



## Financial year of ending Mar.31, 2016

## The 1<sup>st</sup> half of year result

The 1<sup>st</sup> quarter and the 2<sup>nd</sup> quarter total

Nov.20, 2015



Y.A.C. Co., Ltd.

(Ticker symbol: 6298) http://www.yac.co.jp

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  Representative Director & President
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    Director & General Manager Administration Div.
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  - Mr. Toshihiko Itoh,
    Managing Director
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Representative Director & President

## 1. Summing up of interim financial results

## Increased Revenue & Income

New organization started to work effectively and new each three business segment increase its sales and income.

Display related Business

Heater for LCD panel manufacturing led business.

Mechatronics related business

Semiconductor and hard disc related business went well.

Cleaning and other business

Gathering clients demand and business went well.



# 2. Outline of interim financial results of ending Mar.31, 2016

••••••• Mr. Kazumasa Teramoto,
Director & General Manager
Administration Div.

## 2-1 Business Results



# Increased sales and income compared to previous corresponding period

|                                 | 6 month ended<br>Sep. 30, 2014<br>(Consolidated) | 6maonth ended<br>Sep. 30, 2016<br>(Consolidated) | Increase(decreased)<br>amount against<br>previous<br>corresponding period. | Increase(decrease d) amount against previous corresponding period. |
|---------------------------------|--|--|--|--|
| Net Sales                       | 6,573  | 11,102   | 4,529  | 68.9%  |
| Operating income (Income ratio) | -279<br>(-4.3%)                                  | 461<br>(4.2%)                                    | 741  |  |
| Ordinary income                 | -194   | 462  | 657  | _  |
| Net income                      | -169   | 236  | 405  | _  |
| Net income per share            | -18.98   | 26.52  | 45.50  |  |
| R&D                             | 133  | 120  | -13  | -9.8%  |
| New capital investment          | 36   | 81   | 44   | 124.2%   |
| Depreciation                    | 138  | 166  | 28   | 20.5%  |

## 2-2 New classification of segment, from this financial year ....



#### **Up to Mar. 2015**

Industrial electronics related business

Hard disc related

LCD related

Semiconductor related

Photovoltaic related

FEL related

Precise heat treatment related

Industrial metering & telemeter controlling related

Cleaning and other related business

Cleaning related

#### From Apr. 1, 2015

#### Classification of segment

Display related business

LCD panel manufacturing related

#### Mechatronics related

Hard disc related

Semiconductor related

Photovoltaic related

Industrial metering & telemeter controlling related

#### Cleaning & other business related

Cleaning related

Lighting related

Precise heat treatment related



## 2-3 Net sales by business



Heater for LCD panel manufacturing, test handler and industrial telemetering controlling business went well.

YAC DASTech and YAC Pheton contributed to sales.

|                                   | 6 month ended<br>Sep. 30, 2014<br>(Consolidated) | 6maonth ended<br>Sep. 30, 2016<br>(Consolidated)       | Increase(decreased) amount against previous corresponding period. | Increase(decreased) amount against previous corresponding period. |
|-----------------------------------|--|--|---|---|
| Display related                   | 4,147  | 7,189  Heater for LCD panel man                        | 3,041 nufacturing went well.                                      | 73.3%   |
| Mechatronics related              | 1,858  | 3,234 Test handler , industrial YAC Dastech and YAC Pl | 1,375 telemetering controlling but                                | 74.0% siness went well.   |
| Cleaning & other business related | 567  | 679  Precise heat treatment for                        | 112 or automobile went well.                                      | 19.8%   |
| Total                             | 6,573  | 11,102   | 4,529   | 68.9%   |

## 2-4 New order received by business



Display related increased mainly for smart phone.

New order received total amount is 2.5 times of previous corresponding period.

|                                   | 6 month ended<br>Sep. 30, 2014<br>(Consolidated) | 6maonth ended<br>Sep. 30, 2016<br>(Consolidated) | Increase(decreased) amount against previous corresponding period. | Increase(decreased) amount against previous corresponding period. |
|-----------------------------------|--|--|---|---|
| Display related                   | 2,781  | 15,062   | 12,281  | 441.6%  |
| Mechatronics related              | 5,115  | 6,177  | 1,062   | 20.8%   |
| Cleaning & other business related | 571  | 1,184  | 614   | 107.5%  |
| Total                             | 8,467  | 22,424   | 13,956  | 164.8%  |

## 2-5 Back log ordered by business



Display related increased mainly for smart phone.

