

Light is possibility itself.

A brief look at the company 2025

# What Is Light? What Can We Do With Light?

These are the questions we ask ourselves each day, the key to our devotion to light as a leader in photonics.

This pursuit of light leads us to new discoveries almost everyday. Fascinated by these daily discoveries, we continue along this path.

Each time our understanding grows through new discoveries, we wonder how much more remains to explore. This is what makes light so fascinating.

> Facing the unknown and giving back what we learn to society this is the path of light that Hamamatsu Photonics treads.

## MESSAGE FROM THE PRESIDENT

Unlocking the infinite possibilities of light to make life even better for society and humanity, and to preserve the environment.



Light is all around us and brings us numerous benefits. Since its founding, Hamamatsu Photonics has pursued the endless possibilities of light and continues to investigate the unknown and unexplored aspects of light.

Our unique products and state-of-the-art technologies have emerged from these pursuits. In addition, we anticipate the future needs of society and humanity as well as the environment, and we add value to products and technologies to solve various problems.

We continue to take on new challenges as a company committed to contributing to the betterment of society and the environment by exploring and controlling light.

Representative Director and President | Tadashi Maruno

Management Philosophy of the Hamamatsu Photonics Group

### MISSION

Photon is our business

We dedicate our efforts to the advancement of science and technology for a better society and a healthier planet.

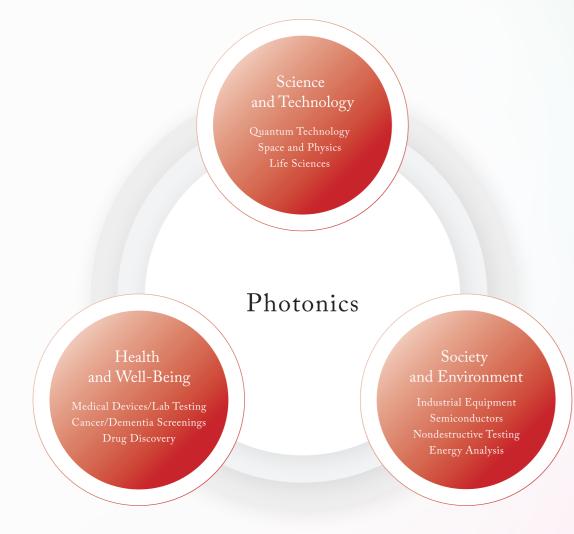
### VISION

We will pursue unknown and unexplored areas to create new markets harnessing photonics technologies.

VALUES

Challenge We never stop trying.

# For Society, the Environment, and Humanity



Fields Where Hamamatsu Photonics Contributes Through Light



PET

### Building a Society of Good Health and Longevity

PET is a diagnostic method that takes cross-sectional images of heart and brain functions to diagnose the causes and symptoms of disease. It has gained attention as an effective means of detecting cancer, the leading cause of death in Japan. At Hamamatsu, we are working to build a society of good health and longevity not only by developing PET devices but also by conducting applied research from different angles.

Contributing to Two Nobel Prizes in Physics Through Neutrino Detection

On February 23, 1987, the historic feat of observing neutrinos from a supernova explosion for the first time ever was achieved at Kamiokande. Hamamatsu Photonics' 20-inch photomultiplier tubes captured this once-in-a-millennium opportunity from a supernova explosion 160,000 light-years away. This ever-evolving technology continues to this day in the highly advanced Super-Kamiokande and the Hyper-Kamiokande projects.

Working to Solve Both Energy and Environmental Issues

Our sun has shone for 5 billion years and remains the source of life on Earth. Laser fusion, which recreates this gift from the sun through human effort, is now drawing attention. The generation of power through laser fusion, which allows for unlimited extraction of deuterium from seawater without emitting carbon dioxide, shows promise as a secret weapon for solving global energy issues.

