# Comprehensive Catalog Ver.3

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Produst Structure Standard Specificartions						
Models	D2XZ-KSH、D3XZ-KSH、D5XZ-KSH					
			Standard Z axis		Optional Z axis	
Measurable			150mm	200mm	300mm	460mm
range	Standard	200mm	0	0	×	×
		300mm	0	0	×	×
	X axis	500mm	0	0	0	0
Minimum reading value	0.01mm(in Digmatic mode)					
Total magnifications	Microscope:50x·25x Telescope:5.5x + marking					
Dimention and Weight	370mm(H) x 450mm(W) x 220mm(D) 12kgs					

# Major features of Measuring Microscope XY, Z-series and Cathetometer

- Minimum mesurement: 0.01mm
- Minimum focus distance in telescope mode: 150mm
- To measure a subject at the front
- The microscope tube can be ajusted at any angle desired
- Rich combinations of X and Y axes

# MEASURING MICROSCOPE XZ-series

The only measuring microscepe XZ-series available in Japan.

### Product

To measure the holizontal or vertical distance between two points on flat surface. By switching to the telescopic mode, you can measure a subject at a distance aheadlt makes noncontact-measuring for subjects though glass or at an unaccessible place possible. In addition, by combining the adapter lens for the telescope mode, it enables you make measurement from closest distance of 150mm, while it requires 1.8 m to ∞ with its standard specification. In tensil testing, for insance, it enables you to measure dimentions of various subjects with ease. We're ready to provide you various combinations of X and Z axes options in order to accommodate your measurring requirements.





# MEASURING MICROSCOPE Z-series

Mounting dimensions

Produst	Structure Standard Specificartions
Models	NZ-150D、NZ-200D、NZ-300D、NZ-460D
Measuring range	Zaxis 150mm、200mm、300mm、460mm
Minimum reading value	0.01mm(in Digmatic mode)
Total magnifications	Microscope:50x·25x Telescope:5.5x with + Marking
Dimention and Weight	320mm(H) x 200mm(W) x 230mm(D) 3.5kg



Produst S	Structure Standard Specificartions
Models	NCZ-150D、NCZ-200D、NCZ-300D、NCZ-460D
	Zaxis 150mm, 200mm, 300mm, 460mm
Minimum reading value	0.01mm(in Digmatic mode)
Total magnifications	Microscope:50x·25x Telescope:5.5x with + marking
Dimention and Weight	φ440 x 760mm(H) 25kg

# Cathetometer

This model enables you to measure vertical distances of subjects in difficult places to measure.

### **■**Product

This instrument is designed to measure the vertical distance between two points ahead. Its digital scale equiped enables you to read values with ease. Its tripot horizontal adjustment sytem helps you set it horizontally. It can be rotated 360° with its rotating table. By switching it to telescopic mode, you can mesure the vertical distances on subjects at a distance. Since it can measure in a non-contact manner, it is possible to measure a subject through a glass or one being placed in a difficult place, from the viewpoint of safety, without any difficulty. Further, by combining adaptor lens, it makes it possible to measure from the minimum distance of 150mm, while it requires 1.8mm with its standard specification.



# **MEASURING MICROSCOPE XYseries**



# Parts in complex shapes can be measured

# Major feasures

- inumum measurable value: 0.01mm
- Complex shapes can be measured
- Rich lineup

### Produc

This enables you to measure the distance between 2 points on flat surfaces of machined parts and/or precision parts.In particular, since this unit can measure in a non-contact manner, it is possible to measure easily complicated shaped parts that are difficult tomeasure, with a caliper micrometer system adopting the plane coordinates in the microscope. It is also suitable to measuring not only metal parts, but also plastic and lubber parts whose shapes can easily be transformed. It can be used as a substitute for a toolmicroscope or projector.

