Company Profile

LOTS (Lighting & Optics tech Specialist) factory was located on Dongguan China, engaged in industrial machine vision LED light manufacture. We focus on the machine vision lights, vision system, lenses and other related components.

LOTS has variety projects experiences and advanced software and hardware technology on high-end machine vision lights developing and production, also has the dealership with many global well-known brand on industrial camera and lenses. (Brand list attached below) Our excellence vision engineers can help you on model selection, therefore, LOTS can really provide One-stop Purchasing Service to our clients.

LOTS found the best solution for detection system inoperative by the dead lamps, solder skips, in-homogeneity emission problem. LOTS is the first enterprise which effectively avoid above problem by adopting auto insertion machine, SMT machine, wave soldering machines and reflow soldering machine to replace the manual soldering. To make our core competence more firmly. Meanwhile, LOTS cooperated with CREE (USA) and NICHIA (JP), the famous LED manufacture, to keep up with the trends of LED development. We adopt the high luminance and low heat LED, to provide more perfect products on industrial machine vision.

Four professional vision lights production lines, modern automatic production machines and detection machines, and great capacity normal model products in stock to reach the short leading time. Our clients never need to worry about the leading time for products.

Vision Laboratory

Abundance products can satisfy various applications. All series light source in our professional lab, can help you choose the model by experiment directly. In the other way, you can send your product sample to us, the experiment working sketch will be provided by our lab, to make your selection more suitable.

R&D Team

LOTS R&D team consist of structure team, circuit team, optics team. Rich experience and powerful technology can estimate and design the performance and needs of customized light source. We can design the vision system that aimed at special function needs from clients, to ensure the detection effect and the customized function can satisfy the clients.

Production Department

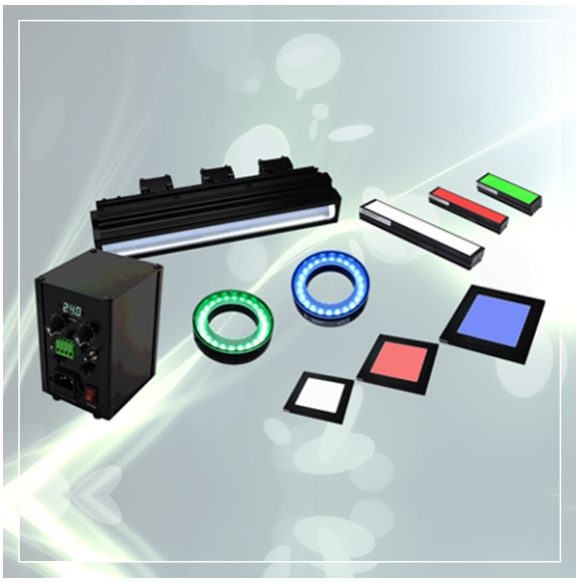
The production manager was served to Japan factory, to bring the 5S production system to LOTS. Standardization process in each details from incoming material checking to packing.

LOTS

Building High-end Machine Vision Labs

01 **All series LOTS vision light source**

LOTS all series standard light source and customized light source to satisfy the clients requirements.



02 **Industrial camera**

Various brand and mount of area scan cameras, 4K, 8K and different line scan camera

03 **Sample project security**

Building two big independent labs for serving the customers

04 **Photo analyzing software**

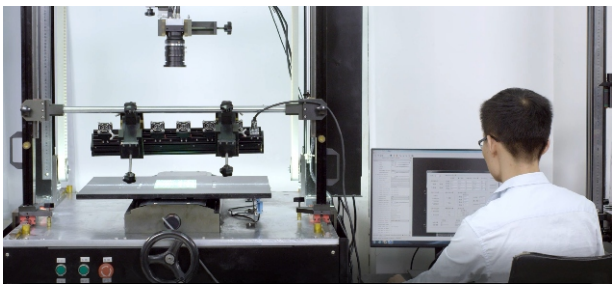
Machine vision software used, such as HALCON, can analyze the photo NG or OK fastly and accurately.

05 **Industrial Lenses**

Whole series CCTV lenses, telecentric lenses, line scan lenses, microscope lenses used.

06 **Multiple test platform**

High accurate line scan platform, high accuratebig area scan platform, multiple degree of freedom motion platform, rotary platform.



07 **Machine vision accessories**

Use filter, polarizer, polarizing film, optical prism to promoting the lighting effect.

08 **Senior lighting engineer**

Several senior lighting engineer can test the highly difficult sample application.

Certification Of Honor

Under the continuous efforts of the LOTS team, now LOTS has a number of patented technologies with independent intellectual property rights.

◆20+ product patent certificates ◆ISO9001:2015 quality management system certificate

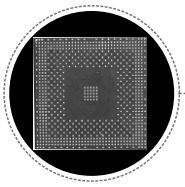
◆All products have passed the CE/RoHS certification ◆Intellectual property management certificate

◆High and new technology enterprise certificate

Model Selection Attention

Machine vision light source model selection attention

To select a suitable lighting system from various scheme for different application is a key process in the whole image processing system. However, there is no common lighting system which can adapt to every application, according to the various shape and multi-color characteristics of LED, we summarized some methods for light source selection.



FOV

1. Confirm the structure and operational requirements of system, and the space structure relationship of camera, light and workpiece. Parameter need to confirm: Field of view (FOV), working distance (WD).

WD between the light and workpiece

2. Space structure: direct emitting, flank emitting, back emitting.
   Direct emitting light -- partial ring lights, coaxial lights, dome lights;
   Flank emitting light -- partial ring lights, bar lights, line scan lights, spot lights;
   Back emitting light -- square back lights, bar back lights, dual-retangular back lights.

The shape, material, color of the workpiece

3. To analysis the workpiece, hook surface need to use dome light, smooth surface need to use coaxial light, rough surface need to use bright FOV light, IR light is used for good transmission workpiece. Saperated the color of background (color no need to inspect)and the color of foreground (color no need to inspect).

Highlight the contrast

High quality light can highlight the contrast of image -- clear contrast of background and foreground.

Machine vision light using attention

1.The life span of LED will be shortened while use under high temperature environment.

*To LED, the higher temperature, the lower lighting effective, and the luminance will be decreased also.
*Prolonged use under high temperature environment, will cause irreversible damage to LED chips.

2. How to use the light correctly, to avoid the aging and luminance decreased by self-heating.

- Use the light in as low as posible luminance level.

Decrease the lighting level to cut down the magnitude of current at the suitable luminance. Therefore, it emits less heat to avoid the brightness attenuation. Increase the luminance level step by step when long time using cause the brightness attenuation.

- Installable fan or provide air flow to dissipate the heat, reduce the temperature to slow down the brightness attenuation.

Installed fan---Provide air flow---Install the bracket with high heat-dissipation.

- Can light on the light when shoot image or use with strobe controller.

There is few influence to LED life span when comtinuous more than once to on / off the light. The brightness will be more stable and LED life span will be extended when the LED work as strobe light or light on according to the external signal requires.