Observation Kamiokande

Laser Fusion

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Neutrino

## Exploring the Unknown

The things humanity still cannot do and does not yet know are infinite. Using light to explore unknown territories will benefit all of humanity and create new industries that transform the way we live.

The Spirit of Prof. Takayanagi, Father of Japanese Television: Forever Chasing the Unknown

Hamamatsu Photonics was founded by a student of Prof. Kenjiro Takayanagi (Heihachiro Horiuchi, our first president), the first in the world to display the Japanese character for "i" on a cathode-ray tube. Legend has it that Prof. Takayanagi, who pursued his own research to develop technology that would benefit society a decade or two in the future, had in mind an image of the Roman goddess of fortune, Fortuna. She has thick bangs but no hair in the back. This meant that to catch her, one must make every possible preparation, get ahead of her, wait for her to come, then grab her by the bangs. This spirit of innovation lives on at Hamamatsu Photonics, which carries on Prof. Takayanagi's technology.



Our roots: Prof. Kenjiro Takayanagi



The Japanese character for "i" displayed on a cathode-ray tube (The device in the photograph is a reproduction

## The History of Hamamatsu Photonics

### 1953 Hamamatsu TV Co., Ltd (former company name) established.

Tokyo Business Office

(currently Tokyo Sales Office) opened.

New York Business Office opened.

1961

1964

opened.

1966

1969

subsidiary.

1953

1956

1958

1959

Production of

phototubes started.

Release of CdS cells

Hamamatsu

Path of Growth

Photonics'

Hamamatsu Corporation established as a U.S.A.

1953 to 1972

Ichino Factory (currently Main Factory)



1973

Hamamatsu Television Europe GmbH (Germany established as a joint company.



Toyooka Factory opened.





1979

Osaka Sales Office opened

1980 Joko Factory opened.

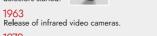
1981 Tenno Glass Works opened.

## 1973 to 1981

### Expand Applications of Photonics Technology

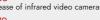
We established production systems with the construction of a new plant. Although analysis was our products' mainstay application at that time, we developed opto-semiconductors for X-ray CT scanners and swept the optical sensor market for X-ray CT scanners. The application of opto-semiconductors expanded from analysis and medical use to a wide range of fields including industrial, academic, and measurement fields.





1977

Release of





Release of photomultiplier tubes.

From Founding to Product Development

Heihachiro Horiuchi established Hamamatsu TV Co., Ltd. together

with the second president Teruo Hiruma and others. They devoted

themselves to their work with the goal of developing the top

products in the world and a spirit of "never stop trying!"

Inheriting the spirit of Prof. Takayanagi, the first president

Release of deuterium lamps

1972 Release of silicon photodiodes



Release of xenon lamps. 1985

1982

1984



Production of PbS







### 1984

Registered on the over-the-counter market of the Japan Securities Dealers Association.

### 1985

Headquarters Business Office opened and Tsukuba Research Laboratory established.

Subsidiary established in France.

### 1988

Subsidiaries established in the U.K. and Sweden. Joint company established in China.

### 1990 Central Research Laboratory opened.

1991 Subsidiary established in Italy.

- 1994 Miyakoda Factory opened.
- 1996 Company's stock registered on the second section of the Tokyo Stock Exchange.

### 1998

Company's stock registered on the first section of the Tokyo Stock Exchange.



2000 Mitsue Factory opened.

### 2002

Masatoshi Koshiba, professor emeritus of the University of Tokyo, awarded the Nobel Prize in Physics (for the research at Kamiokande where our photomultiplier tubes were installed).

### 2003

Hamamatsu Medical Imaging Center of the Hamamatsu Medical Photonics Foundation built.

### 2005

1990 to 2008



2008 Industrial Development Laboratory opened



Subsidiary established in China.

