

After Sales Service

Quality and continuous improvement is at the heart of everything we do at Photonic Science to ensure we deliver on-spec cameras and systems, every time.

Photonic Science is an ISO9001:2015 qualified company and as standard we provide a 12 month warranty on all our products, with warranty extensions available on request.

Photonic Science also provide after sales support for the lifetime of our products and we can provide repairs for all Photonic Science cameras and systems.

PHOTONIC SCIENCE

Laue Single Crystal Orientation System

Compact | Motorised | Real-time | Accurate

PHOTONIC SCIENCE

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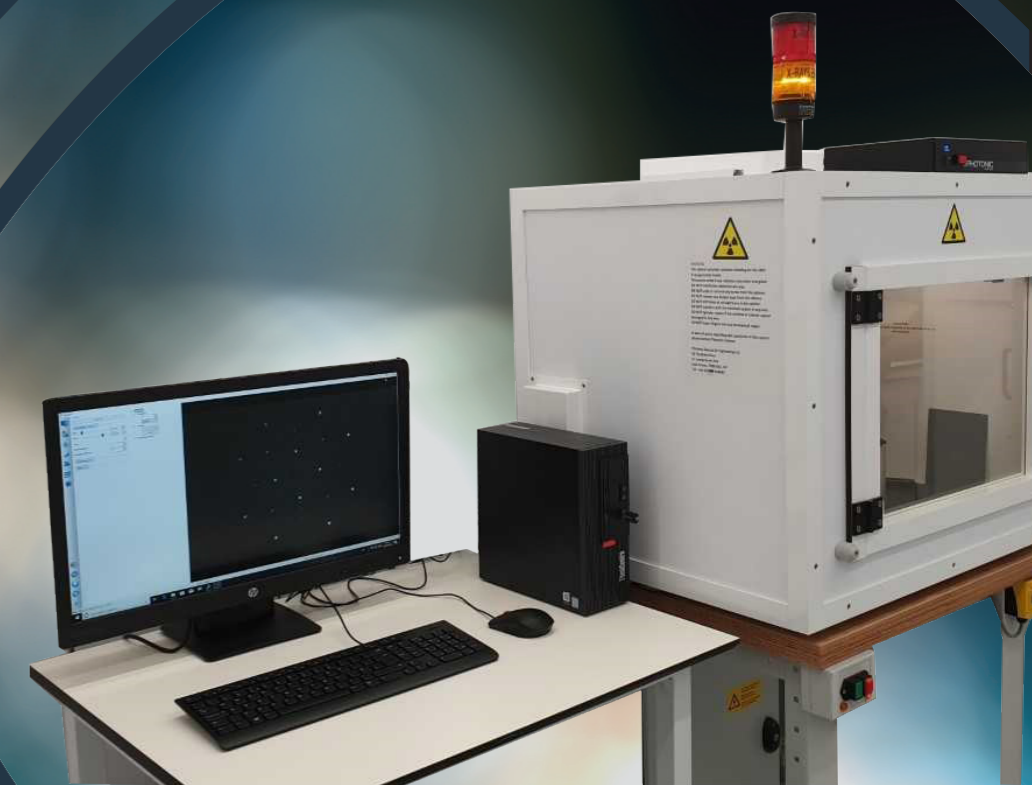
www.photonicscience.com

LAUE Solutions 20190700 DB Iss1



BLAUE Solutions 2019051214 DB Iss1

Industrial & Scientific Configurations



Crystal Orientation System

Photonic Science back reflection Laue system allows real-time crystal orientation down to 0.1 degrees accuracy.

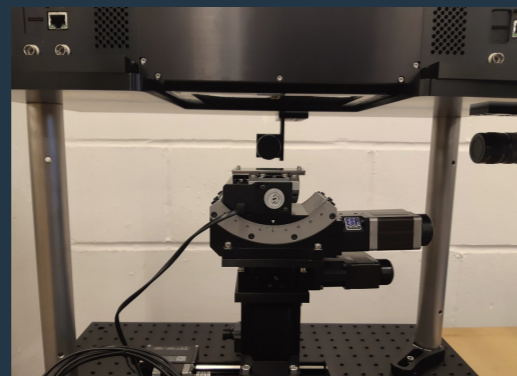
With PSEL software mis-orientation measurement down to 0.05 degrees.

Two dimensional orientation mapping of polycrystalline silicon wafers.

High-throughput sample screening & heavy duty sample orientation up to 20Kg for production environments.



Horizontal Laue system



Vertical Laue system

Photonic Science CCD back reflection Laue X-ray Detector:

