



“We make it visible”

Fresnel *Factory* Inc.

- PIR facility

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Fresnel *Factory*.com
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Company Introduction

Fresnel Factory Inc. is the unique USA and Korean based manufacturer having technology for Fresnel lens.

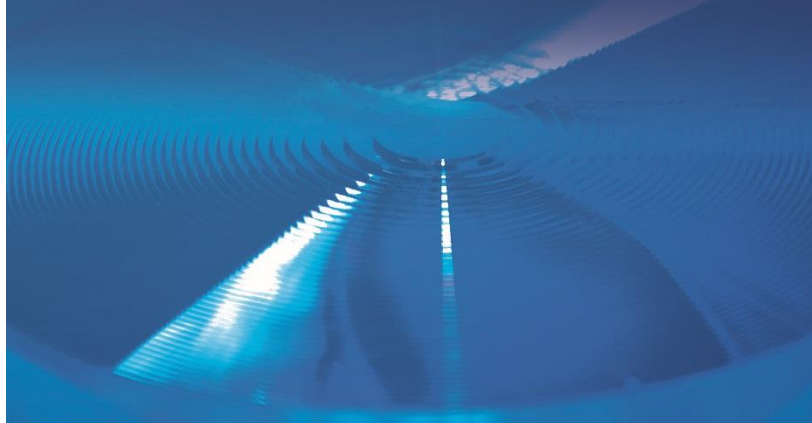
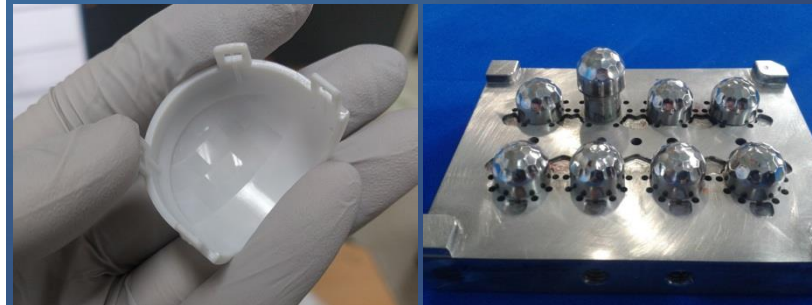
We started our business since 2002 and incorporated in 2013 and have intensified core competence in the development by venture certification and establishment of R&D center.

Going beyond the simple supply of optic components, Fresnel Factory produces and supplies custom-made optic devices to fit all requirements from all customers based on the capabilities of optic design and tool making technologies. The developed products are applied to display, LED lighting, motion detection sensors and photovoltaic apparatus.

Fresnel technology is spotlighted again as the technology in many areas. So, we are making alliances with many companies in optic and display fields.

Certifications

- Certified R&D Center
- Certified as Export Frontier Firm
- RoHS / REACH certified
- ISO 14001:2015 certified
- INNOBIZ certified
- ISO 9001:2015 certified



