

EPIC Online Technology Meeting on Ophthalmology

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HAMAMATSU Photonics France, Swiss Office

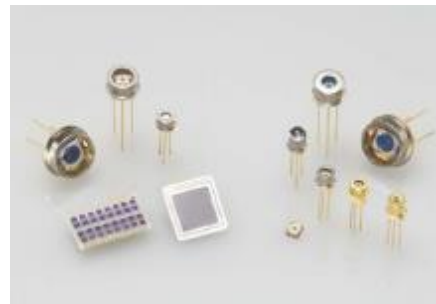
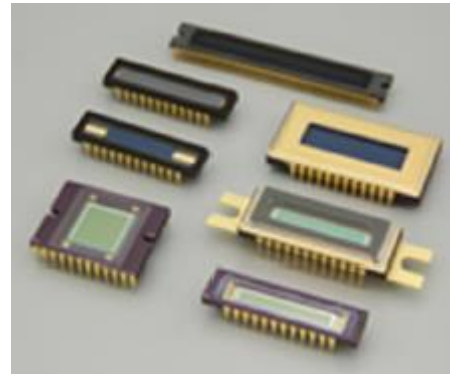
June 29th 2020

HAMAMATSU Photonics

- Very short intro
- Products for Ophthalmology

HAMAMATSU Photonics

- 1953: Founded in Japan - Manufacturing Phototubes, later PMTs, Light sources, Semiconductor based Sensors, Spectrometers, Modules, Complex instruments, etc.
- Today: 5000+ employees, 15'000+ Products, 1.3M\$ turnover,

