



## Custom LED-Based Edge-Lit Light Guides



[glthome.com](http://glthome.com)

# Innovation Through Technology

While our best collaborations start in the early stages of product development, GLT also works with clients who need to improve on existing component illumination. With more than 250 issued patents, we're proven industry experts in developing advanced light guide solutions, no matter how simple or complex.



# We develop custom light guide solutions.

Global Lighting Technologies engineers and manufactures custom light guides that unlock new market opportunities for innovative companies worldwide.

With a seamless, global process that spans the U.S. and Asia, we deliver quality lighting solutions that suit complex client requirements.

Founded in 2000, GLT offers the world's most efficient LED-based edge lighting. We utilize industry leading light extraction technologies combined with high volume, cost efficient manufacturing processes to provide the thinnest, most efficient, and cost-effective light guide solutions.



## 1. Discover

Taking the time to understand our customers' needs and provide samples



## 2. Design

Offering both custom designs and improvements to existing illumination



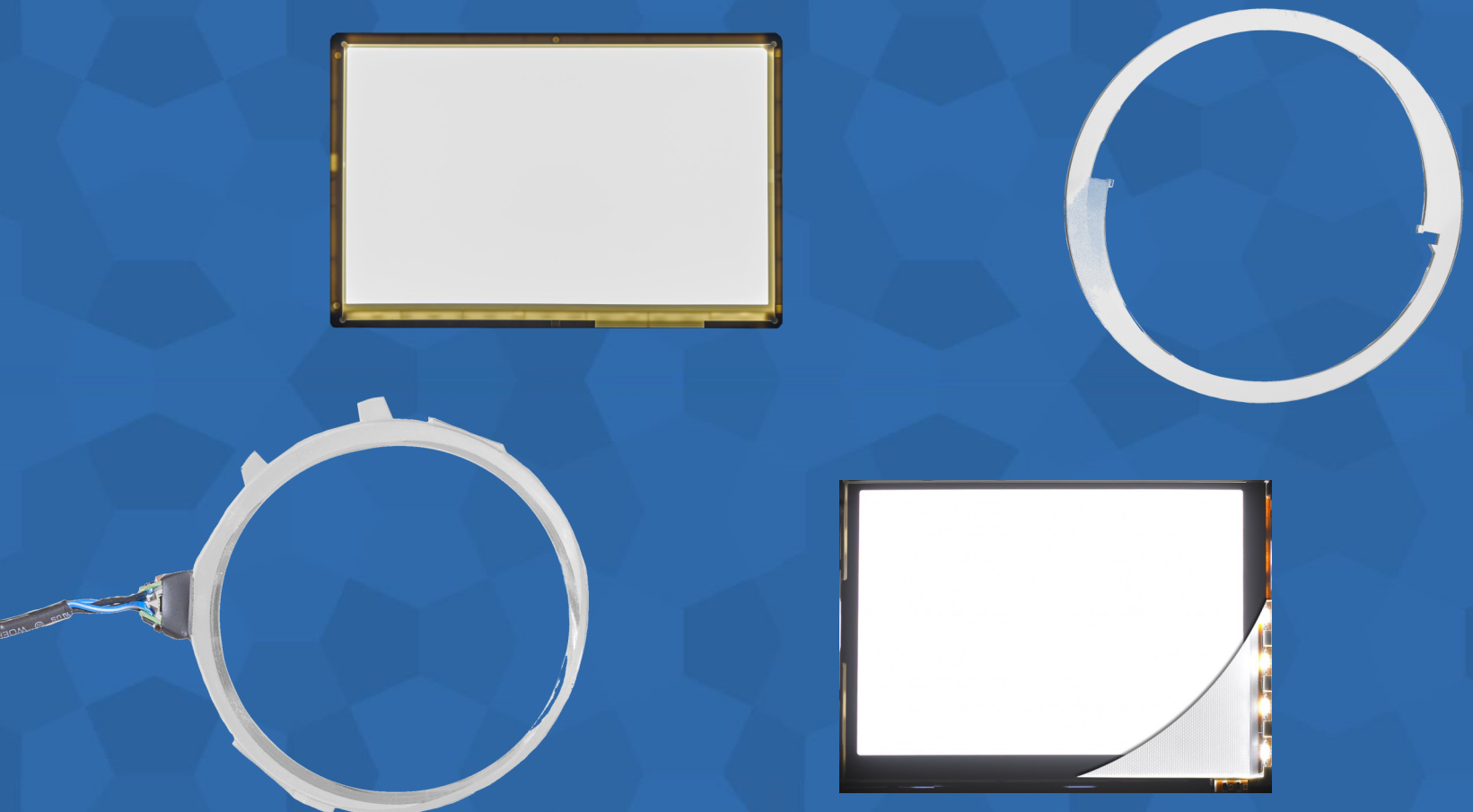
## 3. Prototype

Helping our customers see and judge real results before final builds



## 4. Manufacture

Mass-producing in quantities of thousands to millions





## LCD Backlighting

GLT modules can include LEDs, films, flex circuits, PCBs, connectors, and light guides.