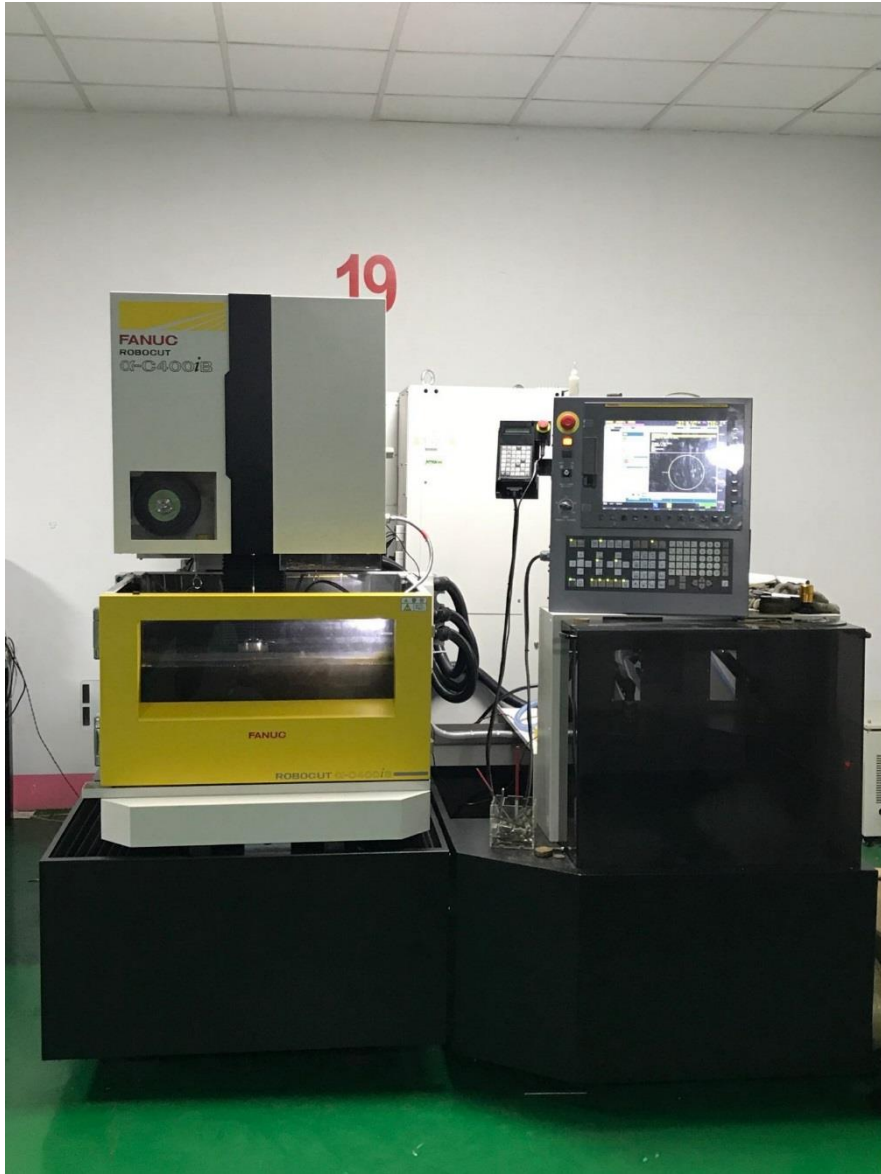
Design and tooling Machine List

Description	Quantity
Ultra Precision CNC Machining Center	2
Computer Numerical Control	4
Low Speed Wire Cut	4
numerically controlled production center	2
Hot press machine	80
Injection machine	15
Rotary table laminator	1
Image measuring instrument	2
Automatic Chemiluminescence Analyzer	2
Solid Works for mold design	1
ZEMAX optical ray-tracing	1
Light tools optical ray-tracing	1