Produst Structure Standard Specificartions				
Models	D2XY-KSH、D5XY-KSH			
Managerina	Xaxis 200mm、500mm			
Measuring range	Yaxis 150mm			
Minimum meesuring value	0.01mm(in Digmatic mode)			
Total magnifications	50x·25x with + Marking			
Stage	Selectable: alminium of glass			
Dimention and Weight	350mm(H)×550mm(W)×370mm(D)22kg			











# PC is not required to set to the C-mound of your microscop AR-D200HD

74mm

to PC monitor

84mm

# AR-D200HD C-mound camera connectable directly to your PC monitor

C-mound camera for high quality images which can be connected directly to your existing PC monitor. You can get the high quality image of an object under microscope and save in SC card



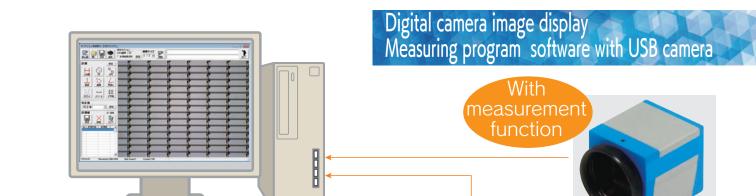
USB security key

\*A cable to connect AR-D200HD to your PC monitor is not included.

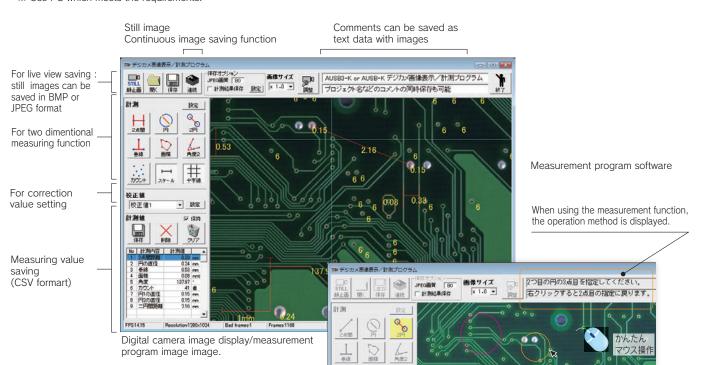
### **■**Product

All necessary conrols (i.e.: cross line indication, image adjustments and etc. can be made by mouse connected to camera, and images can be saved in SD card.

USB camera (color) 1.3 mil. pixels



\* Use PC which meets the requirements.



# Three-axis Measuring Microscope



NTM-100F

For highly accurate measurements of small parts and microfabricated products

### Main features

- Minimum measuring value: 0.01mm
- Micrometer head mounted on XY stage
- Degimatic indicater mounted on Z axis
- Total magnification: 100x

### Product

This device enables you to measure length, width, and depth (X, Y, Z) with high accuracy. It is suitable for dimensional inspection (depth inspection) of small parts and microfabricated products. The micrometer head allows the XY stage to move finely. This allows you to measure the distance moved. Since the Z-axis is equipped with a digital indicator to display the values measured, the values can be read easily

Produst Structure Standard Specificartions			
Models	NTM-100F		
Measuring range	X. Yaxis 0~25mm		
	Zaxis(Deapth) 0~6.5mm		
Minimum reading value	X.Yaxis 0.01mm (Micromeasure head)		
	Zaxis 0.001mm (Digimatic indicator)		
Total magnifications	100x (200x) with + Marking		
Objective piece	10x (20x)		
Power source of lighting	USB port		
Dimention and Weight	400mm(H) x 200mm(W) x 210mm(D) 6.5kg		

# Compact Portable Shop Measuring Microscope



# Easy measurement like a caliper

# **■**Product

An inexpensive and easy-to-use microscope that allows you to observe the surface of a subject. It can be used widely in the industry as a factory measuring microscope. Since it is small and lightweight, and it has a built-in micrometer, measurement can easy be made even in darkness with a portable light source.

