



# Ikegami **image**



# HUNGRY FOR DETAILS

**IKEGAMI IS A LEADING MANUFACTURER** of specialized cameras, image processing and transmission equipment. Ikegami was founded in 1946 in Tokyo, Japan. Today around 800 employees are working in 3 factories and 9 sales and service organizations all over the world.

Ikegami has consistently created the most advanced products in all image processes, namely image, transmission, processing, recording and display. Ikegami Electronics (Europe) GmbH in Neuss, Germany, was founded in 1970 and it is the sales and service organization for Europe and Africa.

Ikegami has an office in the UK, a regional office in Dubai and works with distributors, system integrators and dealers throughout Europe, Middle East & Africa.

## EMMY AWARDS



- 1981** Development of Digital Computers for automatic adjustment of colour studio cameras
- 1983** Development of the EC-35 Electronic Cinematography Camera
- 1994** Development of Skin-Tone Detail, Edge Control Enhancement Technology
- 2010** Development and Production of Portable Tapeless Acquisition

## MEDICAL SYSTEMS

### 60 ULTRA HD CAMERAS 4K

- 60 **NEW** **MKC-750UHD** | 3CMOS 4K Medical Grade Camera
- 61 **NEW** **MKC-704KHD** | 3CMOS High Sensitive Full-HD Medical Grade Camera
- 62 **PRELIMINARY** **MKC-704KHD** | Native 4K single chip Medical Grade Camera

### 63 FULL-HD CAMERAS

- 63 **MKC-700HD** | 3CMOS High Sensitive Full-HD Medical Grade Camera
- 64 **MKC-310HD** | 3CMOS Full-HDTV Medical Grade Camera
- 65 **MKC-210HD** | 1CMOS Full-HD Medical Grade Ultra Compact Camera

### 66 CAMERA ADAPTORS

- 66 **NEW** **CFA-400 Series** | Surgery Microscope High Resolution Adaptors for 3 chips Full HD/4K Cameras

### 67 FULL-HD RECORDER

- 67 **MDR-600HD** | Medical Grade Digital Video Recorder

### 68 LCD COLOUR MONITORS

- 68 **PRELIMINARY** **MLW-2750UHD** | 27-inch 4K Multi-Format high Luminance LED Colour Monitor
- 68 **PRELIMINARY** **MLW-3110U** | 31-inch 4K LED Colour Monitor
- 69 **NEW** **MLW-2627C-DC** | 26-inch Full-HD 3G Multi-Format high Luminance LED Colour Monitor
- 69 **NEW** **MLW-2627C-3D** | 26-inch Full-HD 3D LED Colour Monitor
- 70 **MLW-2624C-DC** | 26-inch Full-HD 3G Multi-Format LCD Colour Monitor
- 70 **MLW-2424C-DC** | 24-inch Full-HD 3G Multi-Format Gamut LCD Monitor

- 71 **MLW-3225C** | 32-inch HDTV/SDTV Multi-Format LCD Colour Monitor

- 71 **MLW-3225C-3D** | 32-inch 3D HDTV/SDTV Multi-Format LCD Colour Monitor

- 71 **MLW-2150HD** | 21.5-inch Full-HD 3G Multi-LED Monitor

- 72 **Monitor Comparison Table**

### 73 ACCESSORIES FOR MEDICAL SYSTEMS

## SECURITY SYSTEMS

### 76 FULL-HD CAMERAS (HD-SDI)

- 76 **ISD-2500HD** | Ultra High Sensitivity CMOS Colour Single-Chip HD-SD Camera
- 77 **ISD-220HD** | Full-HD Wide Dynamic Range Camera

### 78 IP NETWORK HD CODEC

- 78 **IEN-200HD** | HDTV/SDTV Network Video Encoder
- 78 **IDE-200HD** | HDTV/SDTV Network Video Decoder

### 79 HIGH PERFORMANCE DAY/NIGHT CAMERAS

- 79 **ICD-809P** | 1/3-inch High Resolution & Performance True Day/Night Camera
- 79 **ICD-879P** | 1/2-inch High Resolution & Performance True Day/Night Camera

### 80 FLAT SCREEN MONITORS

- 80 **ULE-217** | Full-HD 21.5-inch Security Surveillance TFT Monitor with HD-SDI
- 81 **ULM-193** | 19-inch Security Surveillance TFT Monitor
- 81 **ULM-173** | 17-inch Security Surveillance TFT Monitor