Numerically Controlled Production Center



Low Speed Wire Cut



Injection Machine



QC Process Diagrams

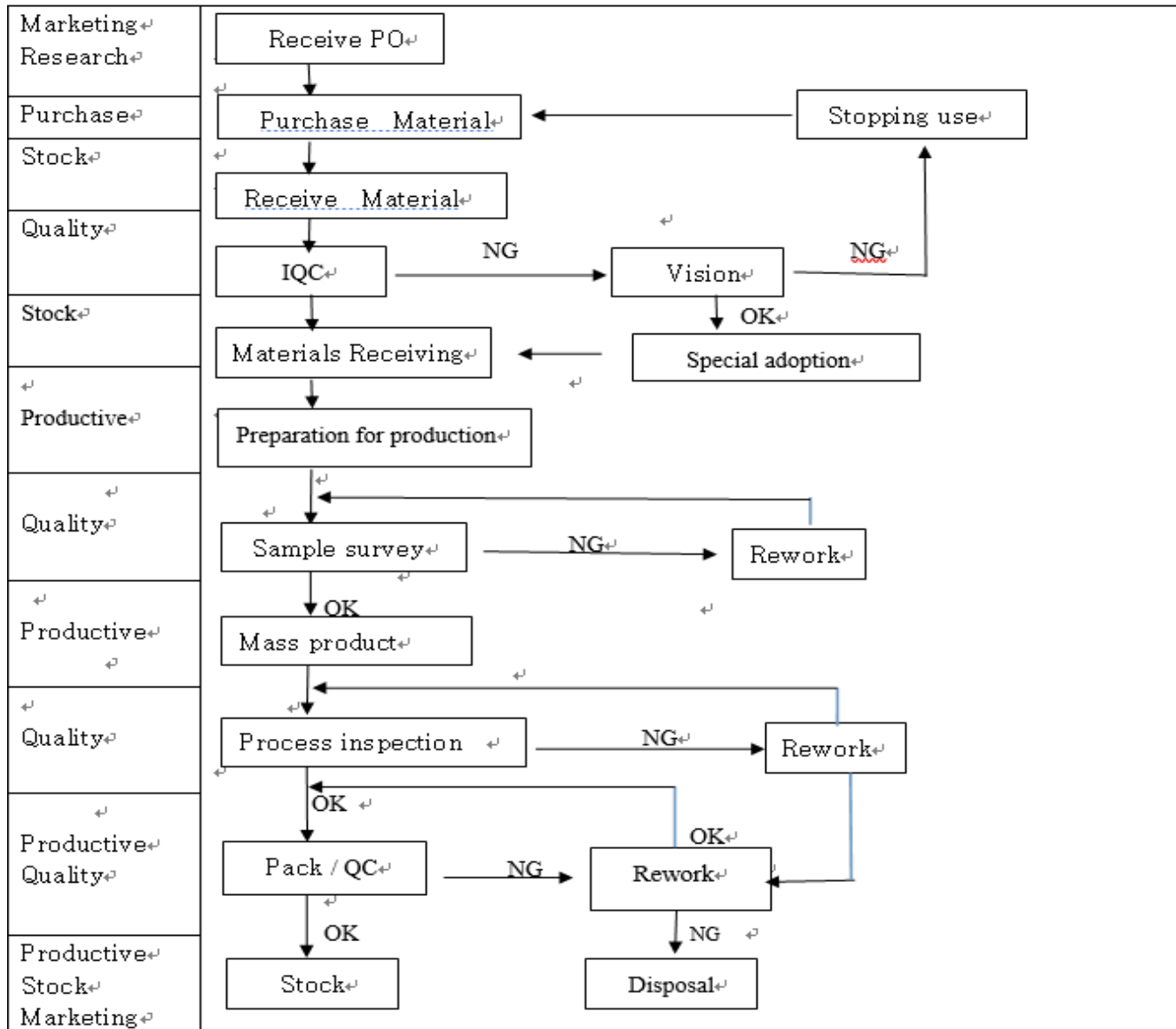
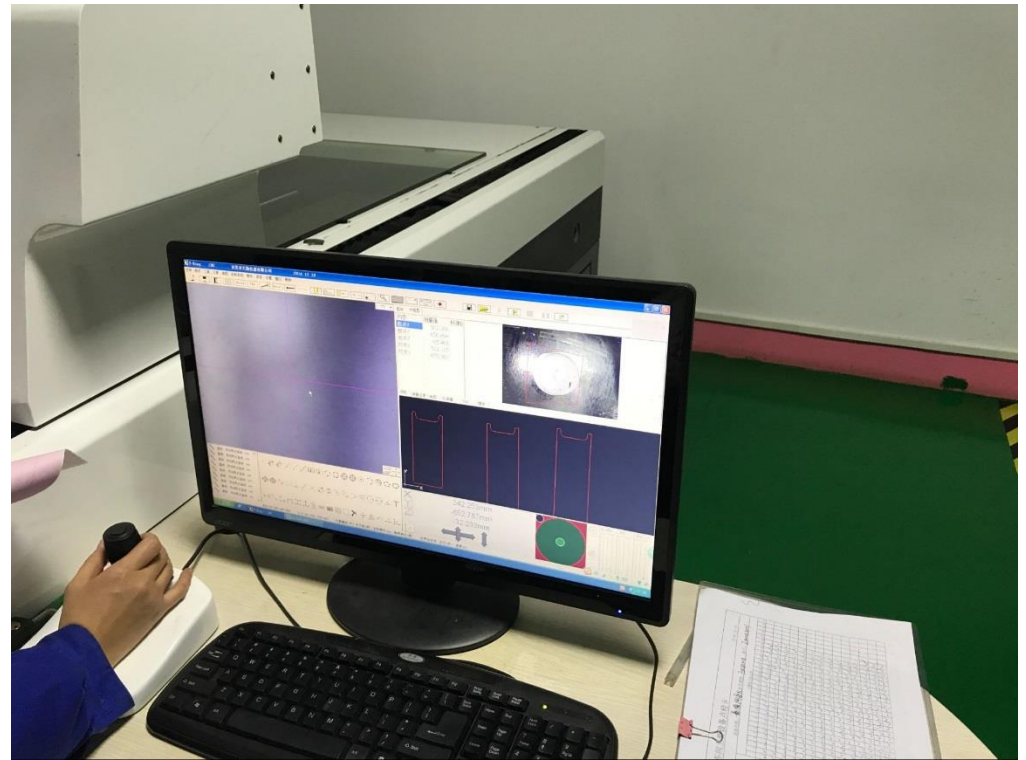
