A company focused on LIGHT

The best optical contents with the best quality

We will continue to move forward with a sincere spirit and passion so that we can contribute to people all over the world with our one-of-a-kind optical solutions.

Photonic Lattice

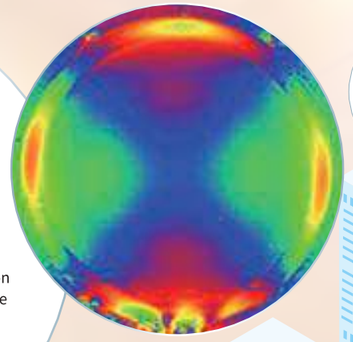
The best optical contents with the best quality

It is our pleasure to create customer satisfaction by providing the best optical contents with the best quality, exceeding customer expectations and needs. Our mission is to contribute to the development of social infrastructure and cutting-edge manufacturing fields.
By pursuing innovative technology and know-how, we aim to become a company our customers can rely on.
By connecting diverse people, technologies, and regions, we will continue to create even more value together.
We value such a spirit of “co-creation” and “symbiosis.”

Birefringence and Stress/ Strain measurement

[Cutting-edge polarization sensor and quality control functionalities]

Beyond the scope of conventional point measurement devices, our systems allow instatanous measurement and evaluation of whole surfaces. High-speed and high-precision birefringence measurement contributes to the improvement of quality and functionality of optical components.
Applications: Lens, semiconductor wafer, glass, film, etc



Ultra-precision micro-processing

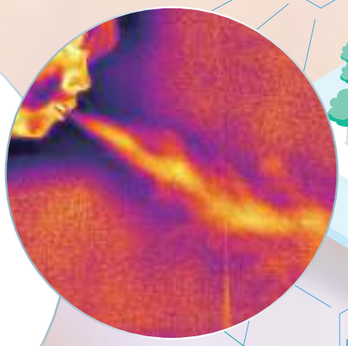
[Unique optical components for advanced control in laser processing, beyond the scope of sole power control]

For ever more precise processing and energy savings, we offer in-house designed polarizing beam-shaping elements and quality evaluation based on high-speed temperature visualization.
Applications: Welding, cutting, grooving, drilling, medical, etc

Next-generation ultrahigh-speed optical communication

[Highly integrated, high-precision devices for next-generation optical communications based on in-house designs]

Importance of polarization and phase control is increasing for the spread of next-generation information and communications social infrastructure. Our unique photonic crystals enables technological innovation.
Applications: Optical branching element, polarization multiplexing, phase distribution control, etc



Visualization and measurement of greenhouse gases

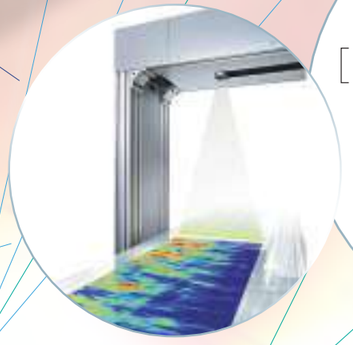
[Unique infrared spectral imaging and high-sensitivity technology]

To realize a low-carbon society, there is an increasing need for visualizing and measuring greenhouse gases. We help tackling environmental and safety issues by providing our original gas visualization technology and analytical expertise.
Applications: Carbon dioxide, Methane, etc

High-speed temperature imaging

[Market-leading temperature measurement, high-resolution / high-speed imaging]

High-speed visualization of heat caused by various material processing, such as folding, cutting, abrasion, etc. The improvements we achieved in temperature measurement resolution support breakthroughs in the field of research in material durability, physical properties characterization, and more.
Applications: Automotive, welding, processing, combustion, etc



Full-length and full-width measurement of optical film

[Full-surface distortion inspection for highly-functional film, linked to defect database]

The distribution of distortion over the whole span, width and length, of a film is measured inline by the system, using its unique high-speed polarization cameras. for total control of production quality and defect detection.
Applications: Optical film, glass sheet, etc

Thin film measurement
Optical computations
Photonic crystal
Infrared/ Ultraviolet
Polarization high-speed camera
High-speed infrared camera
Stress propagation
High-speed camera
Special imaging
Birefringence measurement
Fragmented waveplate
Polarizers/ Phase plates

Search for solutions here »

Focused on light, from our roots to the world

Founded in 2002 as a venture company from Tohoku University, we are developing our business as a manufacturer on our original optical technologies.
With our unique optical solutions, we will continue to work with sincere spirit and passion to grow as a global company from our hometown Sendai.

About Us

Company Name	Photonic Lattice, Inc.
Business Field	○ Manufacturing, sales, design, R&D of photonic crystals ○ Development, manufacture, sales of optical measurement systems (polarization measurement systems, high-speed polarization camera, high-speed infrared camera, etc) ○ Commissioned measurement service
Founded	July 4, 2002
Capitalization	90,000,000 JPY
Management Team	**Representative Director, President**：Takashi ONUMA **Senior Executive Director/CTO**：Takashi SATO **Director**：Yoshihiko INOUE **Director**：Takayuki KAWASHIMA **Director(part-time)**：Takashi TAKIMIZU(PHOTRON LIMITED) **Director(part-time)**：Eiji UMEDA(PHOTRON LIMITED) **Director(part-time)**：Hidemichi TAKAHATA(PHOTRON LIMITED) **Auditor(part-time)**：Yasuhiro OHTA(PHOTRON LIMITED) **Founder**：Shojiro KAWAKAMI

Corporate History

1996. The Company's core technology "Technology for preparing photonic crystal by auto-cloning" was invented by S. Kawakami in Research Institute of Electrical Communication of Tohoku university.

2002. Photonic Lattice, Inc. was established.
Company started limited operation while building up core technologies at NICHe of Tohoku university.

2006. Release of first polarization imaging camera PI-100, with photonic crystals embedded.

2011. The company was hit by the Great East Japan Earthquake. Headquarters moved to a new location in Sendai.

2020. Photonic Lattice, Inc. joined the PHOTRON LIMITED group, our longtime partner in product development.

2022. Photonic Lattice, Inc., inherited the optical measurement business of PHOTRON LIMITED.

Photonic Lattice

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