NSM-20

Produst Structure Standard Specificartions			
Models	NSM-20	NSM-40	NSM-100
Total magnifications	20X	40X	100X
Minimum 1 scale	5/100mm	2.5/100mm	1/100mm
Field bo vision	9.0mm	4.5m	1.8mm
Measuring range	5.0mm	2.5mm	1.0mm
Working distance	17mm	19mm	5.5mm
Dimention and Weight	φ64 x 200mm 600g	φ64 x 200mm 600g	φ64 x 200mm 600g

# Micro measuring microscope



Lightweight and compact, easy to observe on site

### Main features

- Minimum measuring value: 0.001mm
- It is possible to measure and observe the length of cylindrical objects and curbed surfaces.
- Compact, lightweight and easy to carry
- Total magnification: 20x

NMM-25D

### Product

You can measure the length and observe the surface by placing this unit on the subject. Since it is small and lightweight at 3.2 kg, it is easy to carry and enable to measure on site. You can observe the surface of a large subject that has to be obsereved on site. In addition, not only on the flat surface of a subject, but also it is possible to easily measure the dimensions of a cylindrical or curbed surface being difficult to measure, The digital micrometer head allows you to move the X-axis finely and the distance moved can be read.

Produst Structure Standard Specificartions				
Models	NMM-25D			
Measuring range	Xaxis 0~25mm			
Minimum reading value	0.001mm (Digital microhaed meter)			
Total magnifications	20x with + Marking			
Dimention and Weight	220mm(H) x 160mm(W) x 160mm(D) 3.2kg			

# Burineru Measuring Microscope



# For measuring indentation diamete

### Product

For measuring indentation diameter of the Brinell hardness tester. It is often used in construction related to heat treatment. It can also be used as an industrial handy type contact measuring device, which can measure in 0.05 mm increments.

NB-HL (with penlight)

Produst Structure Standard Specificartions			
Models	NB-H NB-HL(with penlight)		
Total magnifications	20x		
Field bo vision	8.5mm		
Measuring range	5mm		
Minimum scale	0.05mm		
Dimention and Weight	205mm(H) x 55mm(W) x 50mm(D) 425g		





# Compact Portable Shop Metal Microscope

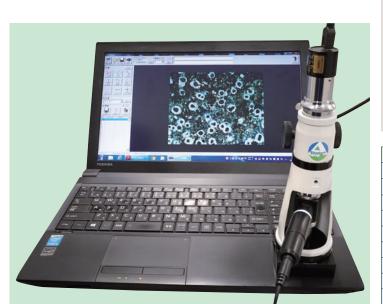
It enables you to observe the surface of parts that is not possible with a desktop microscope.

# Main features

- Small size and convenient to carry.
- Can also be used for color checking.
- With this eassiness, the total magnification is 100 x.
- For observation of the surfacd of ductile cast iron.

### Product

It is a metallurgical microscope enabling you to easily observe the surface of metal skin, etc. at the site or factory. Coaxial vertical illumination allows you to observe the condition of the metal surface clearly. Placie this microscope on the plane to observe, and the plane can be observed. It makes it possible to observe the surface of large-sized parts or inmovable parts which cannot be made with a desktop type of microscope.





Produst S	Structure Standard Specificartions
Models	NSM-M (for both of USB port type and battery type)
Total magnifications	100x
Eye piece	10x
Objective piece	10x
Microscope tube	Monocular
Forcusing	Vatical motion
Power source of lighting	USB pot type: DC5V 1A, Battery type: AA Battery x 4
Accessory	A special alminum case
Dimention and Weight	φ62 x 220mm(H) 700g

▼We have 5 different types of pedestals. Please make your choice according to your applications.



Ε



# DSM FIELD MICROSCPE SERIES WH

The DSM series is a handy, ultra-compact and, portable precision microscope that breaks the conventional concept of microscopes and makes it possible to use in any field. Despite being ultra-compact and portable, it has high magnification, high performance, and high contrast comparable to high-end research microscopes. Since pictures can be taken on the spot, it is indispensable for field observers. Please select the most suitable model according to your observation purpose.