- 81 **ULM-153** | 15-inch Security Surveillance TFT Monitor


## INDUSTRIAL SYSTEMS

### 84 INSPECTION

- 84 **TIE-Series** | Colour Visual Tablet Inspection Equipment
- 85 **POIE-Series** | Colour Powdered/Granulated Medicine Inspection Device







Our technology has the capability of inspecting tablets for fine hairs and fibres, diffuse stains and many other defects with a high degree of accuracy

# LIFE INSURANCE FOR VALUABLE GOODS

# TIE-Series



By adopting the newly developed optical system A.I.I., the TIE-9000 series has the capability of inspecting tablet for diffuse stains, printing defects, and many other defects with a high degree of accuracy. The new developed high quality color line sensor is equipped with the camera unit. Also, combined the high quality image processing technology, the detection accuracy of color stain is significantly improved. The TIE-9000 series can contribute greatly to improving product quality, consistency and safety, as well as helping to improve overall production efficiency.

- RGB Colour line sensor
- Colour processing technology allows diffuse stains and printing defects to be easily detected
- High accuracy detection of small defects, foreign matter and fiber in or attached to the tablet
- Extensive supply of tablet
- Feeding section
- Stable high-speed transportation by 2 rows belt transportation section
- High speed and stable supply
- Colour touch panel

## Colour Visual Tablet Inspection Equipment

- Operate while Checking Transportation Section
- Camera for High Accuracy Inspection (Option)
- Process Data Store in PC connected to LAN
- Easy Setting of pre-set Threshold (Option)
- Display Sample on Touch Panel

RATINGS / PERFORMANCE		
Applicable Tablets		Plain tablet, Film-coated tablet, Sugar-coated tablet, Irregular-shaped tablet (Division-lined tablet, Engraved tablet, Printed tablet <Oneside/Both sides>)
Applicable Sizes	Shape	[Round tablet] 5mm to 12mm, [Irregular-shaped] length max. 21mm
	Thickness	2mm to 8mm *Other sizes may be applicable with customer's requirement
Colour		White color to Dark Brown color
Inspection Items	Front/Back/Sides Inspection	Stain, Printing smudge, Printing blur, Chipping, Cracking, Deformation, Color stain, Discoloration, Color difference, Printing color difference, Hair, Fiber
Inspection Accuracy	Front/Back/Sides	50µm or larger corresponding to black spot
Processing Capacity	TIE-9000	Max 250,000 to 300,000 tablets/hour, *Depends on the shape and size of tablet.
	TIE-9500	Max 500,000 to 600,000 tablets/hour, *Depends on the shape and size of tablet.
Lighting	Standard Inspection	Lighting method: High brightness LED diffuse illumination (optical diffusion built-in reflective plate), Light intensity adjustment function, Life estimated: more than 30000h
	Special Front/Back Inspection	Lighting method: High brightness LED oblique direct illumination, Light intensity adjustment function, Life estimated: more than 30000h
Camera	Standard Inspection	High sensitivity color line sensor, lense: F=2.8 f=52mm, Scanning method: one axis self-scanning method
	Special Front/Back Inspection	High sensitivity color line sensor, lense: F=2.8 f=52mm
Judging Process		Real-time parallel processing method
Power	Power Requirement	Three phase AC200V ±10% 3Φ 50Hz/60Hz, more than 5KW [TIE-9000] (Inside the inspection equipment, AC200V/210V/220V is selectable at transformer tap)
	Power Consumption	TIE-9000: Less than 3kW
	Connection	Terminal block: M6 screw R/S/T/FG 4terminal
Air	Pressure	More than 0.5Mpa
	Consumption	Approx. 400 liter per minute
	Connection Caliber	High coupler socket (400SH, NITTO KOHKI), Inspection equipment side: 400PM NITTO KOHKI
Operating Temperature		+20°C to +30°C
Operating Humidity		30% to 70% (non-condensing)
External dimensions		Approx. W1780 x H1751 x D1060 mm
Weight		Approx: 1400kg
Option		3D inspection, Block removal function, csv support, Powder removal system (SUS spec., coating spec.), Printing software, Operation management system, Setting of Sensitivity support function, Simulation Function



# POIE-Series



The POIE-8000C Colour Powdered/Granulated Medicine Inspection Device combines the colour processing technology developed for tablet inspection equipment with technology for screening powdered and granulated medicines for impurities, thereby boosting the precision with which coloured foreign matter can be detected. This new device also allows for certain colours to be specified for the detection of foreign matter that colour. The device also comes equipped with a “linear feature extraction processing function”, which facilitates the high-precision detection of fine fibers and hairs. With this new equipment wcomes a marked increase in processing capacity thanks to the wide inspection conveyor belt that provides a stable, constant supply of sample material and the five-speed conveyor belt action (top speed is approximately 18m/minute). In addition, the exclusion mechanism employs a reliable rotary nozzle system. This ensures that accurate pinpoint suction is provided only around the foreign substance, thereby boosting the recovery ratio of quality product.

