



SHENZHEN BETOP

LIGHTING SOLUTION PROVIDER

PRESENTATION OF 2024



ABOUT BETOP

Shenzhen Betop is a national high-tech enterprise with independent R&D, production and sales of industrial&commercial lighting products and intelligent control systems.

Founded in 2003, Betop has always focused on LED lighting, adhered to market demand, took technological innovation as the power of development and cultivated a R&D team with rich experience and strong innovation ability; Now we won more than 180 patents and software copyright; We have established a complete system in LED lighting optics, driver and heat dissipation structure design.

We are one of the few players that has mastered core technologies. Betop also has comprehensive capacity including hardware manufacturing, post-processing, driver design and production and LED finished product assembly

In the future, Betop will be deeply involved in high-end LED lighting customization, smart lighting products, agricultural lighting.

Strive to build Betop into a global leader in industrial lighting.



Sedex



VDA6.3

Innovative keeps us ahead



2003

Betop founded

2007

R&D set-up

2010

Set export as core business

2014

Entered into industrial lighting

2015

Won investment from GSR, NLVC, IDG venture capital via Beijing Shineon

2018

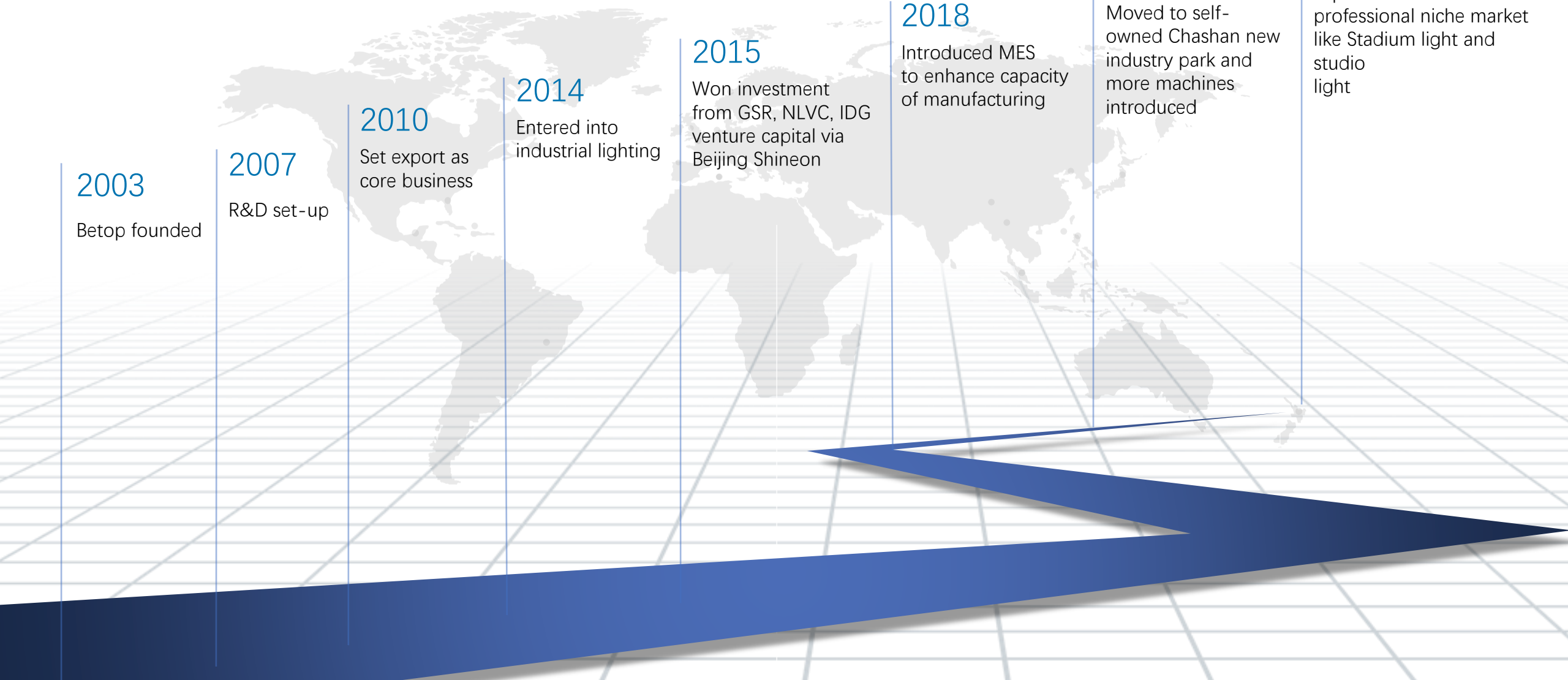
Introduced MES to enhance capacity of manufacturing