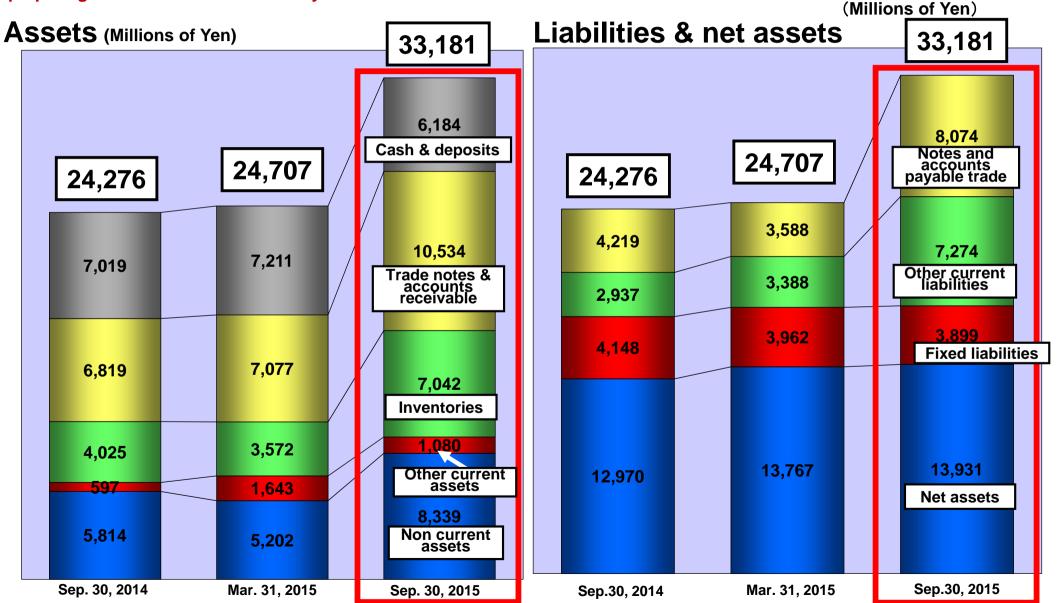
Back log ordered total amount is 2 times of previous corresponding period

|                                   | 6 month ended<br>Sep. 30, 2014<br>(Consolidated) | 6maonth ended<br>Sep. 30, 2016<br>(Consolidated) | Increase(decreased) amount against previous corresponding period. | Increase(decreased) amount against previous corresponding period. |
|-----------------------------------|--|--|---|---|
| Display related                   | 5,018  | 13,971   | 8,953   | 178.4%  |
| Mechatronics related              | 4,380  | 4,775  | 395   | 9.0%  |
| Cleaning & other business related | 8  | 338  | 330   | 4,244.0%  |
| Total                             | 9,405  | 19,084   | 9,679   | 102.9%  |

## 2-6 Historical figure of B/S



Borrowed from outside to lend money to acquired large company. Trade notes & accounts receivable increased because of concentrated sales in September. Inventories and notes and accounts payable increased because of increased purchasing preparing for the 2<sup>nd</sup> half of financial year.



## 2-7 Summary of cash flow statements.



Increasing trade notes and accounts receivable, inventory and trade noted and accounts payable made CF from operating activities minus and cash & cash equivalent at end of period decreased.

(Millions of Yen)

|  | 6 month ended<br>Sep. 30, 2013<br>(Consolidated) | 6 month ended<br>Sep. 30, 2014<br>(Consolidated) | 6 month ended<br>Sep. 30, 2015<br>(Consolidated) |
|--|--|--|--|
| CF from operating activities             | -856   | -1,317   | -1,105   |
| CF from investment activities            | -830   | -44  | -3,801   |
| CF from financial activities             | -780   | 280  | 2,950  |
| Cash & cash equivalents at end of period | 6,390  | 6,777  | 5,972  |



# 3. Outlook of financial result of year ending Mar.31, 2015

Representative Director & president

## 3-1-1 Business atmosphere and priority strategies.



## **≪Display related business**≫

#### ~LCD related business~

- Cooperation between dry etching equipment business, wet etching business and annealing equipment business made synergy effect.
- ■Business operation focusing on such new device as high definition panel for smart phone and display panel for 4K or 8K TV.
- Execution of competitive cost down.

## 3-1-2 Business atmosphere and priority strategies.



#### **≪Mechatronics related**≫

#### ~Hard disc related~

- ■To get the orders of equipment for HDD applicable to new generation high density HDD.
- ■To bottom up the sales by introducing new products as development new business such as environment-related products.

#### ~Semiconductor related~

■To match the demand for new capital investment in power semiconductor business.

## 3-1-3 Business atmosphere and priority strategies.



#### **≪Mechatronics related**≫

- ~Photovoltaic related ~
  - ■To promote marketing of the process that is applicable to high efficient solar panel and expand sales.
- ~Industrial meter & telemeter controlling related~
  - Capital investment was resumed by liberalization of electric power business and re-run of atomic power plants.
  - Expansion of such clients base as natural energy related business.

## 3-1-4 Business atmosphere and priority strategies.



#### **≪Other related business**≫

## ~Cleaning related~

- ■Introducing new equipment to enlarge our market share and strengthen weak area intensively.
- Expanding market to North America and Europe based on Asia.
- Expanding business linen supply related business.

#### ~Precise heater for automobile related~

Providing equipment that is energy save and applicable to high productivity replying to clients requests in automobile parts business.

