 | 302,520,050.99 | 529,410,089.22 |
| Income tax | 988,627,617.60 | 1,779,529,711.68 | 2,847,247,538.69 | 4,840,320,807.46 | 8,470,561,427.60 |
| Total cash payments | 1,345,367,748.10 | 2,388,206,146.58 | 3,794,843,134.53 | 6,416,534,876.39 | 11,187,587,069.12 |
| Total inflows/outflows from operating activities | 1,749,337,026.25 | 3,649,102,290.75 | 6,049,226,712.82 | 10,781,014,848.69 | 19,788,349,299.69 |
| INVESTING ACTIVITIES | 0 | 0 | 0 | 0 | 0 |
| Purchase of property, plant and equipment | 697,646,205.53 | 797,028,486.62 | 920,253,058.85 | 1,079,590,971.46 | 1,369,815,913.70 |
| Sale of property, plant and equipment | 1,395,292,410.85 | 1,694,056,972.82 | 1,840,506,117.69 | 2,159,181,942.91 | 2,739,631,826.37 |
| Total cash inflows/outflows from investing activities | 697,646,205.32 | 797,028,486.20 | 920,253,058.85 | 1,079,590,971.46 | 1,369,815,912.66 |
| FINANCING ACTIVITIES | 0 | 0 | 0 | 0 | 0 |
| Repayments of finance leases | 0 | 0 | 0 | 0 | 0 |
| Repayments of loans | 0 | 0 | 0 | 0 | 0 |
| Total cash inflow/outflow from financing activities | 0 | 0 | 0 | 0 | 0 |
| Net increase in cash/cash equivalents | 2,446,983,231.57 | 4,446,130,776.95 | 6,969,479,771.07 | 11,860,605,820.14 | 21,158,165,212.35 |
| Cash and cash equivalents at the beginning of the year | 0 | 2,446,983,231.57 | 6,893,114,008.52 | 13,862,593,780.19 | 25,723,199,600.33 |
| Cash and cash equivalents at the end of the year | 2,446,983,231.57 | 6,893,114,008.52 | 13,862,593,780.19 | 25,723,199,600.33 | 46,881,364,812.68 |

9. RISKS AND MITIGATION

In the context of conducting a feasibility study for establishing an assembly factory for LED lighting products in Tanzania, it is imperative to conduct a comprehensive risk assessment that takes into account the unique challenges and opportunities present in a third-world country environment. These risks can be classified into distinct categories: market, operational, financial, and regulatory.

9.1 Market Risks:

Diversification of Product Portfolio: In Tanzania, where economic stability can fluctuate, diversifying the product portfolio is crucial. By offering a range of LED lighting products catering to various needs and price points, the factory can navigate market shifts and mitigate the impact of changes in specific sectors.

Given the country's economic volatility, regular monitoring of economic indicators, consumer preferences, and purchasing power is essential. This will enable the factory to identify potential triggers early and adjust production strategies accordingly. In Tanzania's dynamic market landscape, the ability to quickly adapt production volumes and offerings is paramount. By implementing agile production planning, the factory can swiftly respond to changes in demand, reducing the risk of overproduction or shortages.

9.2 Operational Risks:

Tanzania faces frequent power outages and transportation challenges. Investing in reliable power backup systems, such as solar panels and generators, can ensure continuous production. Additionally, collaborating with local authorities to improve transportation infrastructure can mitigate logistical disruptions. Tanzania's labor market often lacks specialized skills. Collaborating with local vocational institutions to offer training programs can help build a skilled workforce that understands the intricacies of LED lighting assembly, reducing dependence on expatriate labor. With Tanzania's geographical and economic challenges, relying on a single supplier can be risky. Developing partnerships with multiple suppliers, including local ones, can mitigate supply chain disruptions caused by international factors.

9.3 Financial Risks:

Currency Hedging: Tanzania's currency, the Tanzanian Shilling (TZS), can experience volatility. Engaging in currency hedging mechanisms, such as forward contracts, can protect against sudden fluctuations in exchange rates and provide cost predictability for imported materials.