### 2013

Professors emeritus François Englert and Peter W. Higgs awarded the Nobel Prize in Physics (for Higgs boson discovery at CERN's LHC where our SSD, APD, and PMT were used)

2014 Our 20-inch photomultiplier tube was recognized as an IEEE milestone.

### 2015

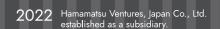
Takaaki Kaiita, profe at the University of Tokyo, awarded the Nobel Prize



2017 Compound Semiconductor Fabrication Center opened.

Energetig Technology, Inc. (U.S.A.) acquired as a subsidiary.

2020 Subsidiary established in Korea.



# FY 2024 Net Sales ¥203.9 billion

### 2023 Yokohama IT Development Office opened

### 2024

NKT Photonics (Denmark) and Fairchild Imaging (U.S.A.) acquired as subsidiaries

### 1982 to 1989

## Establishing the Current Management

Base Through a Division System

Securing outstanding human resources is essential to superior planning and development. The company name was changed to "Hamamatsu Photonics K.K." and company shares were offered in the over-the-counter market. Meanwhile, a divisional system was introduced to carry out flexible corporate activities, and the current management base was established.

### Release of infrared LEDs.

1987 Release of excimer lasers.

1986

Release of photo ICs.

### Release of linear image sensors.

Release of high power pulsed laser diodes.

### A New Challenge: Pursue Unknown and Unexplored Realms

Achieving more ambitious company goals requires taking on challenges in realms unknown and unexplored by humanity. As specific examples of facing such challenges, we established the Central Research Laboratory, the Hamamatsu Medical Imaging Center which aims for early detection of cancer and dementia, and the Graduate School for the Creation of New Photonics Industries to train human resources in photonics technology.

Release of microfocus X-ray sources. Release of mini-spectrometers.

2005

Release of

MPPC<sup>®</sup>

(Multi-Pixe

#### 1998 Release of flat panel sensors.

1994



2007 Release of quantum cascade lasers.

2009 to 2022

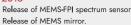
Expansion of the photonics industry

In addition to strengthening our core photonic devices, we established the Global Strategic Challenge Center (GSCC) and strived to expand the photonic industry by collaborating with startup companies and building an in-house venture function.

2021

Release of

2011 Release of ORCA® -Flash4.0 (scientific CMOS camera).



We will contribute to the realization of a prosperous society and environment by providing higher value-added products through

properly understanding not only customer needs but also social and environmental needs while also strengthening cooperation between divisions and with external organizations.