## 3-2 Forecast of this financial year.



- Sales: <u>¥26.5 Billion.</u>
- Operating income: ¥1.4Billion.
  - Clients investment climate is going up.
  - Nihon Garter Co., Ltd. newly consolidated this financial year will contribute from the 2<sup>nd</sup> half of this f. year.
  - © Every year, sales realizes intensively during the 2<sup>nd</sup> half of financial year therefore full year result will be expected to be the same as disclosed forecast.

## 3-3 Forecast of full year ending Mar. 30, 2016



|                           |                      |                                      |   | (minion or ren)  |
|---------------------------|----------------------|--------------------------------------|---|--|
|                           | Ended<br>Mar.30,2015 | Ending Mar.30,<br>2016<br>(Forecast) | Increase<br>(Decrease)<br>amount against<br>previous year<br>(Forecast) | Increase<br>(Decrease)<br>% against<br>previous year<br>(Forecast) |
| Net sales                 | 16,622               | 26,500                               | 9,877   | 59.4%  |
| Operating income          | 787                  | 1,400                                | 612   | 77.8%  |
| Ordinary income           | 966                  | 1,450                                | 483   | 50.0%  |
| Net Income                | 639                  | 870                                  | 230   | 36.0%  |
| Net income per share(Yen) | 71.72                | 97.54                                |   |  |

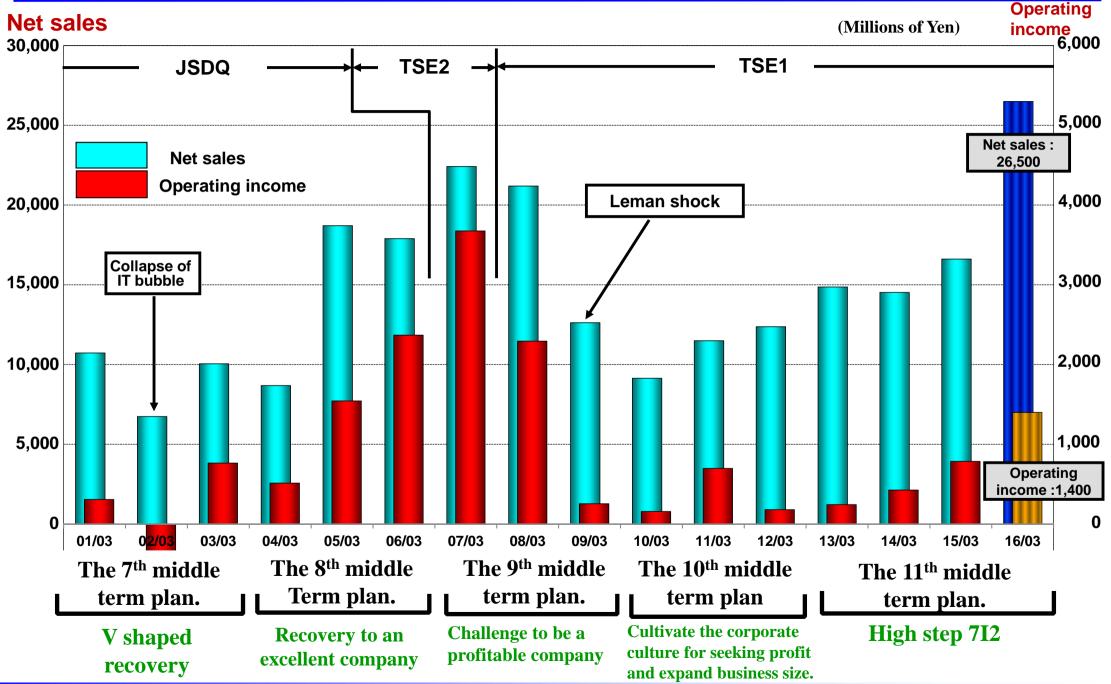
## 3-4 Sales forecast by business.



| (Internal of the control of the cont |                       |                                      |   | (minione et 1en)   |
|--|-----------------------|--------------------------------------|---|--|
|  | Ended<br>Mar.30, 2015 | Ending Mar.30,<br>2016<br>(Forecast) | Increase<br>(Decrease)<br>amount against<br>previous year<br>(Forecast) | Increase<br>(Decrease)<br>% against<br>previous year<br>(Forecast) |
| Display related  | 8,750                 | 13,500                               | 4,749   | 54.3%  |
| Mechatronics related   | 6,415                 | 11,000                               | 4,584   | 71.5%  |
| Cleaning related others  | 1,457                 | 2,000                                | 542   | 37.2%  |
| Total  | 16,622                | 26,500                               | 9,877   | 59.4%  |

## 3-5 Past result and forecast of ending Mar. 30, 2026





## 3-6 New business recently started.



- Wet etching equipment.
- Embossed carrier tape.
- Equipment manufacturing for LED and electronics parts.
- Medical and nursing related equipment.
- Atmosphere related equipment.
  - Fine bubble generating machine.
  - Oxygen and hydrogen generating machine.