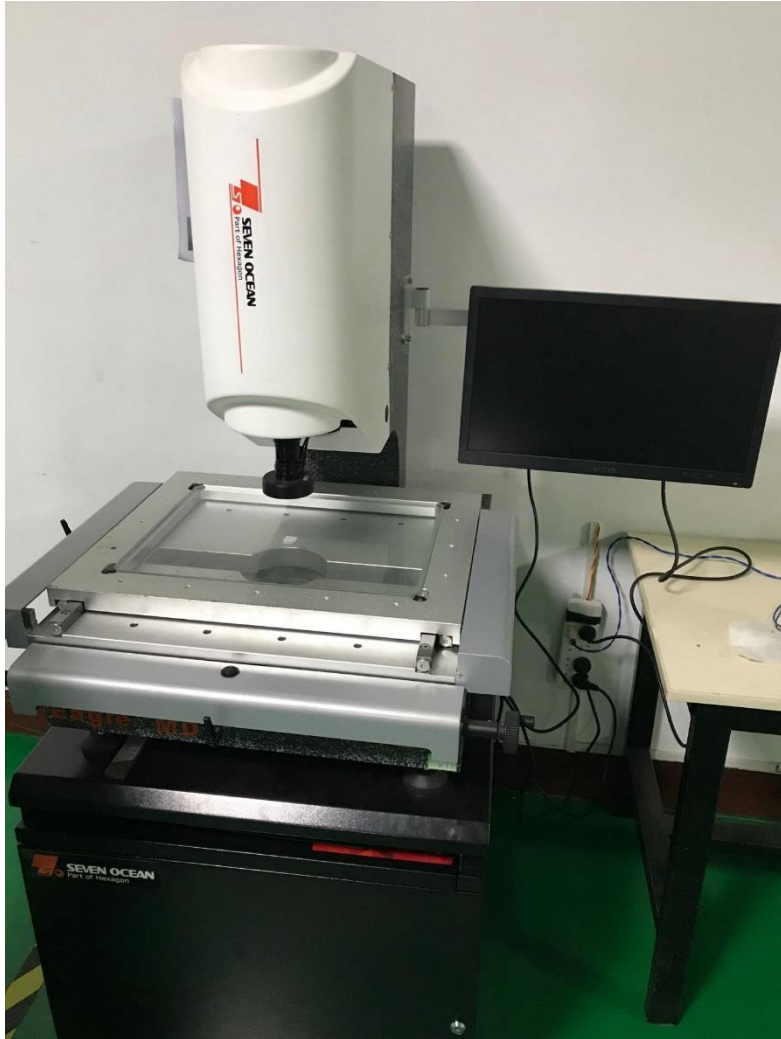
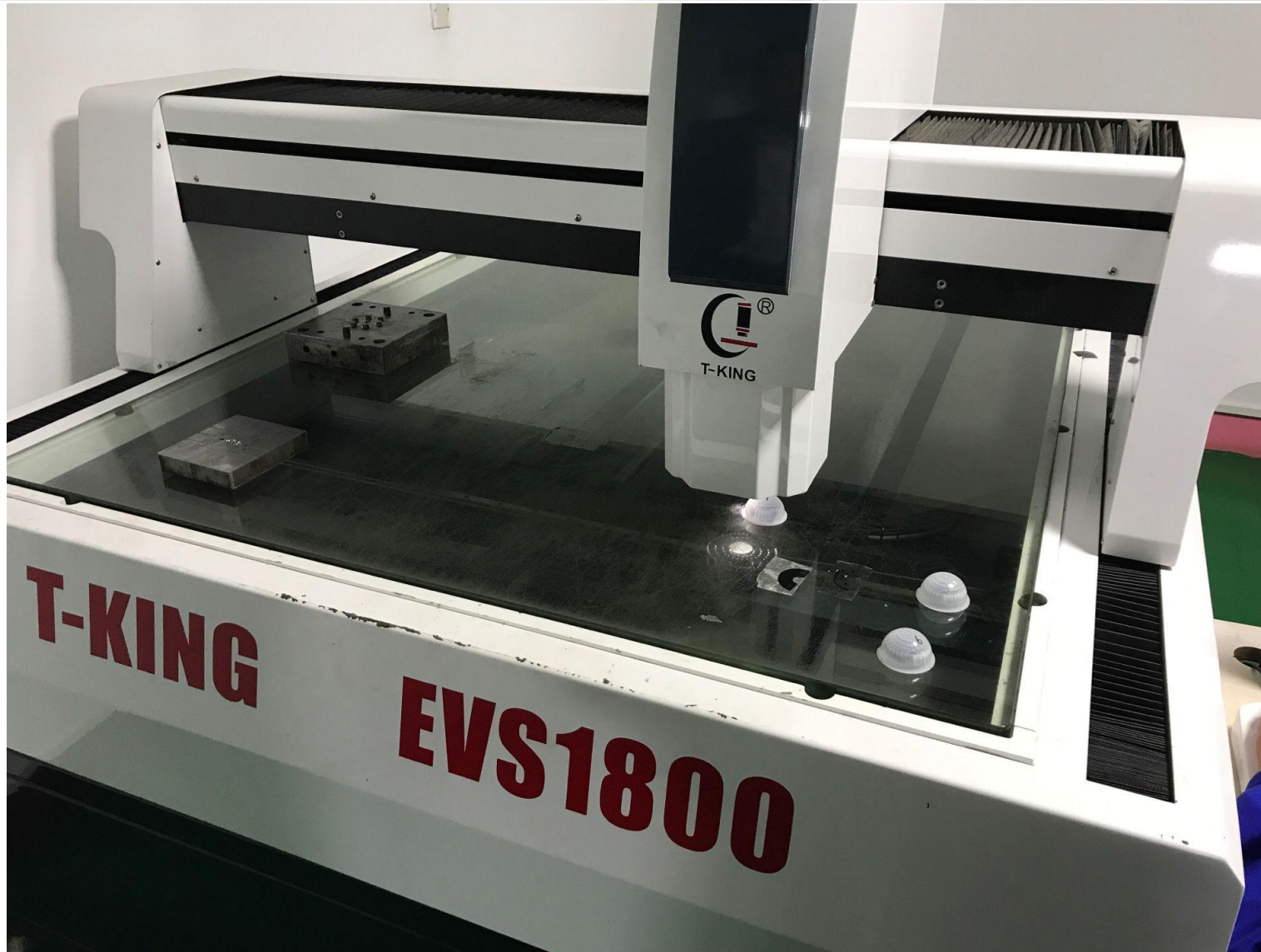