Applications include:

- LCD TV
- Tablet and notebook computers
- Phones
- Wearable devices
- Automotive
- Home automation
- Instrumentation and controllers

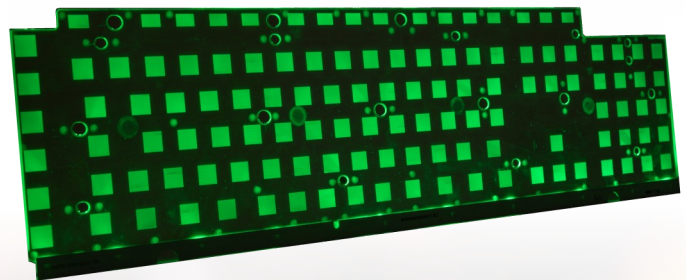


## Keyboards & Keypad Illumination

GLT offers light guides that can be utilized with membrane and keycap-based keyboards.

Applications include:

- Notebook computers
- Desktop computers
- Security keypads
- Handheld devices





## Touch Panel, Decorative, and Graphic Illumination

GLT can supply light guides thin enough to use within a touch sensor-based assembly as well as custom shapes and designs for decorative and graphic illumination.

Applications include:

- White goods
- Automotive
- Medical devices
- Logos
- Graphic icons
- Consumer electronic devices



## Egress & Exit Sign Illumination

GLT light guides are the perfect illumination component to create thin and uniform lighting of exit signs and all manners of egress.

Applications include:

- Wall mounted exit signs
- Dual sided illuminated exit signs
- Egress and pathway lighting





# Manufacturing Capabilities

## Injection Molding

This primary process of light guide production utilizes an insert containing the optical extraction pattern within the mold to create the custom designed light guide.

Processes include:

- 3D features and complex shapes
- Small to medium size products
- PC and PMMA materials
- Curved structures



## Roll to Roll Embossed

Production begins with a thin PC film which is then embossed with custom light extraction pattern. The film is then die cut to final size.

Processes include:

- Serration structure available on edges
- No internal stress (compared to injection)
- High production capacity



## Extruded Embossed

This process of light guide production includes a custom extrusion process creating the light guide profile and thickness which is then embossed with the custom light extraction pattern. Thin film products utilize PC while thicker panels are produced utilizing PMMA .

Processes include:

- Large sizes using PMMA/MS/PS
- Thin production using PC with taper option
- Serration structure available on edges
- No internal stress (compared to injection)
- High production capacity