4. Presentation on new business.

••••• Mr. Toshihiko Itoh

## 4-1 Presentation on new business.



### 1. Introducing Nihon Garter Co., Ltd.

**Smart Grid and** 

Thin and micro technology which lead a spread of auto operated automobile.

Let's go ahead of Moore's law.

# To reach summit of thin and micro item transport technology

Nihon Garter Co., Ltd. YAC Group.

## 4-1 Presentation on new business.



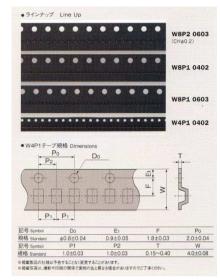
Nihon Garter Co., Ltd. is a pioneer of embossed carrier tape for electronics parts surface mounting, as well as an assembly and testing process equipment manufacturer, manufacturing and selling precise items packaging material embossed carrier tape including electronics parts tester mainly in electronics parts market.

Embossed carrier tape is a indispensable key device to Mount minute parts accurately such as 0402 (0.4mmx0.2mmx0.1mm).

Recently, demand for equipment which perform high speed transportation, characteristic inspection, appearance Inspection and final packing refrain from human hands and is possible to preserve process history is increasing. We have been experienced to provide mass produced Products with coping technical development in early stage and now day and night cope with further technical innovation in order to be able to reply various type of clients request.

And regarding equipment sales and maintenance service, we are growing with our clients with providing global technical support service based on our Asian commercial production bases which have experienced global human resources.

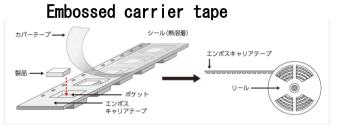
Y.A.C.Co.,Ltd



Ultra thin and minute embossed carrier tape



Inspecting and sorting machine for SMD-LED







Sheet taping machine for WLCSP

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## 4-2 Presentation on new business.



#### 2. Newly lined up products, environmental related equipment.

2 models of environmental related equipment are lined up to our products line from the technology cultivated in mechatronics products business.

#### **Major products**

1. Fine bubble generating machine.



Machine to purify water from blue-green algae occurred by rack of oxygen and plentiful nourishment in lake, pond and reservoir etc. This machine can generate fine bubble directly from filthy water without using pure water like other standard micro bubble generator.

#### 2. Oxygen and hydrogen generating machine.



Machine to contribute to fuel consumption reduction by introducing, from inlet of boiler, oxygen and hydrogen gas generated by electrolysis water.

We propose cleaning business clients who use boiler intensively to reduce running cost.



# Attachment Corporate outline

- 1. Basic information.
- 2. Special features of Y.A.C. Co., Ltd.
- 3. Global network of YAC group.
- 4. Group companies.
- 5. Major products.

## 1. Basic information



| Corporate Name                     | Y.A.C. Co., Ltd.   |
|------------------------------------|--|
| Ticker code                        | 6298 (TSE 1st section)   |
| Established                        | May, 1973  |
| Representative                     | Takefumi Momose, President   |
| O f f i c e s                      | Head Quarter:3-11-10 Musashino, Akishima, Tokyo Japan<br>Sales Office :Osaka, Akishima, Shinchu (Taiwan)<br>Factories :Akishima, Yamanashi, Kumamoto, Ohita  |
| Group Companies<br>(consolidated)  | Ohkura Electric Co., Ltd.(Sakato, saitama Pre.) YAC Denko Co., Ltd. (Ohme, Tokyo) YAC Niigataseiki Co., Ltd. (Myukou, Niigata Pre.) YAC DAStech, Inc.(Toda, Saitama Pre.) YAC Phoeton Corporation(Atsugi, Kanagawa Pre.) Y.A.C. Kokusaidennetsu Co., Ltd(Musashimurayama, Tokyo) Nihon Garter Co., Ltd. (Ohme, Tokyo) HYAC Corporation (California, U.S.A.) YAC Systems Singapore Pte. Lt. (Singapore) YAC (Shanghai) International Trade Co., Ltd. (Shanghai, PRC) Shaoxing YAC(Shanghai) Electronic Equipment Co., Ltd. T.Y.A.C. Corp. |
| Non Consolidated                   | ND Material Co., Ltd. Kowa Electronics Co., Ltd. Kohwa Electric Co., Ltd.  |
| Paid up Capital                    | ¥2,756million  |
| Major Products and s e r v i c e s | Developing, Drawing, Manufacturing & Selling of Manufacturing Equipment for Display related equipment, Mechatronics related equipment and Cleaning related equipment.  |
| Account Closing                    | March 31   |

## 2. Special Features of YAC Co., Ltd.



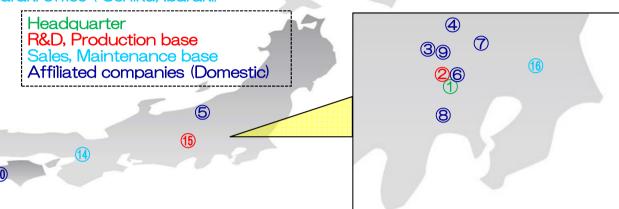
- Diversified in 10 fields.
- Fables management.
- Challenging for M&A, acquired 14 business during past 15 years.
- Global enterprise focusing Asia.
- Penetrating into device business.
- All-in-one management with employee.