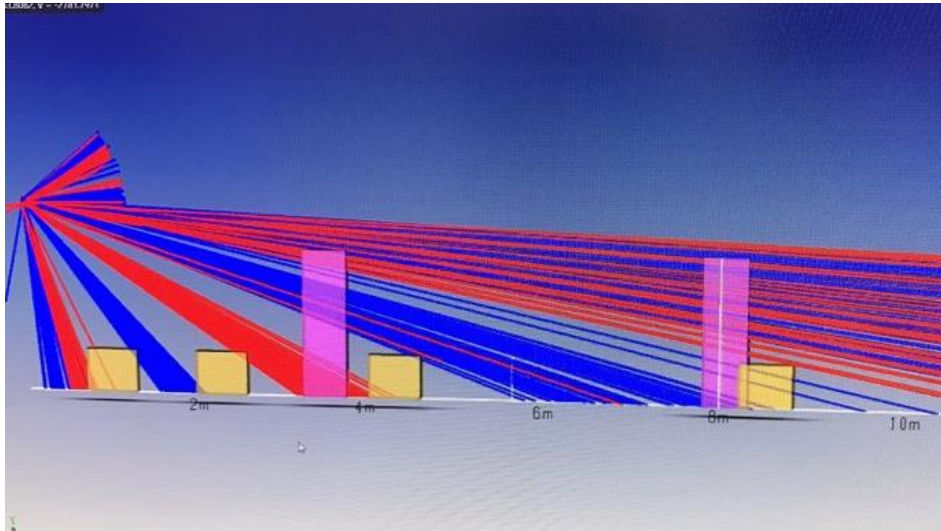
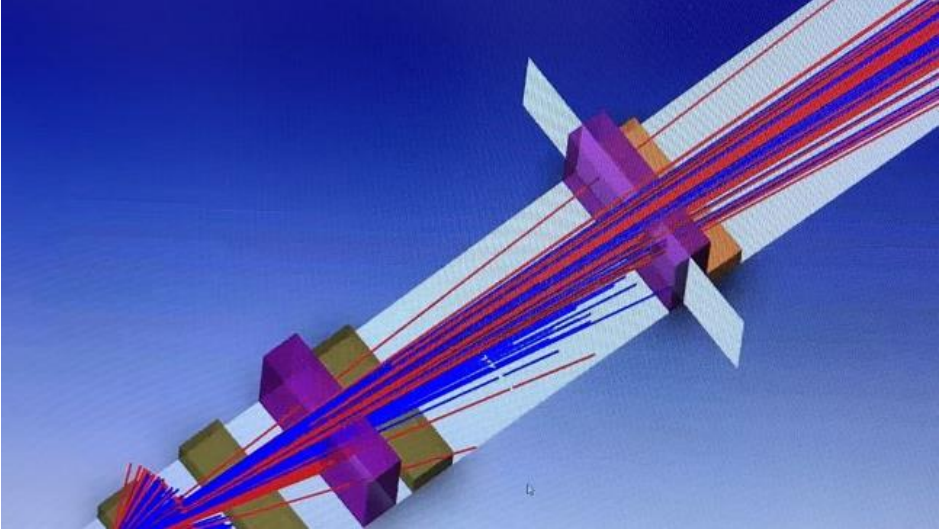
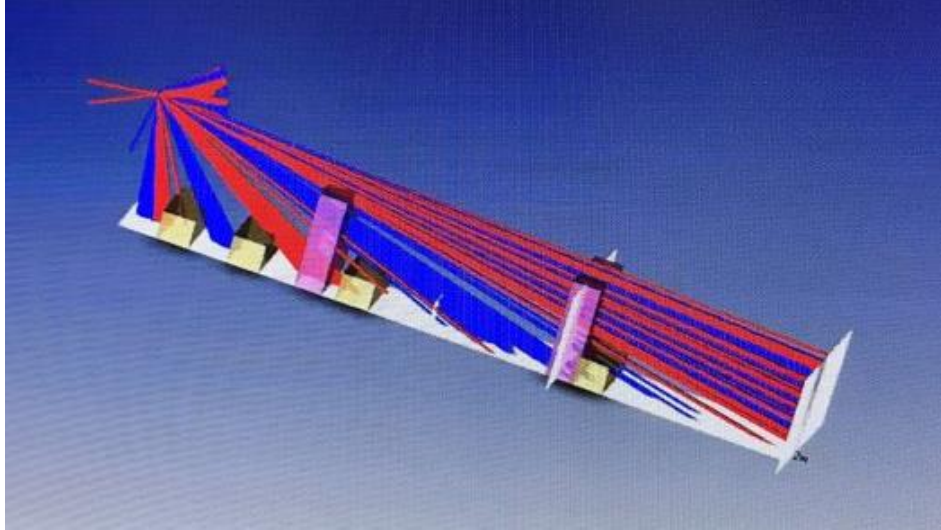
Image Measuring Instrument