# Main features

- Being ultra-compact and lightweight, obsevation can be made holding it by your hand.
- Ideal for personal use at low price.
- Easy, fast, high performance and high resolution.
- Easy picture-taking.

- ■Total magnification: 20-800x.
- 6 models are available for a wide range of applications.
- Various accessories for special observations.



# ■Applications

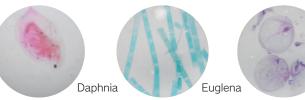
- Use in pollution surveys of environmental organisms in lakes and rivers.
- Observation of pollen, spores, and capillitium in the field.
- Microbiological test for red tide factor.
- •Inspection, at the factory site, of protozoa, bacteria, etc. relaed to wastewater purification and maintenance systems using activated sludg.
- Inspection of bacteria, mold, mites, etc. associated with building maintenance.
- On-site inspection in judicial forensics.
- Inspection of genuine and fake with herbal medicine. (Chinese medicine)
- Inspection of fish parasites at fish farms.
- Inspection of cosmetic emulsions and pigments. (lipsticks)
- Film powder property inspection.
- Inspection of water and sewage.

# Super-Compact Portable Inverted Biological Microscope

# Required for field observation of microorganisms and/or opllene

### Product

It is a portable and ultra-compact on-site microscope that can be used separately from the stationary microscope (for indoor use). It is a must-have item enabling field observers to obseve microorganisms in lakes, rivers and seawater, and also pollen and spores in the field. It is palm-sized, portable, ultra-compact, lightweight, and in compact design. Its revolver type magnification adjustment system enables you to observe at 40x, 100x, and 400x according to the subject. Since it is also designed so that you can observe it with the cover glass side up, observation on a petri dish can also be made. You can make microscopic observation anywhere with it.



Produst St	ructure Standard Specificartions
Models	DSM-I DSM-ID DSM-IP
Total magnifications	40X、100X、400X
Eye piece	10x
Objective piece	4x、10x、40x
Microscope tube	Monocular
Revolver	3
Forcusing motion	Vertical motion
Power source of lighting	Inverted
Accessory	High brightness lighting, Pen type lighting, Mechanical stage
Dimention and Weight	110mm(H) x 50mm(W) x 150mm(D) 900g

Noctiluca



# HICH IS INDISPENSABLE FORFIELD OBSERVERS

# DSM-ID: Super-Compact Portable Inverted Dark-field Microscope



This microscope is a portable high quality dark-field microscope developed based on DSM-I model, which is equiped witha special dark-field illuminatiuon system.

DSM - I D型

# Applications

optional item.

- Observation of tobacco smoke particles.
- Observation of colloidal particles.
- Observation of jewel inclusions.
- Observation of floating particles in liquid
- Observation of plankton in seawater, rivers, lakes, and marshes.
- For building maintenance and inspections of bacteria, molds, mites, etc. in general houses.
- Inspection of termites in forests And intestinal protozoa and nematodes.



### Applications

- Bacterial examination in the dental field.
- •Identification of spores and phytoplankton.
- Protozoan identification.
- •Identification of bacteria, molds, mites, etc.
- Grease deterioration inspection.
- Contamination inspection in machine oil.
- Emulsion inspection.

# 

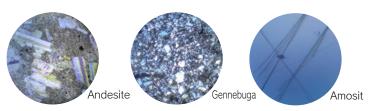
# DSM-IP: Super-Compact Portable Inverted Polarizing Microscope



This microscope is also a model developed based on DSM-I which is a portable microscope equiped with bright-field illuminator and eyepiece(10x) having built-in analyzer

# Applications

- Observation of rocks, minerals and crystals.
- Observation of asbestos and asbestos.



# DSM-II: Super-Compact Portable Invereted Phase-Contrast Microscope

A palm-sized microscope available for identification and inspection purposes.