#### 3. Global network



- 1 Head Quarter/ Factory (Akishima, Tokyo)
- 2 Technical Center (Akishima, Tokyo)
- 3 YAC Denko Co., Ltd. (Ohme, Tokyo)
- 4 Ohkura Electric Co., Ltd. (Sakato, Saitama)
- 5 YAC Niigta Seiki Co., Ltd. (Myoukou, Niigata)
- 6 YAC-Kokusaidennetsu Co., Ltd. (Akishima, Tokyo)
- 7 YAC DAStech Co., Ltd. (Toda, saitama)
- 8 YAC Pheton Co., Ltd. (Atsugi, Kanagawa)
- 9 NIHON GARTER CO., LTD. (Ohme, Tokyo)
- 10 ND Material Co., Ltd. (Kouchi, Kouchi)
- (1) Kohwa Electric Co., Ltd. (Izumi, Kagoshima)

- 12 Ooita factory (Ooita, Ooita)
- (13) Kumamoto factory (Oozu, Kumamoto)
- (4) Oosaka office (Oosaka, Oosaka)
- (15) Yamanashi Factory (Minami alpus, Yamanashi)
- 16 Ibaraki office (Ushiku, Ibaraki)



- A) HYAC Corporation (California, U.S.A.)
- B) YAC Systems Singapore Pte Ltd. (Singapore)
- C) YAC (Shanghai) International Co., Ltd. (Shanghai, P.R.C.)
- D) Shaoxing Weiaixin Electronics Equipment Co., Ltd. (Shaoxing, P.R.C.
- E) T.Y.A.C. Corp. (Hsinchu, Taiwan)
- F) NIHON GARTER PHILIPPINES, INC.
- G) Suzhou Nihon Garter Electronics Co., Ltd (Suzhou, P.R.C.)
- H) NGC Garter(M)Sdn, Bhd, (Malaysia)
- I) Garter Technology Co., Ltd. (Taiwan)
- J) NIHON GARTER CO., LTD KOREA BRANCH (Korea)

Affiliated companies (Overseas)
Sub- affiliated companies (Overseas)
Overseas branch of affiliated companie



## 4. Group companies



#### In Japan

■Y.A.C. Co., Ltd.

**Mechatronics Products Div.** 

**Display Manufacturing Equipment Div.** 

**Cleaning Equipment Div.** 

**Lamp & Lighting Business Div.** 

■ 7 Group companies.

| YAC Denko Co., Ltd.           | Ohme, Tokyo         |
|-------------------------------|---------------------|
| Ohkura Electric Co., Ltd.     | Sakato, Saitama     |
| YAC Niigata Seiki Co., Ltd.   | Myoukou,<br>Niigata |
| YAC DAStech co., Ltd.         | Toda, Saitama       |
| YAC Pheton Co., Ltd.          | Atsygi,<br>Kanagawa |
| YAC-Kokusaidennetsu Co., Ltd. | Akishima, Tokyo     |
| NIHON GARTER CO., LTD.        | Ohme, Tokyo         |

■ 2 equity method affiliated companies

| ND Material Co., Ltd.    | Kohchi-Shi, Kouchi |  |
|--------------------------|--------------------|--|
| Kohwa electric Co., Ltd. | Izumi, Kagoshima   |  |

#### **Outside of Japan**

■ 4 Group Companies

| HYAC Corporation                                | California,<br>U.S.A. |
|---|-----------------------|
| YAC Systems Singapore Pte Ltd.                  | Singapore             |
| Y.A.C. (Shanghai) International Trade Co., Ltd. | Shanghai,<br>P.R.C.   |
| T.Y.A.C. CORP.                                  | Hsinchu,              |

■5 sub-subsidiaries and 1 branch

| Shaoxing Weiaixin Electronic Equipment | Shaoxing, |
|--|-----------|
| Co., Ltd.                              | P.R.C.    |

|   | NIHON GARTER PHILIPPINES,INC.                | Philippines       |
|---|--|-------------------|
|   | Suzhou Nihon Garter Electronics Co.,<br>Ltd. | Suzhou,<br>P.R.C. |
|   | NGC Garter(M) Sdn. Bhd.                      | Malaysia          |
| • | GARTER TECHNOLOGY CO., LTD.                  | Taiwan            |
|   | NIHON GARTER CO.,LTD KOREA BRANCH            | Korea             |

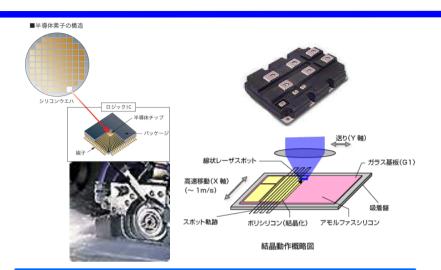
4 business divisions, 7 domestic group companies, 4 overseas group companies and 5 overseas sub-subsidiaries.