2023

Moved to self-owned Chashan new industry park and more machines introduced

2024

Explore into more professional niche market like Stadium light and studio light



CAPACITY

500+
employees

180+
patents

60000 m²
areas

50+
machines

40+
engineers

22+
years



FACTORY TOUR



COLD-FORGE WORKSHOP

Pure aluminum cold-forg process with high thermal conductivity and light weight
5 machines, produce 1000W heatsink
With daily production capacity of 2000pcs
Mainly used for high-power light such as plant growth lights and stadium lights



DIE-CAST WORKSHOP

4 die-cast production lines from 1250T, 850T, 500T and 350T
Produce max 500W heatsink
With daily production capacity of 6000pcs
Mainly used for LED highbay, floodlight, streetlight, canopy and downlight



CNC WORKSHOP

Betop also has all the subsequent hardware process technology, includes polishing, CNC, drilling and tapping, bending etc.
Moreover equipment like cutting machine, stamping machine, bending machine, punching machine for the production of brackets, rings, end cap etc.



WAREHOUSE

Electronic warehouse covers 1100m² mainly used to store precision raw materials such as electronic parts, LED chips and PCB. Adopted advanced MES system to realize real-time first-in&first-out by scanning QR code. 100% ensure that the quality of all materials during storage is controllable and traceable.

FACTORY TOUR



LABORATORY

Betop laboratory covers 300m² and is fully equipped with all devices. All new products need to undergo strict reliability test before mass production. All samples need to go through internal test and evaluation before sending to customers. Development procedures are strictly followed and interlocked.



DRIVER WORKSHOP

Some drivers are designed and produced all by ourselves. We have solid experience of driver from 5-200W. All drivers meet EU requirement and some meet UL and FCC. Self-developed driver can effectively improve product cost effectiveness, solution flexibility and better service customers



SMT WORKSHOP

Betop SMT workshop has 7 Yamaha SMT machines imported from Japan 2 reflow soldering machines and 1 wave soldering machine. Capable of fully assembling and producing LED PCB and LED drivers from 5-200W. With AOI optical inspection, solder paste thickness monitor and other professional testing equipment



FINAL ASSEMBLE

2 finish product assembly workshops
1 for industry lighting product like highbay, floodlight, sports light etc.
1 for commercial lighting product like spotlight, downlight, tube etc.
With automatic glue machine, potting machine, packaging lines, air-tightness test machine.
100% aging and three mandatory tests before packing

BETOP CULTURE



DUTY

Create value for customers, society,
employees and shareholders



VISION

Use beautiful light to illuminate a
better life



VALUE

Strive, responsibility, integrity, unity
and innovation.



PURSUIT

Integrity is the soul of Betop
Pragmatism is the base of Betop
Innovation is the pursuit of Betop



QUALITY

Listen to the feedback of customers
and continue to improve quality level
and yield rate



EMPLOYEES

People are the cornerstone of
Betop, Fully motivate and respect
every employee, share our value
among all employees

SOCIAL

Responsibility & Sustainability

we continue to practice the concept of sustainable development in all aspects of product development, manufacturing, and after-sales

- Plastic-free packaging
- Replaceable sustainable design
- Recyclable manufacturing



We started with customer satisfaction, technological innovation, people-oriented



Product with high efficiency
low energy consumption
stable, reliable quality



Betop wants build a low-carbon life
with sustainability more energy-
saving and environmentally friendly

A large blue diamond shape is positioned in the center-left of the slide. Inside the diamond, the text "R&D" is written in a white, bold, sans-serif font. The diamond has a gradient from a darker blue at the top to a lighter blue at the bottom.