## ORCA®-Quest

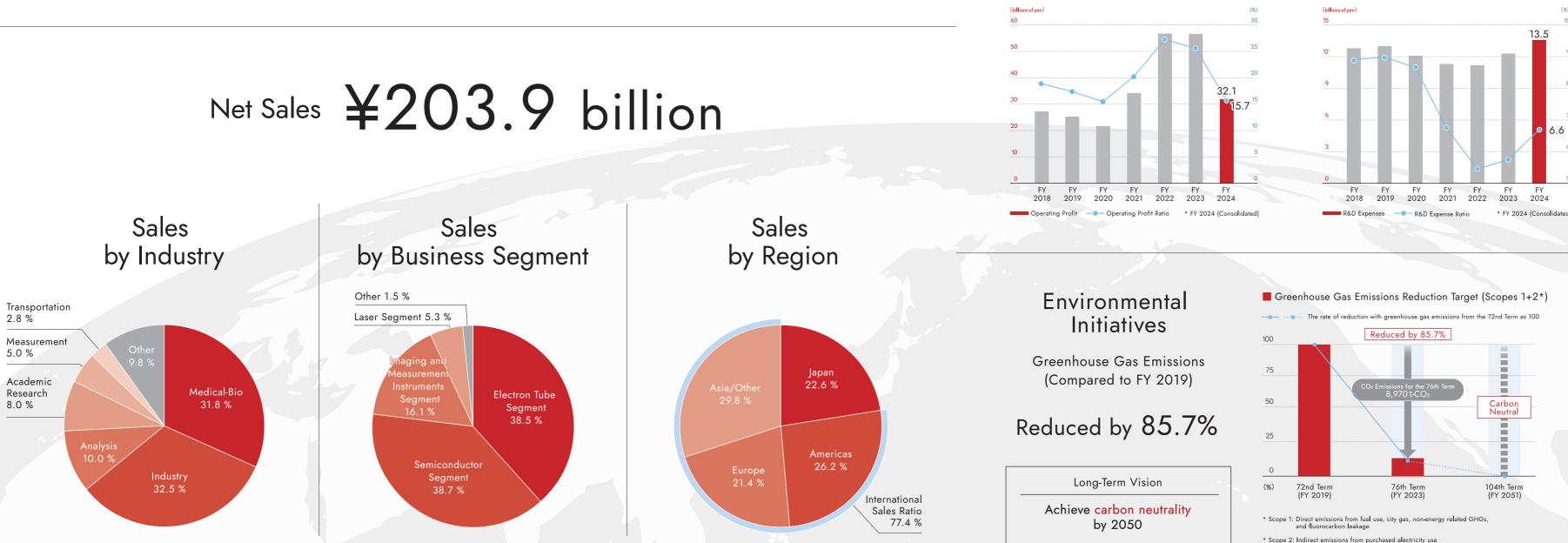
## 2023 Onward

## Becoming a Social and

Environmental Value Creation Company

## Hamamatsu Photonics in Numbers

The following is a summation of various initiatives and characteristics of the Hamamatsu Photonics Group based on a variety of data.



\* FY 2024 (Consolidated)

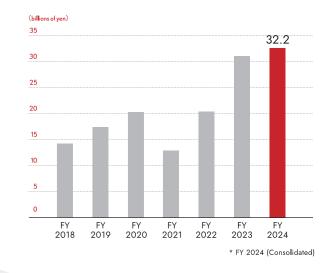
07

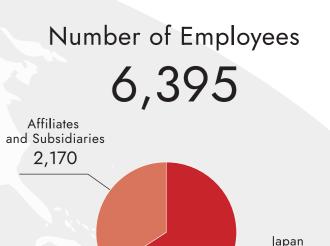
### ¥32.1 billion Operating Profit

### R&D Expenses



## Capital Investment ¥32.2 billion





(Non-consolidated) 4,225

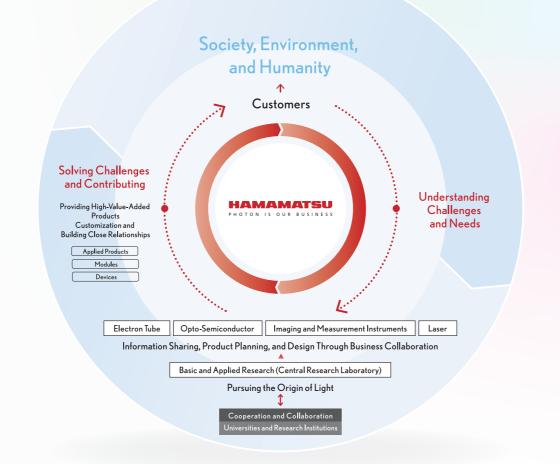
\* FY 2024 (Consolidated)

# Added Value Creation Cycle

## Hamamatsu Photonics employs a cycle that creates social value through photonics technology.

Each of our business entities builds close relationships with customers to understand their needs, makes plans, invests in prototype development, and supplies products. To accurately respond to our customers' needs, we must have our own manufacturing line and customization service based on our in-house manufacturing capabilities, leading to high-value-added devices and modules.

Previously, this cycle was run according to each segment. However, in the future, we will strengthen cooperation among segments, providing higher-value-added products. We will also anticipate and address our social and industrial needs that our customers may not be unaware of, to provide them with higher-value-added products. This is an extremely important cycle for achieving sustainable growth, and we view it as a form of social contribution through our core business activities.