## Colour Powdered/Granulated Medicine Inspection Device

- Max. Output : 200kg /h
- 5000 Pixel RGB Colour line sensor / 20 µm resolution
- Detect fiber/hair/foreign material
- Colour processing
- Fiber lighting for uniform and high intensity illumination
- Stable and constant feeding with 2nd transfer unit
- Spot vacuum with rotary nozzle system
- Spot vacuum with rotary nozzle
- Correct rejection control
- Easy operation with touch panel
- Detection image memory

RATINGS/ PERFORMANCE		
Applicable Particle		Powder, Fine Granule, Granule etc., Coloured
Inspection Throughput		20 to 100 kg / hour
Inspection Objects		Black or coloured foreign particle of over 40 to 60 µm (diameter) Black or coloured fiber and hair of over 30 µm (diameter) x 3 mm (Inspection accuracy depends on inspection throughput and object)
Transport Section	Transport Belt / Speed	1 row /Approx. 9 to 18m / minute (5 steps selectable)
	Transported Particle Thickness	Step Gain :-6, -3, 0, +3, +6, +9, +12 dB
	Inspection Area	Approx. 392 mm in width
	Transported Particle Thickness	Approx. 0.3 to 0.7mm (1 layer)
Camera Section	Limit Of Resolution	5,000 pixel RGB CCD line sensor camera x 4 units – 20 µm
Lighting Section	System/Source/Position	Fiber guide/Halogen lamp x 12/2 spots at top, 1 spot at bottom
	Lamp Sytem	DC lighting system (lighting level variable at 16 steps)
	Lighting Control	Manual, Auto control selectable
	Expected Lamp Life	1,000 to 1,500 hours
Power Source	Power Supply	Three phase 200V ± 10%, 50 /60 Hz
	Power Consumption	5 kVA or less
	Connection	Terminal fixed with 6 mm-screw
Air	Pressured Air Pressure	0.5 M pa or more
	Consumption	0.7 NL / minute or less (clean dry air)
	Coupling Socket Size	Quick-connect air coupler socket 20 SH
External Dimensions	Control Unit / Main Unit	W 570 x H 1850 x D 710 mm / W 1708 x H 2050 x D 1149 mm
	Air-Vacuuming Unit	W 750 x H 1333 x D 532 mm
Weight	Control Unit / Main Unit	Approx. 150kg (330 lbs) / Approx. 1,000 kg (2,203 lbs)
Environment Condition	Temperature	15°C to 20°C (59 -77 degree F)
	Humidity	30 to 60%
Vacuumed Air Exhaust	Negative Pressure	4 Kpa or more
	Exhaust Air Emission	10 cubic meter / minute



Our reflection creates the perfect image

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Ikegami Electronics (Europe) GmbH  
Ikegami Straße 1  
D-41460 Neuss  
Germany  
Phone: +49 2131 123 0  
Fax: +49 2131 102 820

U.K Branch  
1 Windmill Business Village, Brooklands Close  
Sunbury on Thames, TW16 7DY  
England  
Phone: +44 1932 769700  
Fax: +44 1932 769710

France office  
13 rue Camille Desmoulins  
92130 Issy-les-Moulineaux  
France  
Phone: +33 1 58 04 25 05  
Fax: +33 1 58 04 23 00

Middle East office  
One Lake Plaza, 103 JLT, Dubai  
United Arab Emirates  
Phone: +971 50 288 8951  
Fax: +49 2131 102 820

IKEGAMI TSUSHINKI CO., LTD  
5-6-16 Ikegami, Ohta-ku, Tokyo 146-8567  
Japan  
Phone: +81 35700 1111  
Fax: +81 35700 1137

Ikegami Electronics (USA) Inc.  
300 Route 17 South, Mahwah, NJ 07430  
USA  
Phone: +1 201 368 9171  
Fax: +1 201 569 1626

Ikegami Electronics Asia Pacific Pte. Ltd.  
#03-03, CPF Tampines Building  
1 Tampines Central 5, 529508  
Singapore  
Phone: +65 6260 8820  
Fax: +65 6260 8896