R&D

- R&D system
- Reliability test
- Lab equipment

R&D SYSTEM



Market survey

Paying close attention to market trends and partners needs and conducting deep research and systematic data analysis which will help us develop new products more precisely.



Concept design

Based on market research and demand, Betop's R&D team will carry out concept design. This stage mainly for the initial concept of new product outlook, functional need and technical realization.



Detailed design

With more than 38 experienced engineers, they carry out detailed design including product structure design, optical design, thermal design. To ensure product feasibility and manufacturability.



Prototype test

After the detailed design is completed, prototype will be manufactured for verification and testing. This stage is to test the feasibility and eligibility of design and make necessary modifications and improvements.



Tooling

After we tested the prototype samples, our engineers will complete necessary modification and submit for final pre-tooling evaluation then get all the approval and start the tooling process.



Reliability test

After we complete the tooling, we will build certain amount of samples to run all the reliability test before mass production and certificate application.

LABORATORY

Reliability matters a lot!



To ensure the reliability and stability of our products.
We implement a strict reliability testing process.



Environment test

We test the suitability of products in different temp, humidity and climate conditions. Ensure stable performance of the product under various environmental conditions



Extreme test

We evaluate product durability and resistance through tests that simulate harsh environment like Hum&tem 85°C



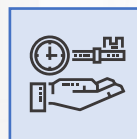
Electromagnetic

We test anti-electromagnetic interference ability of the product to ensure the products can pass EMC/FCC



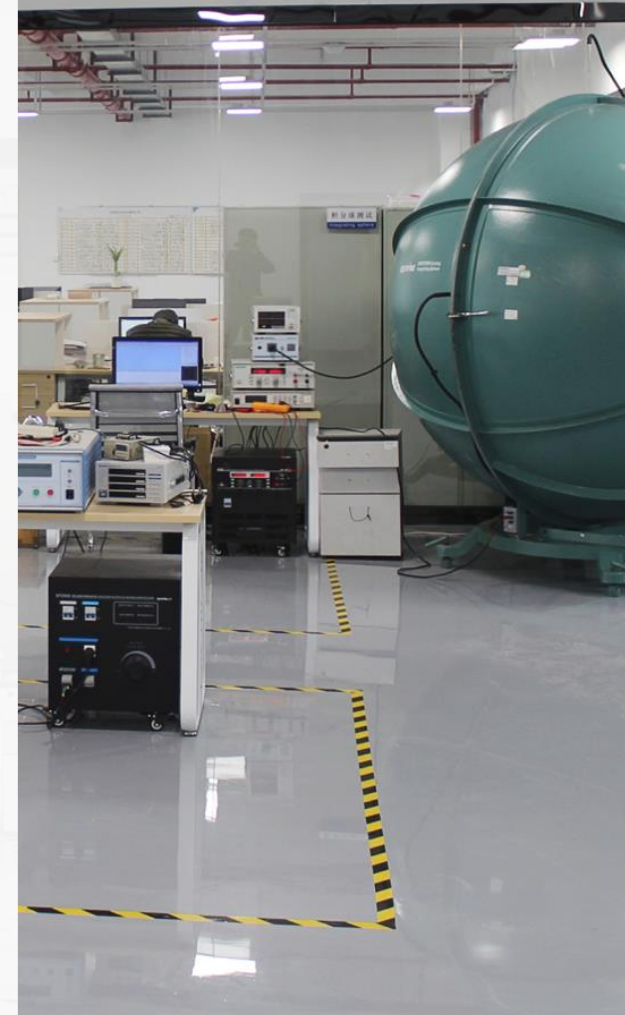
Electrical Test

The electrical performance of the product is fully tested, including the evaluation of current, voltage, PF and THD, inrush current, dimming compatibility other parameters



Material validity

We also perform salty spray test, UV resistance test, fire-resistance test to valid the surface treatment process, plastic part quality in harsh outdoor application.



Part of the equipments

To support our R&D and reliability testing requirements

We have advanced laboratory testing equipments.