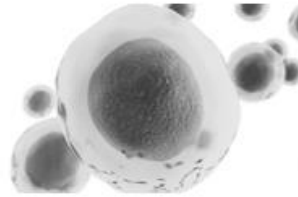


HAMAMATSU Photonics – Applications



Medical
Instrument

Academic
Research



Life Science

Measuring
Instrument



Industrial
Instrument

Automotive



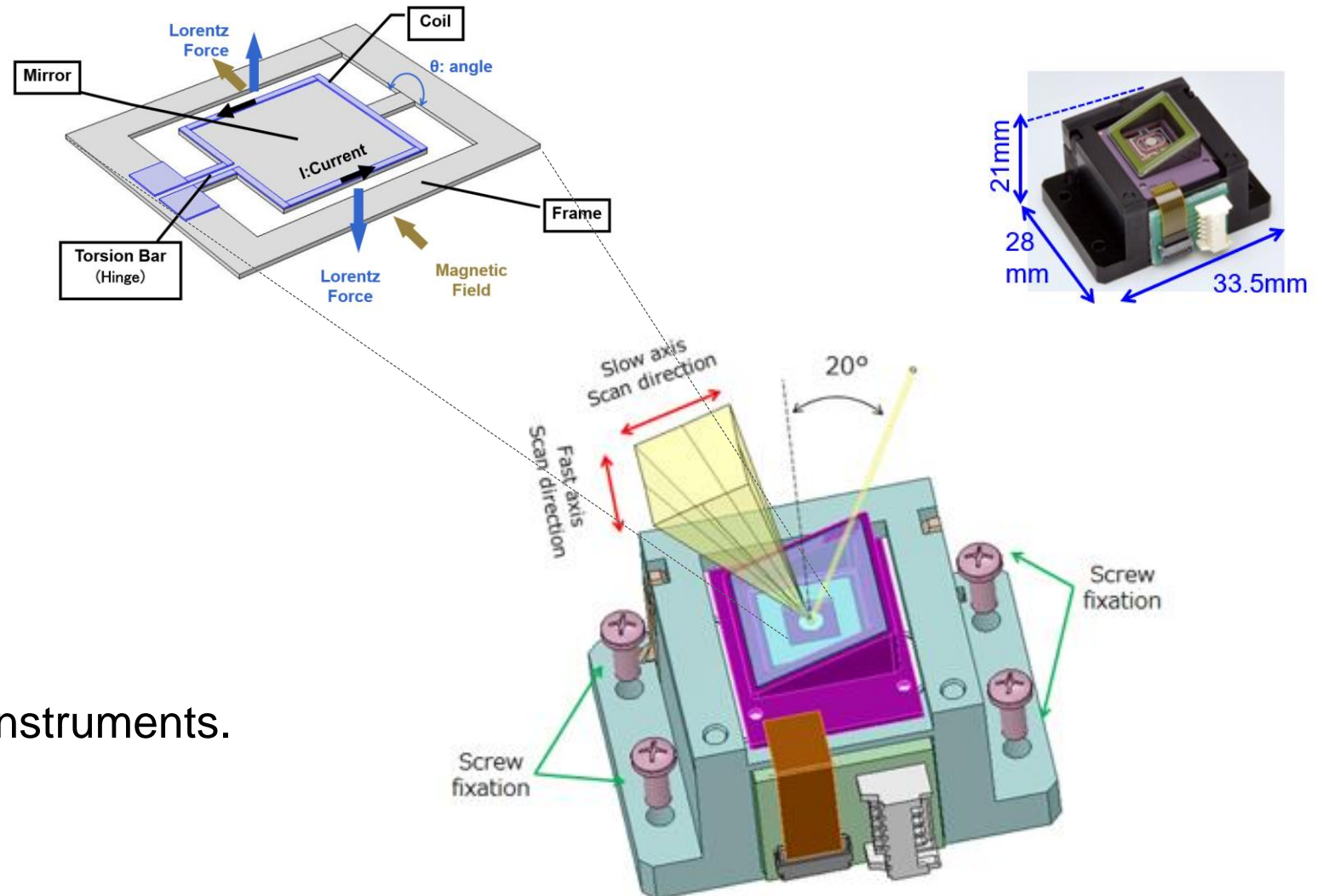
Analytical
Instrument

Consumer
Instrument



MEMS mirror for beam steering

- Dual-axis Mirror
d:1.95mm, Al or Au coated
- Beam deflection $\pm 10^\circ$
on both axis
- Quasi-static type
0Hz - ca. 100Hz
- Electromagnetic type
- Hermetically sealed
- High reliability, Compact.
- For table-top and portable instruments.
- Coming soon ...



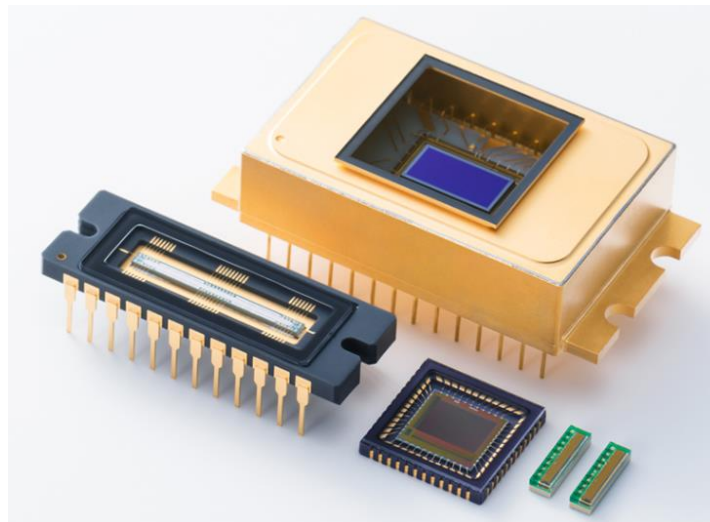
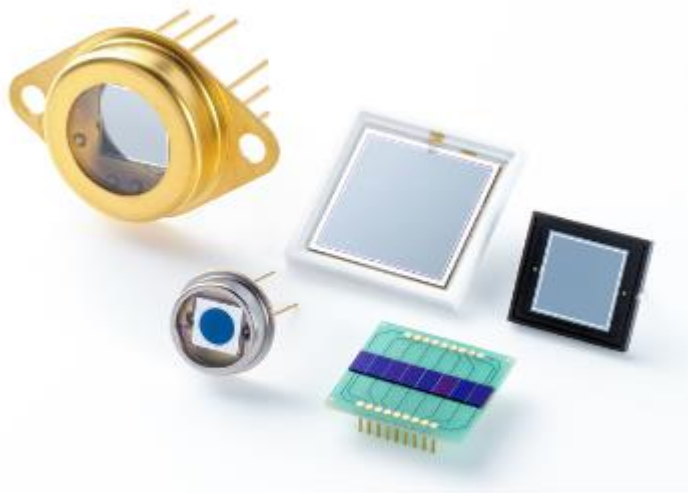
MEMS mirror for beam steering – High speed