### Providing High-Value-Added Modules

Custom modules created by combining unique photonics technologies from each business segment - optical sensors, optical systems, signal processing circuits, and software optimized to the customer's requirements - are installed directly as core components of equipment to provide high added value. In addition to existing devices, high-value-added custom modules enabled through business partnerships will be used to further meet customer needs.

### Our Business Segments BUSINESS INTRODUCTION

-Laser



- -Electron Tube
- -Opto-Semiconductor
- -Imaging and Measurement Instruments
- -Basic and Applied Research

\* Energetiq Technology, Inc., Beijing Hamamatsu Photon Techniques Inc., Fairchild Imaging, Inc., and NKT Photonics A/S are wholly owned subsidiaries of Hamamatsu Photonics

## Electron Tube Segment Photomultiplier Tubes, Image Devices and Light Sources

### Electron Tube Division

high-sensitivity photomultiplier tubes, highly stable and long-life lamps, as well as applied products in these areas.

#### Energetia Technology, Inc.

Develops and manufactures highly reliable, high-brightness broadband light sources for industrial and scientific applications.

#### Beijing Hamamatsu Photon Techniques, Inc.

Develops and manufactures photomultiplier tubes, scintillators, and measurement instruments primarily for customers in China.



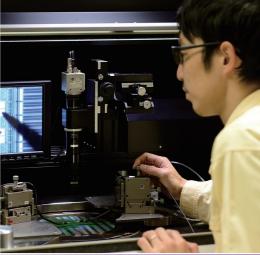
**Opto-Semiconductor Segment** Opto-Semiconductor Devices

### Solid State Division

Develops and manufactures opto-semiconductor devices such as photodiodes, photo ICs, and image sensors utilizing proprietary semiconductor process technology, mounting/packaging technology, and MEMS technology.

### airchild Imaging, Inc.

Possesses high-performance CMOS design technology and supplies image sensors optimized for scientific measurement and dental imaging.





### Laser Division

Develops and manufactures laser products in-house, including excitation laser diode modules, customized laser application products, and laser engines.

### NKT Photonics A/S

Possesses photonic crystal fiber manufacturing technology and offers a product line of fiber laser light sources that leverage these core technologies.



### Imaging and Measurement Instruments Segment

Image Processing and Measurement Equipment

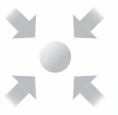
### Systems Division

Develops and manufactures systems that integrate light detection, imaging, and image measurement technologies with optical sensors, such as opto-semiconductor devices and electron tube devices, as key components.



### Basic Research and Applied Research

Conducts a wide range of research including basic research to explore the essence of light as well as applied research to adapt resulting technologies and knowledge for industrial use.



Measuring, Creating, and Controlling Light

Products from each business segment are created from technologies that measure, create, an control light.By combining these three technologies, Hamamatsu Photonics provides optimal solutions sought by customers.

# Measuring Light

Utilize received light to gather information about objects



Photomultiplier tubes



Si photodiodes



Cameras









X-ray sensors





Failure analysis system





Spectrometers

Digital slide Scanner

# Creating Light

Generate light from electrical energy



Controlling Light

Control light freely by using the properties of light







Microfocus X-ray sources



Lamps

Laser-Driven Light Sources (LDLS®)



LEDs

UV-LED light sources



Lamp modules & units



Fiber lasers





Supercontinuum white light lasers







Fiber optic plates

LCOS-SLM

FAC lenses



Photonic crystal fibers



Collimating capillary lenses

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Terahertz wave plates

Optical blocks

MEMS mirrors









## Offering Optimal Solutions

Hamamatsu Photonics combines the three

MEDICAL

## LIFE SCIENCE

## ENVIRONMENT



- Dental Diagnosis
- X-ray CT
- PET Diagnosis
- Fundoscopy
- Blood Testing
- Cancer Tissue Observation



- Flow Cytometer
- DNA Sequencer
- Fluorescence Imaging
- Drug Discovery Screening
- Mass Spectrometry
- Electron Microscopes



- Gas Analysis
- Soil Analysis
- Water Quality Inspection
- Plastic Recycling
- Underwater Optical Communication
- Radiation Detection

aspects of measuring, creating, and controlling light to provide optimal solutions sought by customers.