Below are some examples of our commonly used laboratory test equipments:

1. Goniophotometer

Located in darkroom, this equipment is used to measure and evaluate the luminous flux output, beam angle, UGR of products.

2. Integrating sphere

This equipment is used to test the lumen output, CRI, CCT and SDCM and R9 of the products which also providing PF and power evaluation.

3. Constant tem&hum chamber

This equipment is used to simulate various environmental with different temperature&humidity.

To evaluate the adaptability and stability of products.

We can conduct long-term environmental adaptability tests on products in environmental test chambers.



Part of the equipments

4. Thermal raise monitor

Key device for every product development. But how to use it is also very important. Betop build a special aging room with no air convection to get the real result in tough working environment.

5. Vibration test platform

Vibration requirement is mainly for products used in transportation station, bridge and factory with heavy machines required by ANSI. our device supports 3G test.

6. UV aging test chamber

More and more outdoor lighting products are installed with lens directly to save the cost. So the PC lens material resistance to UV is now the key for outdoor 5 years warranty.

7. Salty spray chamber

Some times our floodlight or street light are installed near the port or beach which is really tough environment for the component and surface treatment. We use this machine to see if our product can really pass 1000 hours salty spray test and complied with C4 standard



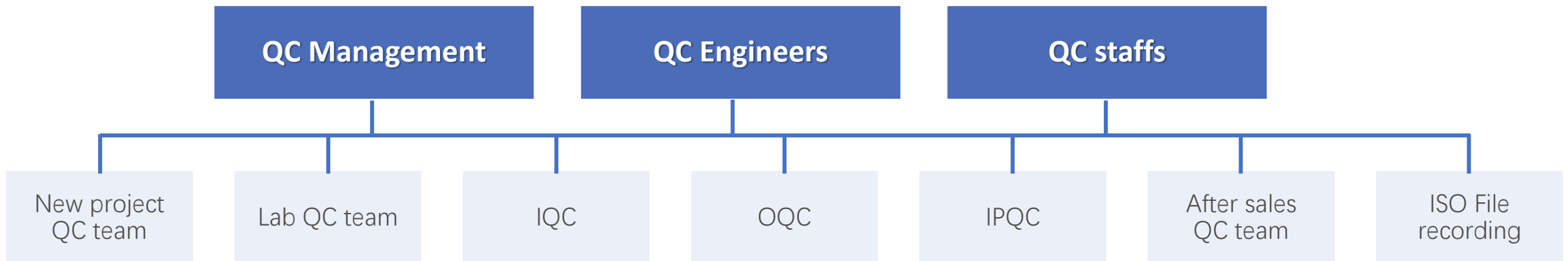
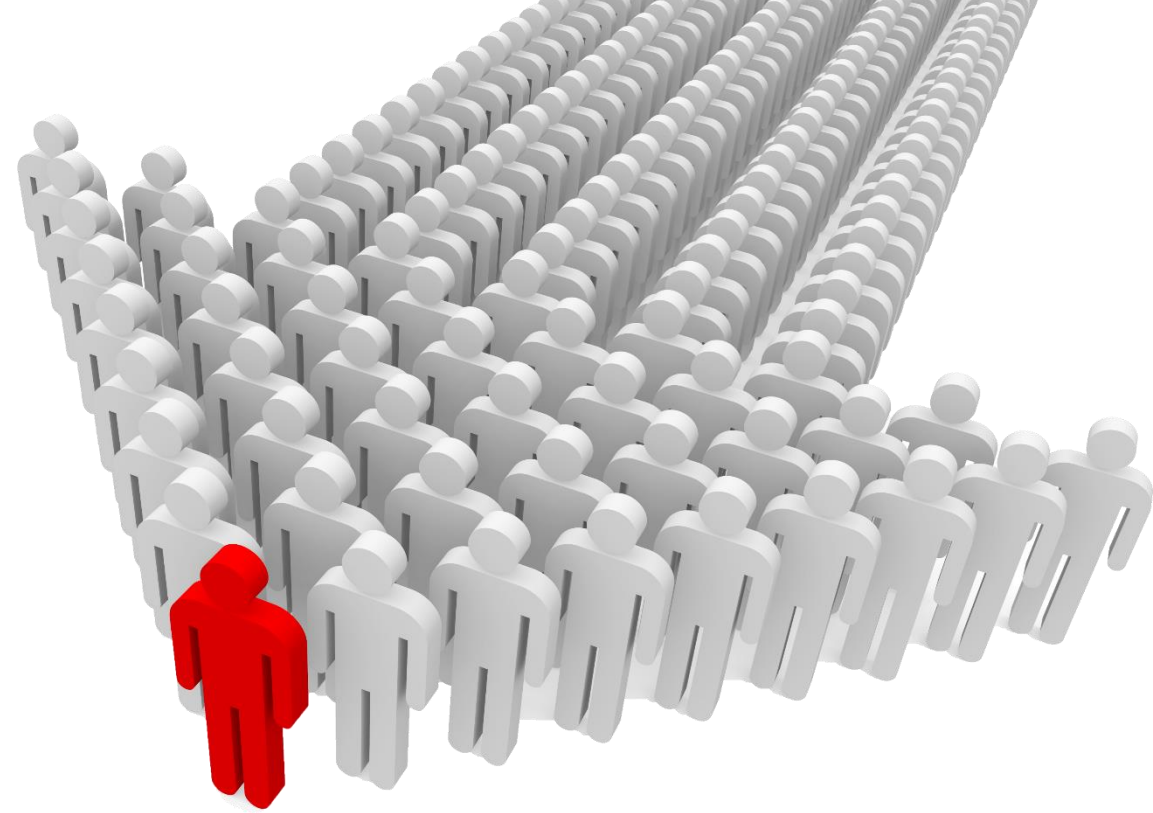
QC