## 5. Major products Core technologies

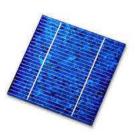




—Plasma, Vacuum and Heat— Etching, Reforming and Diffusion



Cutting, LaserDicing and Diffusion



Etching and Texturing



Handling —Handler and Conveyer



—Precise polishing—
Burnisher

#### (1) LCD related business



| Plasma dry etching equipment | Dry etching equipment by using plasma technology.  The most suitable for high definition panel manufacturing such as LTPS and OLED for smart phone, efficient manufacturing process and mask less technology. |
|------------------------------|---|
| Annealing equipment          | Heat treatment equipment (RTA) for reforming and improving film quality. Suitable for mass production of high definition panel such as LTPS and contributed for high functionality of smart phone and tablet. |
| Wet etching equipment        | Wet etching equipment using chemical liquid. Applying for small to large panel including high definition panel such as IGZO, OLED and metal wiring.   |







Plasma dry etching equipment

**Annealing equipment** 

Wet etching equipment

#### (2) Hard disk related business



| Banisher for HDD      | The disk surface precise polishing equipment to eliminate the nano-size projections on the disk surface after the process of magnetic film generating.  |
|-----------------------|---|
| Wiping System for HDD | The equipment to remove particles on the disk surface and to equalize the lubricant agent after the process of magnetic film generating.  |
| UV Curing             | UV Curing Surface-reforming for Hard Disk   |
| Clean Conveyor        | For HDD factory: Possible to built various type of transportation line easily by module combination.  For semiconductor factory: Achieved high lord-baring performance, impact performance and speed performance for 300 mm wafer pot.  Solar sells factory: Transport big size substrate with high lord-baring performance and impact performance. |



**Banisher** 



Clean conveyor for hard disk



High speed clean conveyor for semiconductor

#### (3)-1. Semiconductor testing & cleaning related.



| Testing handler. | Equipment that screen automatically good or bad after packaging of logic IC. Applicable wide range of temperature between 55 degree C. to 155 degree C. |
|------------------|---|
| Testing handler. |   |

## Semiconductor and parts cleaning equipment.

- •Wet process equipment: Cleaning equipment, resist removal equipment and night ride equipment.
- Semiconductor peripheral equipment: Quarts tube cleaner, stocker and chemical liquid supplying equipment.

#### IPA vapor dryer.

Drying wafer by using IPA vapor at the final stage of semiconductor, including LSI, MEMS, and power devices, cleaning process with free from particles.







Test handler for logic IC.

**Quarts tube cleaner** 

**IPA** vapor dryer

#### (3)-2. Semiconductor precise dicing and slicing related.



| Full automated slicer   | This is a full automatic slicer to cut thick or complex device which have realized to cut device by one pass in stead of step cut even device that old fashioned slicer used to cut by step cut.  For: Complex devices such as devices containing sapphire, glass, ceramic and packaged devices such as CSP, QFP, QFN and metallic devices. |  |  |
|---|---|--|--|
| Slicing and dicing machine  | Automatic θ-AXIS, having automatic alignment function. Possible to cut thick device highly precisely by multi blade.  |  |  |
| Full automated core drilling machine  | This is full automatic drilling machine which cut the subject such as glass or quarts into circle shape or donuts shape by using core drill. This machine has auto transport and automatic alignment functions . Recently we introduced new equipment DAR806 which is applicable to smaller diameter ( 1to 10) with ultra sonic spindle     |  |  |
| We purchase, repair and resell secondhand dicing equipment, cutting equipment and semiconductor manufacturing equipment.  「ダイサー再生・販売ステーションのしくみ(全て自社にてご提供) |   |  |  |
|   | 買います!!  |  |  |
| Resale business   | 音定で依頼<br>(TEL・メール)<br>ますはお気軽に! 概要確認<br>(書類・TEL)<br>プロの目で幅広く判断 買い取り<br>梱包・手続きは全て当社にて   |  |  |
|   | お問い合わせ(TEL・メール) ・リファービッシュ   |  |  |



**DFS1100** 

Full automatic slicer Y.A.C.Co.,Ltd



OPTION 出張据付

**DAS110** 

Slicing/Dicing



**DAR806 Automatic core** drilling machine

お問い合わせだけでもOK!