### MANUFACTURING



- Encoder
- Electronic Component Inspection
- Laser Processing
- Food Inspection
- Semiconductor Manufacturing/Inspection
- UV Bonding

### EVERYDAY LIVING



## ACADEMIC RESEARCH



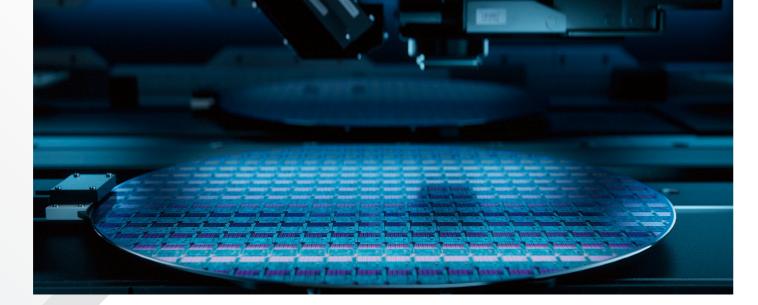
- Automotive
- Brightness/Color Monitor
- Flame Detection
- Touchless Displays
- Robot Vacuum Cleaners
- Baggage Inspection

- Super-Kamiokande/Hyper-Kamiokande
- LHC (Large Hadron Collider)
- Subaru Telescope
- Upper Atmosphere Imaging
- Light-Emitting Material Research
- Quantum Technology

### Semiconductors

Our products are widely used in semiconductor manufacturing and inspection processes essential to modern life, and our technology plays a central role in manufacturing semiconductors for generative AI, a market expected to grow. We offer advanced solutions through our technology to address challenges in semiconductor miniaturization and stacking.





# Greater Breadth and Diversity.



## Nondestructive Testing

Our products and technologies—including X-ray sources, optical sensors, and cameras-play a vital role in nondestructive testing for food and security applications, as well as in the manufacturing of electric vehicles (EVs). Beyond developing solutions for inspecting increasingly large EV batteries and electronic components, we are committed to meeting market demands by expanding our business through the integration of our advanced technologies.





## Quantum Technology

Our technology will help achieve practical quantum computers that can quickly solve complex problems that are difficult to solve with conventional approaches, bringing innovation to everything from scientific research to cryptography and drug development. As the only company with laser light sources, photon detectors, and optical manipulation devices, we will serve as the leader in creating this market.



# The Possibilities of Photonics Technology.



## Medical/Bio

Our technologies and products are used widely in a variety of fields aimed at a future where people live longer, healthier lives, such as low-stress patient testing, efficient drug development, and creating novel treatments. The provision of high-quality, high-stability lasers from NKT Photonics has allowed us to grow our market from diagnostics to therapeutics, holding potential for further growth.



# Topics

## ⊙ Social Contribution Efforts

### Academic Promotion Activities

We work with the Research Foundation for Opto-Science and Technology to spread awareness of photonics through international conferences and research grants.

#### Supporting the Hamamatsu Conference

We hold the annual Hamamatsu Conference to explain cutting-edge photonics research in an accessible way to the community.



### Support for Educational Activities

We conduct educational activities mainly for elementary, middle, and high school students in partnership with relevant organizations and the local community.



### • A Website for Learning About Light

The photon-it is one particle of light. Essential to our lives, yet shrouded in unfathomable mystery. A profound understanding of light unlocks limitless possibilities for our future. Photon terrace is a website where you can discover the present and future of light and photonics.



