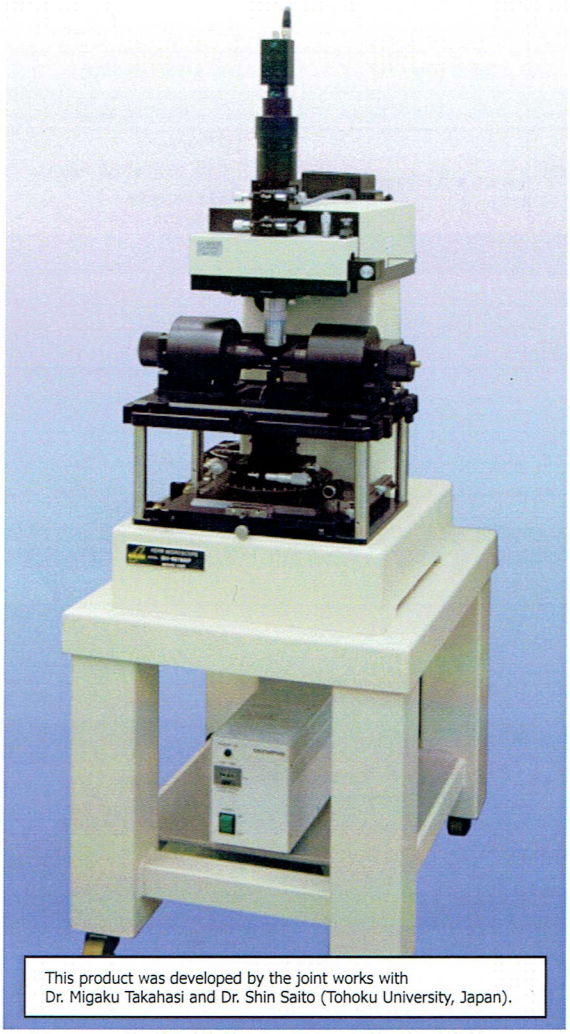
NEOARK

MAGNETIC DOMAIN OBSERVATION MICROSCOPE

MODEL: BH-786IP Series



This product was developed by the joint works with
Dr. Migaku Takahasi and Dr. Shin Saito (Tohoku University, Japan).

*The appearance of the product may change without prior notice.

Feature

Magnetic Domain Observation Microscope is optical equipment for surface observation of various kinds of magnetic materials by utilizing polarization state change based on Longitudinal Kerr Effect (Effect caused by In-Plane Magnetization) and Polar Kerr Effect (Effect caused by Perpendicular Magnetization).

The product is equipped with Basic Observation Software and Flame Movie Software for obtaining continuous images with selected Magnetic Field change.

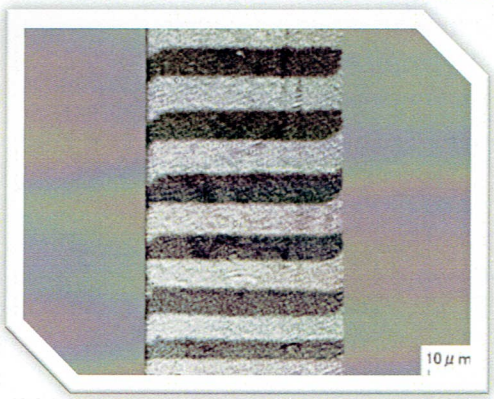
Target Sample

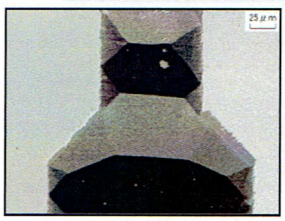
Soft Magnetic Material

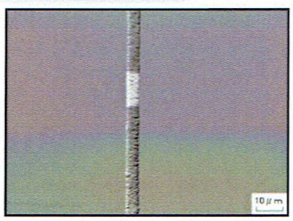
- Silicide Steel
- Permalloy
- Amorphous Sample

Permanent Magnet

Others







Main Performance

1) **Observation Direction**
   In-plane (One Axis) Direction (Longitudinal)
   Polar Direction
2) **Electromagnet**