Product

This is a small and portable field microscope can be used on site separately from the stationary microscope (indoor use). By fixing a phase-contrast lens and special phase-contrast illuminator to it, you can get a high contrast image of semi-transparaent

	A STATE OF THE STA
Produst S	tructure Standard Specificartions
Models	DSM-II
Total magnifications	100X (50X,200X,400X,800X)
Eye piece	10X (5X, 20X)
Objective piece	10x,20x,40x
Microscope tube	Monocular
Forcus adjustment	Vatical motion of tnestage
Туре	Inverted
Accessores	USB cable with light controler, Alminum case
Power source of lighting	USB pot type: *DC5V 1A
Dimention and Weight	190mm(H) x 50mm(W) x 150mm(D) 1.1Kg

Onion



### ■DSM-III型

A upright type model.

Place it on the observation plane for observation. It is possible to observe the surface of large parts and immovable parts that cannot be done with a tabletop microscope.





Martensite and ferrite



### ■ DSM-IV

It is an inverted type, and a sample is placed on the stage of this microscope for observation. Suitable for observation of objects that are difficult to observe with DSM-III, such as small parts.

Total magnification up to 800x

# DSM-III & DSM-IV Super-Compact Portable Mital Microscope

# Palm-sized with equivalent performance to desktop type

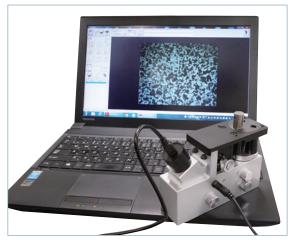
# ■DSM-III & DSM-IV

Super-compact metallurgical microscopes for observation of the surface of metallic skin. Being ultra-compact, light-weight (900g) and palm-sized, you can easily carry it to make a wide raange of observations. By rotating its

revolver, you can switch the total magnification to 3 levels; 100x, 200x, and 400x.By switching the eyepiece to 20x, it is possible to increase the total magnification up to 800x, and you can make observe at a magnification that matches the characteristic of a subject.It has the same performance as a tabletop metallurgical microscope in terms of field brightness, resolution, magnification, etc.Power for lighing can be taken from its USB port.



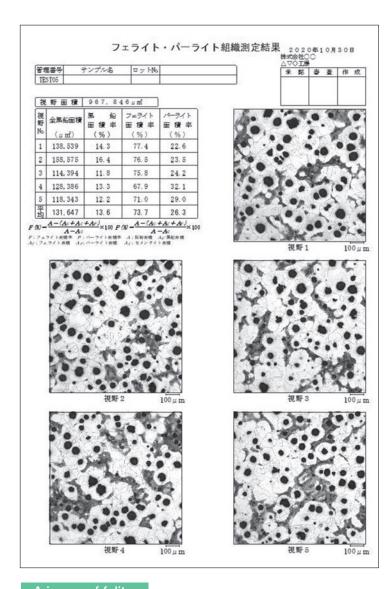
Camera adaptor for smartphone



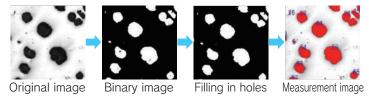
Observation image through DSM-IV

Produst Structure Standard Specificartions		
Models	DSM-III DSM-IV	
Total magnifications	100X 200X 400X(50X 800X)	
Eye piece	W10X (W5X W20X)	
Objective piece	M10x M20x M40x	
Microscope tube	Monocular	
Revolver	3 nobs	
Forcusing motion	Vatical motion of the main body (DSM-Ⅲ)	
	Vatical motion of the stage (DSM-IV)	
Power source of lighting	USB pot type: *DC5V 1A	
Accessory	USB cable with light controler, Alminum case	
Dimention and Weight	110mm(H) x 50mm(W) x 150mm(D) 900g	





# A image of felite



### parlite report













Binary image

Measurement image

# [Operational requirements]

S: Windows7/8/10 (in Japanese version)