### Corporate information is available on our website.



# List of Locations

13 Main Office

14 Rome Office

15 NKT PHOTONICS A/S

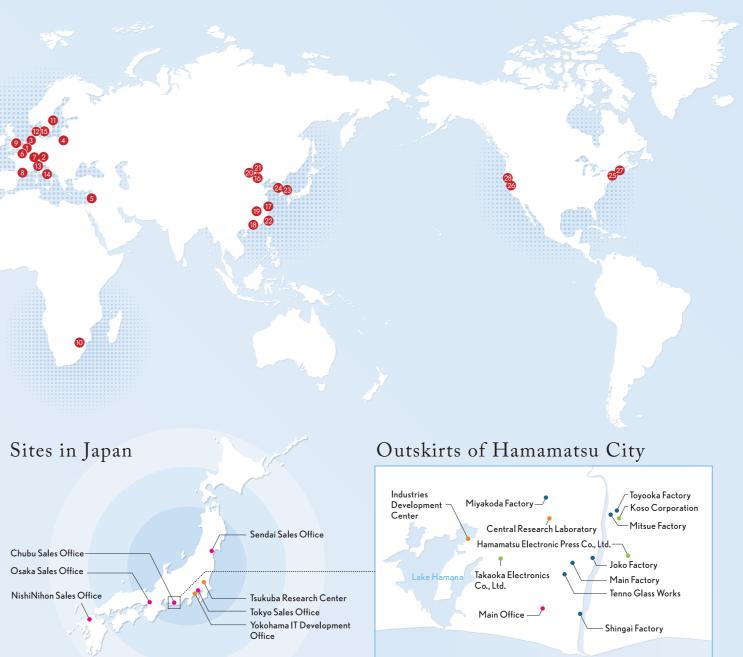


- 25 Main Office
- 26 California Office
- 27 ENERGETIQ TECHNOLOGY, INC.
- 28 FAIRCHILD IMAGING, INC.

## Asia and Oceania



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### Corporate Profile

Established Capital	September 29, 1953 35,146 million yen
Main Product Lines	Photomultiplier Tubes, Imaging Devices, Light Sources, Opto-Semiconductor Devices, Image Processing and Measurement Equipment, Laser Equipment, Laser Equipment Components
Number of Issued Shares	330,167,540 shares

### Directors

Representative Director and President, Chief Executive Officer	Tadashi Maruno
Representative Director and Vice President, Chief Operating Officer	Hisaki Kato
Representative Director, Senior Managing Executive Officer	Takayuki Suzuki
Director, Managing Executive Officer	Kazuhiko Mori
Director, Managing Executive Officer	Ken Nozaki
Director, Managing Executive Officer	Naofumi Toriyama
Outside Director	Kazue Kurihara
Outside Director	Takuo Hirose
Outside Director	Kaoru Minoshima
Outside Director	Takaaki Kimura
Audit & Supervisory Board Member (Standing)	Akira Utsuyama
Audit & Supervisory Board Member (Standing)	Michihito Suzuki
Audit & Supervisory Board Member (Outside)	Shoji Nakano
Audit & Supervisory Board Member (Outside)	Seidai Hirai
Managing Executive Officer	Kazuya Suzuki
Senior Executive Officer	Hiroyuki Okada
Senior Executive Officer	Fumio Iwase
Executive Officer	Koichi Nagumo
Executive Officer	Shuichi Osada
Executive Officer	Haruyoshi Toyoda
Executive Officer	Shinji Ito
Executive Officer	Masato Tsutsumizaki
Executive Officer	Hiroshige Takada
Executive Officer	Takashi Ogasawara
Executive Officer	Kazuo Ueno
Executive Officer	Toshimichi Ishizuka
Executive Officer	Naoki Uchiyama

• · · · Offices • · · · Production sites • · · · Research sites • · · · Domestic subsidiaries



www.hamamatsu.com

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