Access to credit can be limited in Tanzania. Establishing relationships with local banks and financial institutions can provide more reliable access to financing, enabling the factory to navigate financial challenges and seize growth opportunities. Given the uncertain economic environment, maintaining a financial reserve is crucial. This reserve can act as a buffer against unexpected economic downturns and provide flexibility to weather financial challenges.

9.4 Regulatory Risks:

The regulatory landscape in Tanzania can be intricate. Establishing a dedicated compliance team or partnering with local legal experts can help the factory stay abreast of changing regulations, reducing the risk of non-compliance and associated penalties. Building relationships with local government bodies can provide insights into potential regulatory changes and help influence policies that align with the factory's operations. Given the evolving legal landscape, periodically reviewing legal frameworks and seeking legal counsel can ensure the factory's operations remain compliant and minimize the risk of legal disputes.

10. CONCLUSIONS AND RECOMMENDATIONS

The feasibility study highlights the strong potential and competitive advantages associated with establishing an LED assembly factory in Tanzania through the strategic partnership between Skyzon Energy Incorporated Co., Ltd and the National Service Corporation Sole of the United Republic of Tanzania (SUMAJKT). The study showcases the significant market gap in LED lighting products within Tanzania and the East African Community (EAC) region. The absence of local assembly plants presents a prime opportunity for Skyzon International Group Company Ltd. to tap into the market demand, generate foreign income through exports, and become a pioneer in LED luminaires assembly.

Moreover, the study underscores the value of Skyzon's innovative product range, including energy-efficient solutions, intelligent lighting systems, and smart city technologies. These products hold the potential to revolutionize urban illumination while addressing critical energy and operational challenges faced by conventional systems. With projected strong revenues and profits over the coming years, the financial analysis suggests promising business sustainability, reaching beyond the Break-Even point within just two years of operation.

From an environmental perspective, the proposed assembly plant demonstrates its commitment to sustainability and zero emissions. By creating over 50 job opportunities for Tanzanians at an initial stage and fostering economic growth, the project aligns with socio-economic development goals. In the second phase, more than 200 jobs will be created. Furthermore, more than 500 roles will be generated as a ripple effect in the distribution channel. We recommend that the proposed partnership be embraced, as it not only promises economic growth but also contributes to technological advancement, environmental conservation, and policy objectives. The establishment of this LED assembly factory in Tanzania would not only serve the local market but also position the country as a hub for cutting-edge LED lighting solutions in the East African region.

Given the importance of creating local employment opportunities and enhancing skillsets in Tanzania, the assembly factory should establish partnerships with local technical schools and vocational training centers. Collaborate with these institutions to design specialized training programs that cater to the needs of the LED assembly industry.

Recognizing the significance of supporting local businesses and ensuring a reliable supply chain, the assembly factory should prioritize collaborations with diverse suppliers for raw materials, components, and other production needs. Establishing these partnerships will not only contribute to the growth of various businesses but also reduce dependency on a single source of supply and minimize potential disruptions.

Given the Tanzanian market's dynamic nature, establishing a dedicated market research and monitoring team is essential. This team should actively track consumer preferences, economic trends, and competitive developments specific to the local context. By staying informed about market dynamics, the assembly factory can tailor its products and strategies to effectively meet the evolving demands of Tanzanian consumers. In line with Tanzania's commitment to environmental conservation and sustainable development, the assembly factory should integrate eco-friendly practices into its operations. Collaborate with local environmental authorities to ensure compliance with regulations and actively implement waste recycling, energy efficiency measures, and other sustainable initiatives. By doing so, the factory can contribute positively to the country's environmental goals. Recognizing the importance of maintaining a positive relationship with Tanzanian government bodies and regulatory authorities, establish a dedicated team to engage with relevant stakeholders. This team should actively participate in policy discussions, provide insights on industry best practices, and work towards creating a conducive regulatory environment that supports the growth of the LED assembly sector in Tanzania.