Automatic Chemiluminescence Analyzer



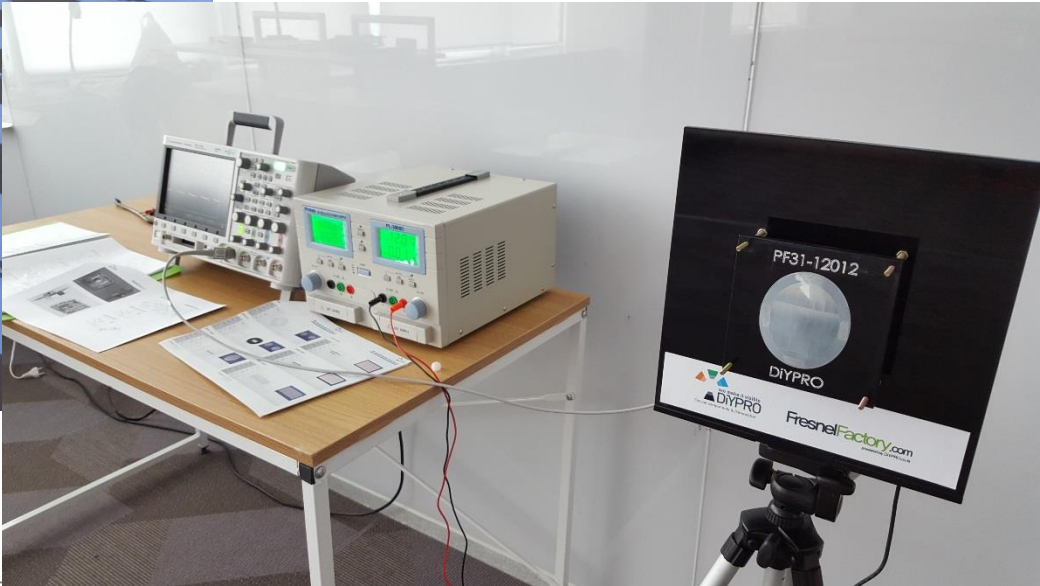
Optical design with Ray-tracing



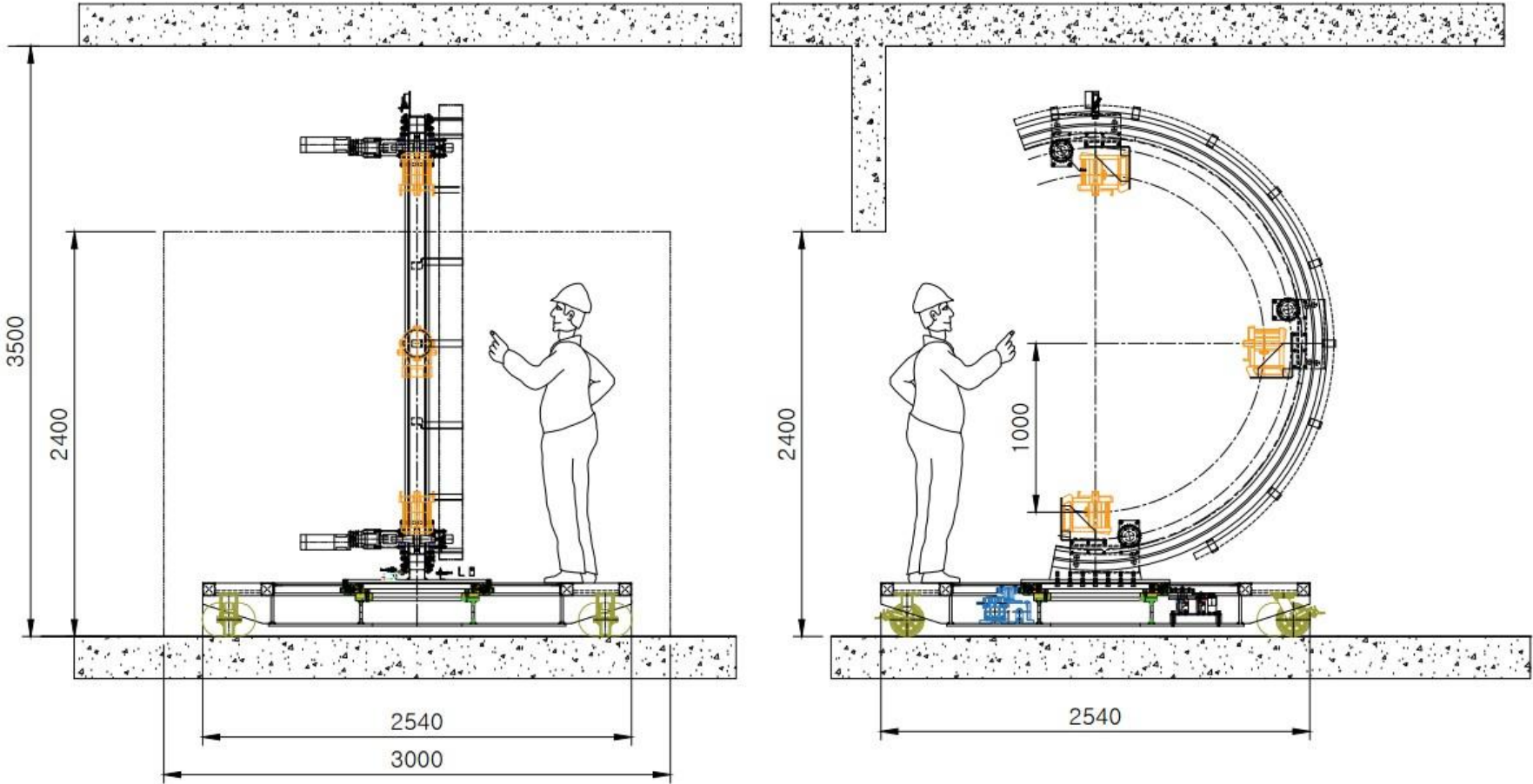
Human heat Measurement system

- Infrared spectrometer model name: FTIR(Cary 5000 (Varian)
- Black body Model name: FLUKE 9133
- FLIR Thermal image camera
- Non-contact thermoscope
- PIR sensor standard module + oscilloscope
- FIR sensor standard module + self-measuring software
- SMD type Quad sensor + sensor company's measuring software
- Real-size Testing Field
- Automatic Testing Field
- Hemisphere automated motion instrument for detection range and angle