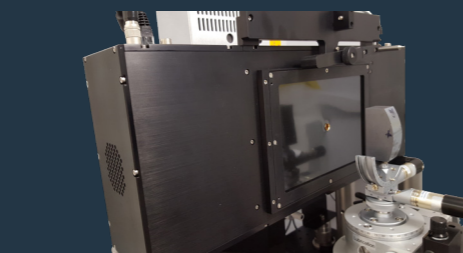
Features

Active input area of approx. 155 (h) x 105 (v) mm (approx.) imaged on the sensor

Minimum input pixel size of 83µ square, 1,867 x 1,265 pixels

Selectable exposure from 1ms to minutes

Pixel addition all owing



increased sensitivity at the expense of resolution

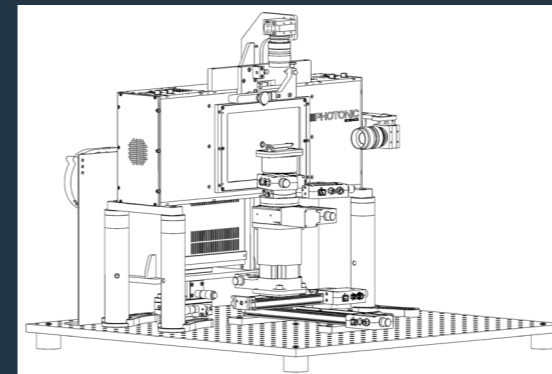
Automatic background subtraction mode

16-bit high precision acquisition mode

12-bit fast preview mode

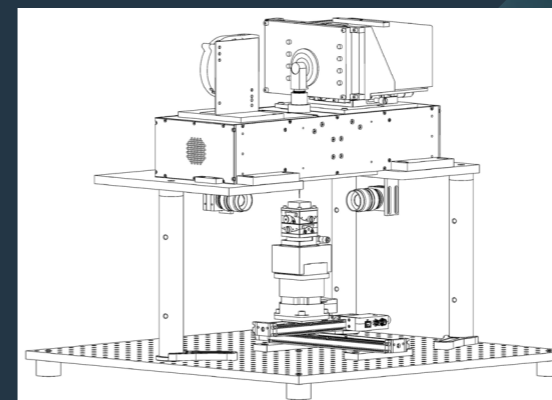
Models

Horizontal



Features	Benefits
<200µm beamsize	For small crystals
Motorised stages	Allows scanning along the growth axis
Motorised gonios	Direct compatibility with synchrotron /Neutron facilities set up
Manual gonios	Direct compatibility with cutting tools

Vertical



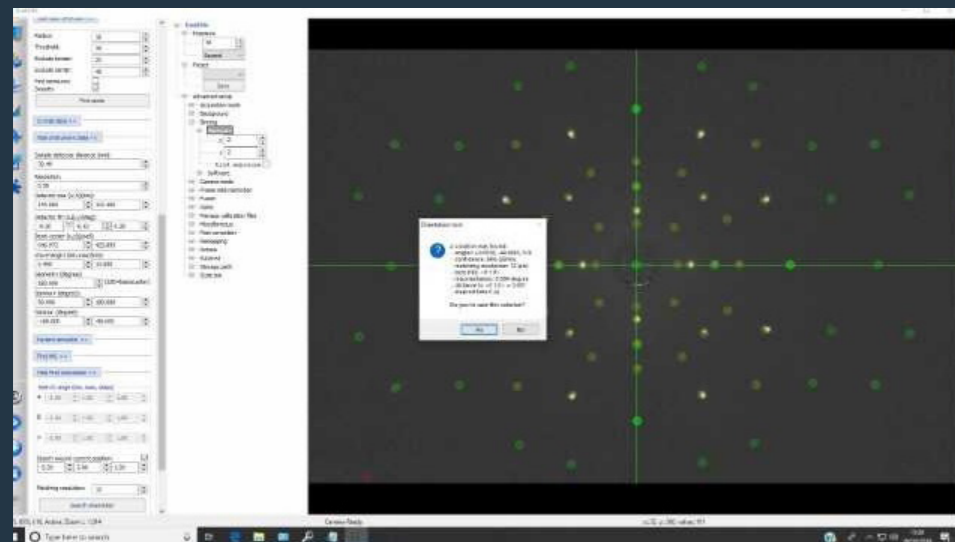
Features	Benefits
<200µm beamsize	Works with small grain polycrystalline structures
Large scanning linear stages	Allows automatic wafer or multiple sample mapping
Motorised Z stage	Allows compatibility with large rod / samples
Manual gonio	Allows seed orientation down to +/- 0.02 degree accuracy

Accessories

- | Laue X-ray Detector
- | Laue alignment software
- | High brilliance X-ray generator
- | Motorised/Manual goniometer & high precision stages
- | Video sample positioning/viewing camera
- | Laser distance sensor /joystick

Laue image alignment software

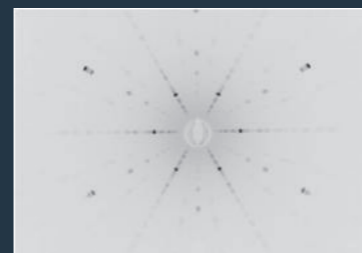
- Detects automatically diffraction spots and calculate spot position against reference crystal
- Calculate mis orientation against goniometer & crystallographic axis automatically (no manual fit of distorted patterns)
- Saves angular measurements in CSV format for further Quality Assurance traceability
- Top to Bottom end user menu allowing step by Step validation of the orientation procedure for non initiated crystallography users
- Python based software allowing remote access control from existing software / system using socket commands



LAUE Diffraction



Sapphire C-axis aligned



SiC hex aligned

Detector Materials:

HgCdTe / CdTe

InGaAs

InSb

Window Materials & piezo/ferro electric ceramics:

Al₂O₃

Quartz

LiNbO₃

Metals and alloys:

Tungsten

Molybdenum

Nickel based alloys

Laser Materials:

YAG

KTP

GaAs

Thin films / semiconductor substrates:

AlN

InP

SiC

Magnetic & superconducting materials:

BCO/BSCCO/HBCCO

FeSe

NbSn / NbTi

Scintillator materials:

BGO / LYSO

CdWO₄

BaF₂/CaF₂