- QC system
- QC in manufacturing
- MES

QC PANORAMA

QC portion
of employee **9%** 36 QC staffs

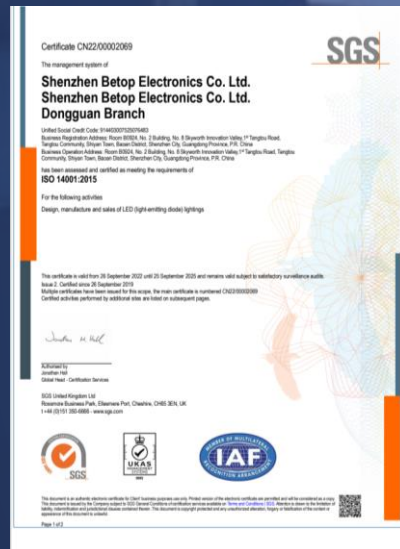
Production
yield rate **99.5%**



SEDEX&ISO9001&14001&VDA6.3 standard



audited by SGS



We follow the ISO9001&14001 management systems and through comprehensive quality management and environmental management, we ensure that our products and services not only meet customer needs, but also pay attention to the impact on the environment. At the same time, we actively promote the integration of industrialization management system which combines information to improve production efficiency and optimize resource allocation to achieve a more efficient and environmentally friendly production method. These advanced management systems are the basis and guarantee for us to provide high-quality LED lighting products.

WHY MES?

MANUFACTURING EXECUTION SYSTEM



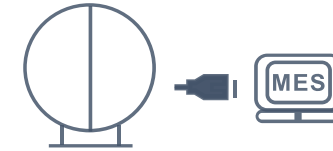
Warehouse

First-in First-out
by QR code scanning



Assembly

Digitalized SOP for
all process positions



QC cloud

All QC results are
recorded automatically



Traceability

Individual QR code on
product and package



The background of the slide is a light blue gradient. On the left side, there is a large, abstract blue shape that resembles a stylized diamond or a cluster of geometric lines. Inside this shape, the text "MARKET & PRODUCT" is written in white, bold, sans-serif capital letters.

MARKET & PRODUCT

- Market share
- Overseas application
- Products

MARKET SHARE

36%

Europe

28%

Japan

21%

USA

10%

Asia

5%

Others

USA, San Diego

Germany, Hamburg

China, Guangzhou

USA, Menards

Israel, Tel Aviv

Netherlands

THANK YOU



Headquarter: Shenzhen
Factory add: Dongguan



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