C O U: Pentium IV and or higher recommended

Menory: More than 1GM

H D D: more than 1GM free space of a hard disc

(more than 3GM free space of a hard disc preferable)

Others: CD-ROM (required at installing)

USB Port: more than 2 ports and one of

them should be USB3.0

# Graphite spheroidization rate measurement software

(available in Japanese only) Compact system configuration that is easy to bring to the work site

# Features of graphite granulation rate measurement software Ver.3.

- JIS standard G5502, old JIS (NIK method) compliant graphite granulation rate measurement.
- Equipped with a measurement function for CV graphite cast iron that complying with ISO16112 standard and JIS G5505 standard.
- Simultaneous measurement of ferrite area ratio and parlite area ratio.
- Continuous measurement with automatic operation function.
- One-click measurement report creation. (EXCEL output)



NIPPON STEEL TECHNOLOGY CO., LTD.

# **RE-EXPORT ITEMS**







# Zoom Stereo Microscope

Three-dimensional observations can be made on various objects, as if you were observing the naked eyes.

### Procucts

It allows you to observe an object in three-dimension, as if you were observing it with your naked eyes. It provides you a wide range of uses in various areas such as observation of insects and plants, jewelry, mechanical parts or precision equipment. It can be used also for inspecting electronic works, assembling works, dental works, handicrafts and so on., and, inspection of assembling works, detal works, handicrafts, precsion works and so on. Two types of lighting systems available; LED ring lighting type (NJSZ8B) and LED epi-illumination (NJSZ8B) according to your requirement. The stand can be switched.

Eyepieces	Auxillary objective lens
WF15×φ16	0.5× WD:220mm
WF20× φ12	0.7× WD:125mm
WF30×φ 9	2 × WD: 45mm

Produs	t Structure Standard	Specificartions
Models	NJSZ8A	NJSZ8B
Total magnifications	$6 \times \sim 50 \times (\phi 34.3 \text{mm} \sim \phi 4.6 \text{mm})$	
Eyepiece	WF10×/φ23	
Objective piece	$0.6 \times \sim 5 \times (Zoom\ ratio\ 8.3)$	
Forcal distance	115mm	
Stage	φ 125 Transparent glass	φ 100 Transparent glass
	$\phi$ 125 Black/white plate	φ 100 Black/white plate
Lighting source	LED Transmitted lighting	LED Transmitted lighting
	LED Ring lighting	epi-illumination

# **Boom mount**

# Smooth with ball guide

- ■Product composition
- Boom mount
- Binocular head,
- Focusing unitL
- ED ring light



# **RE-EXPORT ITEMS**

# Stereo Entity Microscope



# ■NNTX-3

- A low-priced stereomicroscope with epi-illumination and transmitted illumination.
- It is widely used for inspection at production sites and etc.
- It is the best microscope for students' learning and practical training.

# NNTX-L

- This is a stereomicroscope with a focal length of 230 mm.
- A work space can be secured, and it is suitable for assembly work and inspection.
- You can observe with an outstanding stereoscopic image in a wide field of view.

Produst Structure Standard Specificartions			
Models	NNTX-3	NNTX-10	NNTX-L
Total magnifications	20x 40x	20x 40x	10x
Eyepiece	WF10x/φ20	WF10x/φ20	WF10x/φ20
Objective piece	2x4x (Rotation variable)	2x4x (Rotation variable)	1x
Forcal distance	57mm	72mm	230mm
Stage	Acrylic plate poppy glass	Acrylic plate	Non
Lighting source	Epi-illumination and transmitted illumination	Non	Spot light

# NNP-107A

# Polarizing Microscope NNP-1074

# Applications

- Observation of rocks, minerals and crystals.
- Observation of asbestos.