- Dual-axis Mirror S13989-01H
d:1.23mm, Al coated
 - Fast axis : resonant 29.3 kHz $\pm 20^\circ$
Slow axis : quasi-static 0 - ca. 100Hz $\pm 12^\circ$
 - Electromagnetic type
 - Hermetically sealed
-
- High reliability, Compact, for table-top and portable instruments.
 - Allows to scan some 10s of frames/s, depending on resolution
 - www.hamamatsu.com/us/en/product/type/S13989-01H/index.html

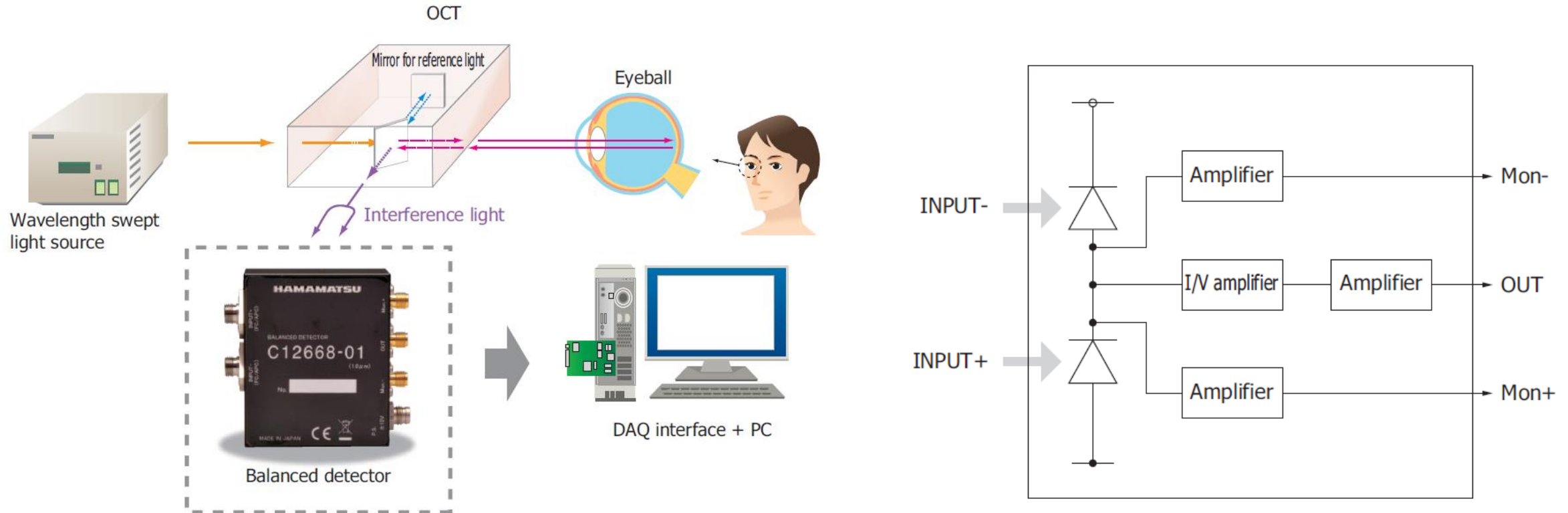


Detection - General

- Check out our wide range of standard products of PDs, APDs, MPPCs (Si-PM), Line- & Image sensors, Sensor modules, Board level Cameras.
- We are open to discuss your custom sensor.



Detection – OCT – Balanced Detector



- Patented structure to minimize internal multiple reflections
- Optimized for 1.0 μm or 1.3 μm / 200MHz or 400 MHz
- www.hamamatsu.com/us/en/product/optical-sensors/photodiodes/balanced-detectors/index.html

www.hamamatsu.com