In-plane Electromagnet	> ±10 kOe
Polar Electromagnet	> ±10 kOe

3) **Spatial Resolution**

x20 Objective Lens	2.5 μm
x50 Objective Lens	1.0 μm

4) **Observation Area**

x20 Objective Lens	250 x 175 μm
x50 Objective Lens	100 x 70 μm

MAGNETO-OPTIC KERR EFFECT PRODUCT

Magnetic Domain Observation Microscope BH-786IP Series
Specification Sheet

Observation Part				
Light Source	100 W Mercury Lamp			
Observation Direction	In-Plane - Longitudinal (one axis only)			
	Polar			
Objective Lens	**Magnification**	**Spatial Resolution**	**Total Magnification** *With 17 Inch Monitor	**Observation Area**
	x 20 Objective Lens	2.5 μm (Typ.)	x 1000 (Typ.)	250 x 175 μm (Typ.)
	x 50 Objective Lens	1.0 μm (Typ.)	x 2500 (Typ.)	100 x 70 μm (Typ.)
Observation CCD Camera	**CCD camera**	**Pixel**	**Pixel size**	**Frame rate**
	1/3 Inch Monochrome	Approx. 0.8 Mega Pixel (1024 x 768)	4.65 x 4.65 μm	15 Frame/s (@ 1024x768 Pixel) 30 Frame/s (@ 800x600 Pixel)
Electromagnet Part				
In-Plane Electromagnet	Generating Magnetic Field	> ±10 kOe		
Sample Holder for In-Plane Electromagnet	Acceptable Sample Size	5 x 5 x 1t mm ～ 10 x 10 x 1t mm (Depend on Magnetic Field)		
	Sample Stage	Manual X Y Z θ Stage		
Polar Electromagnet	Generating Magnetic Field	> ±10 kOe		
Sample Holder for Polar Electromagnet	Acceptable Sample Size	5 x 5 x 1t mm ～ 10 x 10 x 1t mm (Depend on Samples)		
	Sample Stage	Manual X Y Z Stage		
Bi-Polar Power Supply	Output Current	± 15 A		
	Output Voltage	± 45 V		
PC, OS, Monitor				
PC	IBM PC/AT Compatible PC			
OS	Windows 7			
Monitor	17 Inch Monitor			
Accessories	Keyboard, Mouse Cables, Others			
Software				
Basic Observation Software	Magnetic Field Control, Image Processing, Still Image Acquisition & Storage, Image Averaging, Differential Image Processing, Position Correction, Scale Display, and others.			
Frame Movie Software	Magnetic Field Control, Image Processing, Continuous Still Image Acquisition with Controlled Magnetic Field, Image Averaging, Differential Image Processing, Position Correction, Movie Making, Scale Display, and others.			
Dimension and Weight				
Main Unit	Dimension	810(W) x 600(D) x 1550(H) mm * Protruding parts are not included		
	Weight	Approx. 300 kg		
Rack (For PC and Others)	Dimension	570(W) x 700(D) x 1250(H) mm * Protruding parts are not included		
	Weight	Approx. 100 kg		
Utility and Operating Environment				
Power Source	Single-Phase AC100 V, 20 A (Two Lines, 50 / 60 Hz) *Acceptable Voltage Fluctuation Range: Within ± 3 %			
Air Pressure for Vibration Isolation Table	0.3kgf/cm^2 (Air Hose Diameter: Inner 4 mm / Outer 6 mm) *Air Compressor is not included to the product.			
Temperature Range	20 ℃ ～ 25 ℃			
Humidity Range	30 %～60 % * No condensation is required.			
Precaution	This product is a sensitive optical equipment. Please avoid shocks or/and vibrations to the product. The product is susceptible to harsh environment, especially weak to dusts or other fine particles. Please be noted to install and operate the product in environment with stable Temperature and Humidity.			

*This document is subject to changes at any time without notice.
*Actual Shape, Size and Color of the product may change during manufacturing period.
*Contents in this catalog is for a reference. Actual specifications will be decided in consultation.

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