Produst Stru	ucture Standard Specificartions
Models	NNP-107A
Total magnifications	40~400x
Eyepiece	WF10x/φ18
Objective piece	4x 10x 40x
Observation system	45 degree tilted barrel 360 degree rotation type
Standard equipments	Uniaxial coarse and fine movement handle Capacitor NA1.25
Stage	Rotating stage 360 degree scale
Polarizer	Analyzer:Sliding Polarizer: 360 degree rotation
Lighting	Halogen 6V 20W

# Accessory



# Standard Bodytube

Specifiction				
	Total Mangnification	Focal distance	View field	Lens
Microscope	50x	25mm	2.9mm	O.P.A1.2.
Microscope	25x	50mm	5.3mm	O.P.A1.
Telescope (standard)	5.5x	1.8m~∞(expanding and contracting the eyeplece) O.P.A		



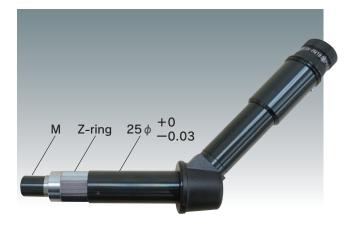
An adapter lens is used for close-range measurements as a telescope. \*\*Adapter lens A is set in the standard lens barrel.

# Adapter Lens

### Telescope focal distance combination table

·	
Combination of objectivse	Focal distance
PABC	150~180mm
ABC	180~230mm
PAC	230~300mm

Combination of objectivse	Focal distance
AC	280~460mm
PAB	330~640mm
AB	510~2,150mm



# Inclined Bodytube At 45 degree angle

# Features

- You can zoom focus by operating the z-ring.
- •You can use it as a telescope by removing the M lens.

Produst Stru	ucture Standard	Specificartions
Models	Microscope	Telescope
Total magnifications	23~35×	4×
Working distance	26~33m/m	300m/m~∞
View field	φ5.2~4.5m/m	(Remove Miens)





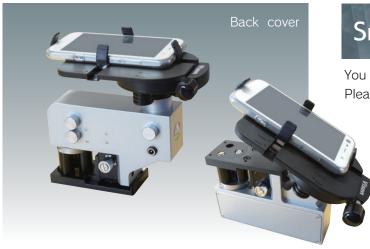
Examples of its uses





# Zoom Scope TS-93005

	Specification
Magnification range	Zoom tube $0.8x \sim 6.4x$ (Zoom ratio $8.0$ )
WD	83mm
Monitor magunification	40x~approx. 350x **When a 1/3inch CCD camera and a 13 inch monitor are connected



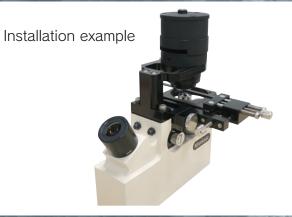
# Smartphone Camera Adapter

You can easily shoot with your smart phone. Please contact us for compatibility.



# Back cover

# Mechanical Stage



# **USB** Camera

For a USB camera, please prepare a personal computer separately.

O S Windows10 (Only Japanese version of Window 10 is corresponded.)







# Head Office • Show room

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Sales department TEL:81-268-71-7551

E-mail info@nihonkouki.co.jp

http://www.nihonkouki.co.jp/

### Second factory

1678-1 Muramatsu, Aoki-mura, Chiisagata-gun, Nagano-ken, Japan 386-1602

Food and beverage manufacturing industry, textiles  $\cdot$  textile products  $\cdot$  clothing manufacturing industry, building materials  $\cdot$  furniture, ceramics  $\cdot$  stone products manufacturing industry, pulp  $\cdot$  paper  $\cdot$  paper processed goods manufacturing, publishing  $\cdot$  printing, chemical manufacturing industry, steel  $\cdot$  We are using it in various fields such as nonferrous mining, machine manufacturing industry, electric machine manufacturing industry (semiconductor), transportation machinery and equipment manufacturing industry, university, research institution, school  $\cdot$  teaching material, medical institution etc.

\* Specifications and design etc. of cataloged products are subject to change without notice.