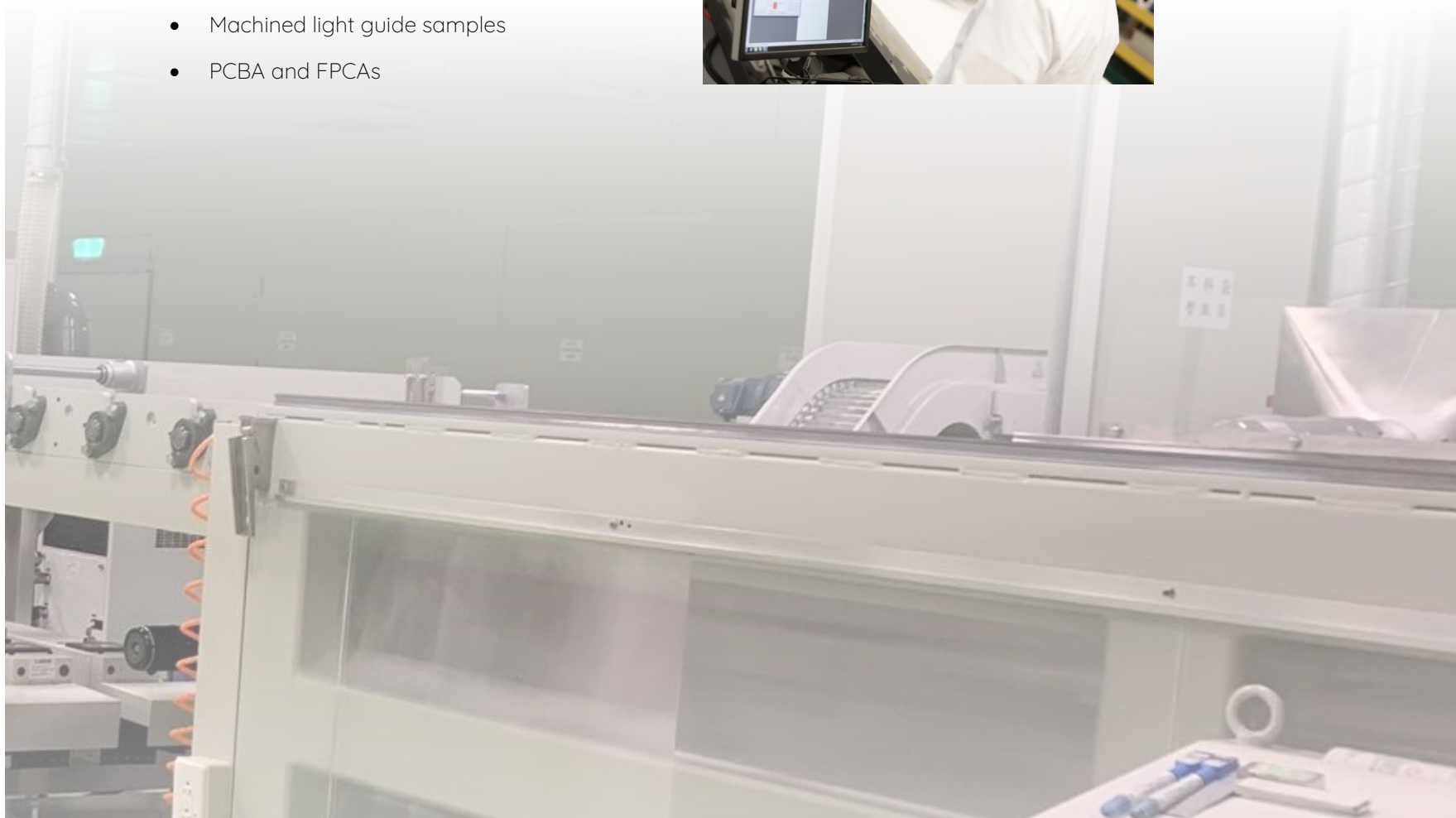
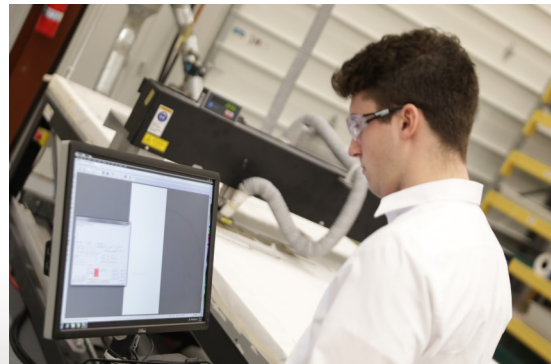


## Prototyping

GLT has developed methods to create prototypes that meet our customers' development needs.

Processes include:

- Laser cutting of materials and films
- 3D printing of materials
- Prototype injection mold tooling
- Machined light guide samples
- PCBA and FPCAs







Ohio USA



Zhongshan China



Tokyo Japan



Tongluo Taiwan



Suzhou China



Shanghai China



Zhongli Taiwan

### **US Office**

Global Lighting Technologies US  
55 Andrews Circle  
Brecksville, OH 44141  
T + 1 440 922 4584  
[www.glthome.com](http://www.glthome.com)

### **Corporate Headquarters**

Global Lighting Technologies  
Taiwan  
No. 1149, Sec. 3  
Min-Chuan Rd., Chung-Li,  
Taoyuan Hsien  
32055 Taiwan  
T + 886 3 426 2828

### **Production Facilities**

Global Lighting Technologies  
Shanghai  
No. 1468 Tingwei Rd.  
Shanyang Town  
Jinshan, Shanghai  
201508 China

Global Lighting Technologies  
Suzhou  
No. 468 - 470 Songshan Rd.  
Xushuguan New District  
Suzhou  
215151 China

Global Lighting Technologies  
Taiwan  
No.6, Tongke 1<sup>st</sup> Rd.  
Tongluo Township, Miao-Li County  
36645 Taiwan

Global Lighting Technologies  
Zhongshan  
Wistron Optronics Park, Linhai  
Industrial Park  
Torch High-tech Development  
Zone  
Zhongshan City, Guangdong  
528400 China

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