Reference

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4. Bürmen, M., Pernus, F., & Likar, B. (2008). LED light sources: a survey of quality-affecting factors and methods for their assessment. *Measurement science and technology*, 19(12), 122002.
5. Davidovic, M., & Kostic, M. (2022). Comparison of energy efficiency and costs related to conventional and LED road lighting installations. *Energy*, 254, 124299.
6. Jägerbrand, A. K. (2016). LED (Light-emitting diode) road lighting in practice: An evaluation of compliance with regulations and improvements for further energy savings. *Energies*, 9(5), 357.
7. Zisis, G., & Bertoldi, P. (2018). Status of LED-lighting world market in 2017. Ispra: European Commission.

Appendix

Appendix 1: The stakeholders consulted in validation of the feasibility study information

Shops, companies, engineering firms, and government organizations visited or contacted:

1. Hussein A. Tayabali, TRONIX shop
2. Omar Ligania, Ligania Store
3. Salum O saleh, SOS Electronics
4. Mr. Frank, Frank Electronics
5. AFRICAB
6. Yusuph A. Msangi, Zam Electronics
7. Hussein A. Tayabali, Tronix
8. Mgimba Electrical Goods
9. Febronia M. Leyana, dealers in Solar and Energy equipment
10. Tiwany Electronics
11. Sigifrid J. Mosha, Selengia Store
12. Tanzania Mechanical and Electrical Agency, TEMESA
13. Tanzania Roads Agency, TANROADs DSM regional office
14. Municipal councils of Kinondoni, Mala and Temeke
15. Tanzania Investment Centre (TIC)
16. Tanzania Revenue Authority (TRA)
17. Business Registration and Licensing Authority (BRELA)
18. National Bureau of Statistics (NBS)
19. Confederation of Tanzanian Industries (CTI)

Appendix 2: Certificates held

ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ CERTIFICADO ◆ CERTIFICAT



CERTIFICATE

No. U6 092974 0012 Rev. 01

Holder of Certificate: Ningbo Skyzon Energy Co.,Ltd.
No.8 QingCang Road,Qiangjiao Town,
315612 Ninghai, Ningbo
PEOPLE'S REPUBLIC OF CHINA

Certification Mark:



Product: Luminaires for road and street lighting
LED Street Light

The product was voluntarily tested according to the listed standards. The product can be marked with the certification mark shown above. It is not permitted to alter the certification mark in any way. In addition, the certificate holder must not transfer the certificate to third parties. All applicable requirements of the testing and certification regulations of TÜV SÜD Group have to be complied. For details see: www.tuvsud.com/ps-cert

Test report no.: 874022221201-01

Date, 2023-04-27

(Yin Ji)



ATTESTATION

ATTESTATO

ATESTACIÓN

BESCHEINIGUNG

ATTESTATION



Product Service

Attestation of Conformity

No. N8A 092974 0011 Rev. 01

Holder of Attestation: Ningbo Skyzon Energy Co.,Ltd.

No.8 QingCang Road,Qiangjiao Town,
315612 Ninghai, Ningbo
PEOPLE'S REPUBLIC OF CHINA

Product:

**Luminaires for road and street lighting
LED Street Light**

This Attestation of Conformity is issued on a voluntary basis according to the Low Voltage Directive 2014/35/EU relating to electrical equipment designed for use within certain voltage limits. It confirms that the listed equipment complies with the principal protection requirements of the directive and is based on the technical specifications applicable at the time of issuance. It refers only to the particular sample submitted for conformity assessment. For details see: www.tuvsud.com/ps-cert

Test report no.: 874022221203-01

Date, 2023-04-27




(Yin Ji)

Page 1 of 6

This Attestation does not replace the regulatory EU Declaration of Conformity (DoC) and does not allow for CE marking. After preparation of the necessary documentation and establishing compliance to requirements of all applicable directives, the manufacturer may sign a DoC and apply the CE marking. The DoC is issued under the sole responsibility of the manufacturer.