Full automatic core **drilling machine**Copyright ©2015Y.A.C.Co.,ltd. All rights reserved

#### (3)-3. Semiconductor laser process related.



|                            | OLaser anneal equipment for IGBT and power semiconductor   |
|----------------------------|--|
|                            | ·Heat only on backside by 2 wavelength laser anneal and control anneal depth from 1 to 10 micro mater.   |
|                            | ·High throughput was realized by combination of continuously oscillating laser and turn table.   |
| Laser anneal machine       | OBackside Laser Annealing System for Ohmic Contact Formation on SiC.   |
| Laser annear macmine       | •The 1st time equipment in the world and applicable development and prototype of products.   |
|                            | •This equipment will support mas production by its high stability, reproducibility, throughput and   |
|                            | low running cost.  |
|                            | OLaser scriber.  |
|                            | •Exclusive use for SIC and realized debris less.   |
|                            | OUltra precise hole making : Making diameter 15 to 50 micrometer hole.   |
|                            | OHigh speed great number holes making : Making maximum diameter 100 mill meter and maximum number one million holes by 30 to 500 seconds. (less than 0.1 mill second/hole) |
| Micro multi laser drilling | OPrecise hole making: Hole position accuracy<0.5micro meter hole diameter accuracy <0.5 micro meter.   |
| machine                    | OLong term stability, easy control and less downtime:  |
|                            | ·Unaffected from change of razor profile.  |
|                            | Easy control because of simple optical system.   |
|                            |  |



Laser anneal machine for IGBT and power semiconductor



Backside Laser Annealing System for Ohmic Contact Formation on SiC

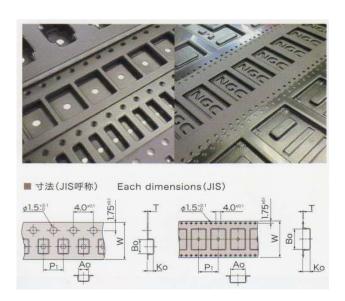


Micro multi laser drilling machine

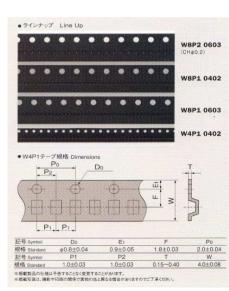
#### (3)-4. Semiconductor embossed carrier tape related.



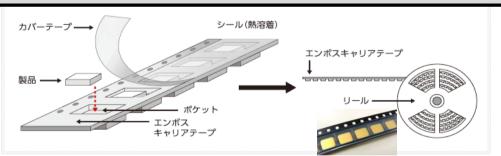
| Embossed carrier tape              | Packaging material for mounting of surface- mount electronic components such as condenser diode, transistor, semiconductor and LED by using automatic mounting machine. |
|------------------------------------|---|
| Ultra micro and thin embossed tape | Embossed carrier tape for small ( 0.2 mm x 0.1 mm)and thin products (less 0.1 mm thin ).  |
| Service business                   | Taping service business for prototype or small lot products of electronic components by embossed carrier tape including vacuum packaging.                               |
| Pealing tester                     | Testing equipment for setting peel strength of sealed cover tape on emboss carrier tape properly.   |
| Auto reel changer                  | Continuous operating machine which changes embossed carrier tape reel automatically, raise machine utilization and contribute for laborsaving.                          |



**Embossed carrier tape** 



Ultra micro and thin embossed tape



**Taping service** 



**Pealing tester** 



Auto reel changer



Wet equipment for manufacturing of crystalline silicon solar cells

Butch type texturing machine
Butch type and inline type isolation equipment and PSG etching equipment
Plating type wiring equipment

Various type of heat treatment equipment

Vertical glass substrate heating equipment. Eva cross linkage furnace for thin film solar cell. Vertical multistage diffusion furnace Walking beam continuous drying furnace Tube diffusion furnace



**Texturing equipment** 



ISO/PSG



**Cure/Anneal furnace** 

#### (5) Cleaning related business



| <b>Dress shirt</b> | pressing |
|--------------------|----------|
| machines           |          |

Pressing machine by using heated panel and hot air. Standard type of product functions are diversified into 3 unit such as for pressing collar & cuff, tuck & sleeve and body, but operating speed are rapid. We have another type of product which can press tuck & sleeve and body by one unit so called Body sleeve type.

**Wool finishers** 

pressing equipment for jacket and pants

**Bagging machines** 

The machine to bag automatically the finished item we have two type of machine, one is to bag items with dress hanger another is to bag by folding.

**Apparel equipment** 

We have various type of machines which are used in the production line of making apparel such as sponging machine, fusing machine and pressing machine



Body-sleeve pressing machine for dress shirts



Finisher for jacket



Finisher for pants



Bagging machine (Dress hanger type)

#### (6)-1. Lamp & Lighting equipment



High brightness single flat LED lighting

Flood light: Sporting facilities, etc.

High ceiling light: Gymnasium, factory, warehouse, big shopping facilities, etc. Special lighting: Fishing light, under water as well as ship board, agriculture light

Field emission lamp

Ultraviolet source: Generating ozone and sterilize by deep ultraviolet, UV-C.