Real-size Testing Field

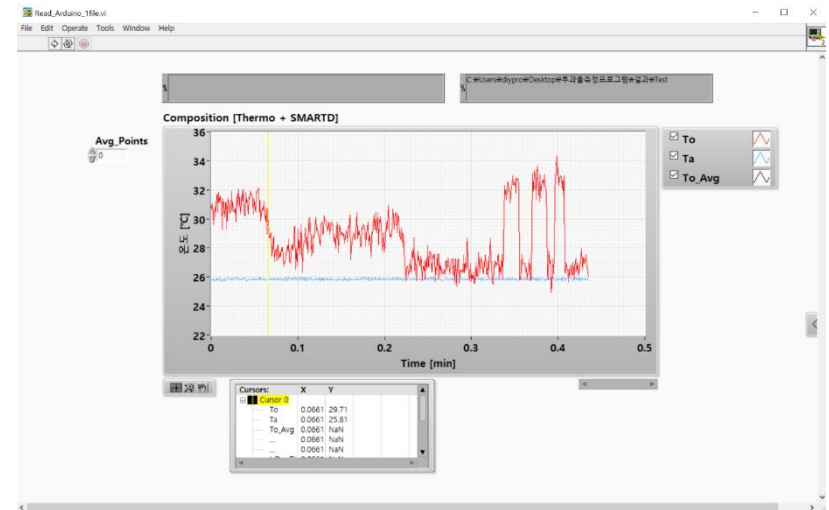
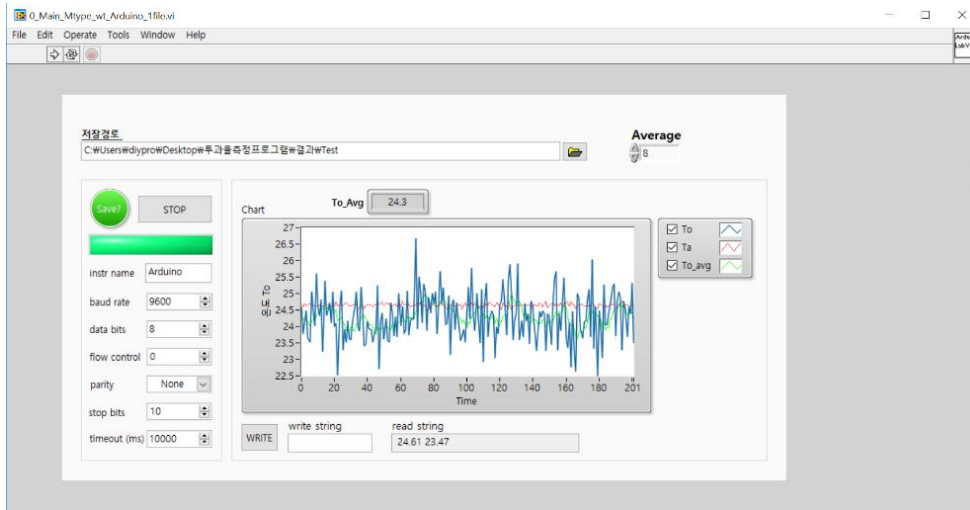


Hemisphere automated motion instrument



Measuring Software

FIR sensor standard module + self-measuring software



SMD type Quad sensor + sensor company's measuring software

FAQ

1. When designing the Fresnel lens, what is the software been used ? Regular mechanical 3D design tool or others ?

->We're using ZEMAX & Solid Works.

2. What is the lead time of design, and the prototype of Fresnel lens ?

->It is usually 8 weeks including the prototype, but it sometimes can be 4 weeks, including the prototype, upon customer's urgent request.

3. Do you have the simulation tool such that we know the performance of the design before PCBA/Prototype are available ?

->We have ZEMAX ray-tracing system.

Useful link

1. [PIR Design request form](https://app.smartsheet.com/b/form/9ba8c9fb6f154a058321377250b14f3a)

<https://app.smartsheet.com/b/form/9ba8c9fb6f154a058321377250b14f3a>

2. [Application book](https://drive.google.com/open?id=1d0ygO6aEGjn3mVwV-hDMsGjJ3-dXNScv)


<https://drive.google.com/open?id=1d0ygO6aEGjn3mVwV-hDMsGjJ3-dXNScv>

3. [PIR lens list](https://drive.google.com/open?id=0B9EILyf56YUWLTktVU1pTTNFWkk)

<https://drive.google.com/open?id=0B9EILyf56YUWLTktVU1pTTNFWkk>

4. [RE200GE for battery powered device](https://drive.google.com/open?id=0B9EILyf56YUWUVVCZXA4RVdljQ)

<https://drive.google.com/open?id=0B9EILyf56YUWUVVCZXA4RVdljQ>



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THANK YOU