Appendix 2: Certificates held

| | | |
|---|--|---|
|  | | Ref. Certif. No. SG PSB-LE-04245M1 |
| IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME | | |
| CB TEST CERTIFICATE | | |
| Product | Luminaires for road and street lighting LED Street Light | |
| Name and address of the applicant | Ningbo Skyzon Energy Co.,Ltd. No.8 QingCang Road,Qiangjiao Town, 315612 Ninghai, Ningbo PEOPLE'S REPUBLIC OF CHINA | |
| Name and address of the manufacturer | Ningbo Skyzon Energy Co.,Ltd. No.8 QingCang Road,Qiangjiao Town., 315612 Ninghai, Ningbo, PEOPLE'S REPUBLIC OF CHINA | |
| Name and address of the factory | Ningbo Skyzon Energy Co.,Ltd. No.8 QingCang Road,Qiangjiao Town., 315612 Ninghai, Ningbo, PEOPLE'S REPUBLIC OF CHINA | |
| Ratings and principal characteristics | Rated voltage: 220-240V~ Rated frequency: 50/60Hz Rated power: See 'Modeltype Ref.' ta: 50°C Protection Class: I Degree of protection: IP66 IK: 10 | |
| Modeltype Ref. | Details see next page | |
| Additional information (if necessary) | Certificate SG PSB-LE-04245 issued 2022-07-05 is replaced by this version due to technical changes | |
| A sample of the product was tested and found to be in conformity with | IEC 60598-1:2020 IEC 60598-2-3:2002 IEC 60598-2-3:2002/AMD1:2011 | |
| as shown in the Test Report Ref. No. which forms part of this certificate | 083-2241101-100 | |
| Page 1 of 5 This CB Test Certificate is issued by the National Certification Body | | |
| CBS 092974 0017 Rev. 00 Date, 2023-04-28 | | |
|  (Yin Ji) | |  |
| TÜV SÜD PSB Pte Ltd 15 International Business Park TÜV SÜD @ IBP Singapore 609937 | | PSB Singapore |

Appendix 2: Certificates held

| | | | | | | | | | | | | | | | |
|---|---|----------------|-----------|------------------|---------|--------------|----------------|-------------------|---------|-----------------------|------|-----|------|-----|----|
| <p>ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ CERTIFICADO ◆ CERTIFICAT</p> |  | | | | | | | | | | | | | | |
| | <h1>CERTIFICATE</h1> | | | | | | | | | | | | | | |
| | No. U6 18 05 91783 030 | | | | | | | | | | | | | | |
| | Holder of Certificate: Everlite LED Lighting Co., Limited Room 2105, Trend Centre, 29-31, Cheung Lee Street Chaiwan HONG KONG | | | | | | | | | | | | | | |
| | Production Facility(ies): 92974 | | | | | | | | | | | | | | |
| | Certification Mark:  | | | | | | | | | | | | | | |
| | Product: Luminaires for road and street lighting LED Street Light | | | | | | | | | | | | | | |
| | Model(s): EL-SL11(Mini)-20, EL-SL11(Mini)-30, EL-SL11(Mini)-40, EL-SL11(S)-50 All models refer to attachment | | | | | | | | | | | | | | |
| | Parameters: <table border="0"><tr><td>Rated voltage:</td><td>220-240V-</td></tr><tr><td>Rated frequency:</td><td>50/60HZ</td></tr><tr><td>Rated power:</td><td>See attachment</td></tr><tr><td>Protection Class:</td><td>Class I</td></tr><tr><td>Degree of protection:</td><td>IP66</td></tr><tr><td>ta:</td><td>50°C</td></tr><tr><td>IK:</td><td>10</td></tr></table> | Rated voltage: | 220-240V- | Rated frequency: | 50/60HZ | Rated power: | See attachment | Protection Class: | Class I | Degree of protection: | IP66 | ta: | 50°C | IK: | 10 |
| | Rated voltage: | 220-240V- | | | | | | | | | | | | | |
| Rated frequency: | 50/60HZ | | | | | | | | | | | | | | |
| Rated power: | See attachment | | | | | | | | | | | | | | |
| Protection Class: | Class I | | | | | | | | | | | | | | |
| Degree of protection: | IP66 | | | | | | | | | | | | | | |
| ta: | 50°C | | | | | | | | | | | | | | |
| IK: | 10 | | | | | | | | | | | | | | |
| Tested according to: EN 60598-1:2015 EN 60598-2-3:2003/A1:2011 | | | | | | | | | | | | | | | |
| <p>The product was voluntarily tested according to the listed standards. The product can be marked with the certification mark shown above. The certification mark must not be altered in any way. See also notes overleaf.</p> | | | | | | | | | | | | | | | |
| Test report no.: 704021701440-00 | | | | | | | | | | | | | | | |
| Date: 2018-05-14  (Na Zhang) | | | | | | | | | | | | | | | |
| Page 1 of 3 |  | | | | | | | | | | | | | | |
| <p>TUV SUD Product Service GmbH • Zertifizierstelle • Ridlerstraße 65 • 80339 München • Germany</p> | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | |

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE)CB SCHEME

CB TEST CERTIFICATE

| | |
|---|--|
| Product | Luminaires for road and street lighting LED Street Light |
| Name and address of the applicant | Everlite LED Lighting Co., Limited Room 2105, Trend Centre, 29-31, Cheung Lee Street Chaiwan, HONG KONG |
| Name and address of the manufacturer | Everlite LED Lighting Co., Limited Room 2105, Trend Centre, 29-31, Cheung Lee Street, Chaiwan, HONG KONG |
| Name and address of the factory | Ningbo Shishang Photoelectricity Technology Co., Ltd No.19,KeSan Road,, 315600 Ninghai, Ningbo,, PEOPLE'S REPUBLIC OF CHINA |
| Ratings and principal characteristics | Rated voltage: 220-240V- Rated frequency: 50/60HZ Rated power: see appendix Protection Class: Class I Degree of protection: IP66 ta: 50°C IK: 10 |
| Model/type Ref. | EL-SL11(Mini)-20, EL-SL11(Mini)-30, EL-SL11(Mini)-40, EL-SL11(S)-50 All models refer to appendix |
| Additional information (if necessary) | Certificate SG PSB-LE-00400M2 issued on 2018-04-09 is replaced by this version due to technical changes. Complies with IEC 62493:2015. |
| A sample of the product was tested and found to be in conformity with | IEC 60598-1:2014 IEC 60598-2-3:2002 IEC 60598-2-3:2002/AMD1:2011 IEC 62471:2006 |
| as shown in the Test Report Ref. No. which forms part of this certificate | TUV SOD PSB Pte Ltd 083-1810808-000 |

This CB Test Certificate is issued by the National Certification Body

Date, 2018-05-15
CBS 18 05 91783 029


(Binwen Zhang)



TUV SUD PSB Pte Ltd • 1 Science Park Drive • Singapore 118221

PSB Singapore



CERTIFICATE

No. Z1A 18 05 91783 028

Holder of Certificate: Everlite LED Lighting Co., Limited
 Room 2105, Trend Centre, 29-31, Cheung Lee Street
 Chaiwan
 HONG KONG

Factory(ies): 92974

Certification Mark:



Product: Luminaires for road and street lighting
 LED Street Light

Model(s): EL-SL11 (Mini)-20, EL-SL11 (Mini)-30,
 EL-SL11 (Mini)-40, EL-SL11 (S)-50
 All models refer to attachment

Parameters:

| | |
|-----------------------|----------------|
| Rated voltage: | 220-240V- |
| Rated frequency: | 50/60HZ |
| Rated power: | See attachment |
| Protection Class: | Class I |
| Degree of protection: | IP66 |
| ta: | 50°C |
| IK: | 10 |

Tested according to: EN 60598-1:2015
 EN 60598-2-3:2003/A1:2011
 EN 62471:2008
 EN 62493:2015
 AfPS GS 2014:01 PAK

The product meets the safety and health requirements of the German Product Safety Act section 20 to 22 ProdSG. The certification marks shown above can be affixed on the product. It is not permitted to alter the certification marks in any way. In addition the certificate holder must not transfer the certificate to third parties. This certificate is valid until the listed date, unless it is cancelled earlier. See also notes overleaf.

Test report no.: 7040215111904-03

Valid until: 2023-05-13

Date, 2018-05-14

(Yin Ji)

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