ND emitter

Electron source for FEL, which is applicable for soft x- ray tube and electron beam.







**High ceiling light** 

Flood light

Fishing light

Ultra violet source

#### (6)-2. Lamp & Lighting LED & Electronics related.



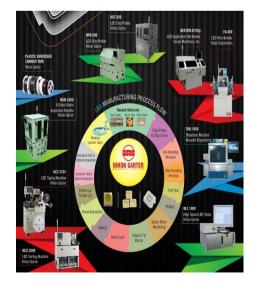
| LED classifier        | Classifying bulk of LED after dicing process into maximum 256 groups by optical inspection and electrical characteristic test.   |
|-----------------------|--|
| Taping machine        | Inserting, sealing with heat and packaging classified bulk LED and electronics parts with inspecting energization, line up in one direction.   |
| Sheet taping machine  | Peeling off semiconductor or LED wafer from sheet after dicing process and inserting, sealing with heat and packaging classified bulk LED and electronics parts with inspecting energization, line up in one direction.  |
| LED measuring machine | Mounted on LED classifier or inspecting taping machine and doing optical inspection and electrical characteristic test of LED and transmit the result to classifier or inspecting taping machine   |
| LED alliance          | We organize a LED alliance aiming to LED new market such as India and Vietnam with major LED manufacturing equipment and element makers such as Canon machinery, Musashi engineering TOWA, Toyota Gosei, Panasonic, Shin-Etsu Chemical, and Kanematsu and support new markets. |











**LED Classifier** 

**Taping machine** 

**Sheet taping machine** 

LED Measuring machine

**LED Alliance** 

#### (7)-1. Precise heating treatment, FPD, electronics and automobile related.



| Heating equipment for Flat Panel Display (FTP) | Heating equipment for LCD panel manufacturing: MB/MS series Heating equipment for LCD and OLED panel manufacturing: MT series Hot plate type heating equipment for LCD panel manufacturing Decompression type drying equipment for LCD and OLED panel and Walking Beam type consecutive heating treatment furnace |
|--|---|
| Heating Furnace equipment for precision parts  | Consecutive muffle kiln with mesh belt conveyor (Muffle), consecutive muffles kiln with mesh belt conveyor (Muffles) and various type of testing kiln for electronics parts.  |
| Heater and other related equipment             | Radiant pat heater (PD/GPD) Infrastructure unit (BD/SG) Infrastructure unit heater (PS/PU/PH/PM) another industrial heaters.  |
| Heater for automobile parts                    | Furnace for automobile industry (High tension sheet steel tempering equipment) Furnace for molding and pre-heater for molding   |



Annealing equipment for IGZO/OLED



Consecutive muffle kiln with mesh belt conveyor



Tempering equipment for automobile high tension sheet steel.

#### (7)-2. Precise heating treatment, molding and industrial furnace related.

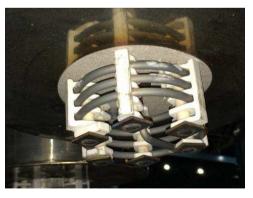


| Mold heater for forging and casting                  | Die heater, DH series. Mold heater for hot forging and warm forging.                                |
|--|---|
| Industrial furnace, heat treatment equipment         | Bogie hearth furnace, T5 T6 heat treatment furnace, Mold heater, Hardening furnace and Pit furnace. |
| Large forging heat treatment equipment for aircraft. | High temperature mold preheater   |
| High speed heater                                    | Heater for automobile power train.  |









Mold heater for forging and casting

Industrial furnace heat treatment

Large forging heat treatment equipment for aircraft

High speed heater

#### (8) Industrial metering and telemetering and controlling related business.



| Industrial |
|------------|
| metering   |
| equipment  |

Utilizing metering and controlling technology, we have been contributing to wide range industrial automation from recorder and data processing systems for atomic power plant, precise temperature controlling system to environmental analytical sensor.

# Telemetering controlling equipment

We have been contributing to building of social infrastructures with providing information transmitter, distance controlling monitoring system, data processing system as well as precise electric power meter and modem in order to support huge and wide range network of electricity system, city gas providing system, water and sewerage system and railway system.

#### Semiconductor

We have been providing vertical and horizontal diffusion furnace, diffusion controlling system as well as furnace renewal service by using own metering, controlling and censoring technology cultivated as industrial metering manufacturer.



Digital indicating controller

Programing controller

Paperless recorder

**High bride controller** 



Pressure transmitter

**Industrial metering equipment** 



input output device

**IP-enabled information** 

High precision transducer

**IP-enabled information transmitter** 

Telemetering and controlling equipment



Vertical diffusion furnace
Semiconductor manufacturing
equipment



Well, Today should be

a Fascinating and Prosperous Day, again!

Flexible High-Technology Company



Y.A.C. Co., Ltd.

The prospects described in this document is based on the information we have as of the time this document is published, and the actual result may differ from such prospects due to various unexpected factors.

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