

IK SEMICON

2013

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IV. INVESTMENT HIGHLIGHTS

I. CORPORATE IDENTITY

Professional Semiconductor Company for Analog & Mixed Signal

- Application, S/W , H/W as well

Focusing Business Area...Green Industry

- Automotive Area : Provide Total Solution
- LED : Display & Lighting for Home Appliance etc.
- Smart Grid

Fabless Design Company

- Fab Foundry in Dongbu-Hitech, Magnachip, Integral

I. CORPORATE IDENTITY

II. COMPANY OVERVIEW

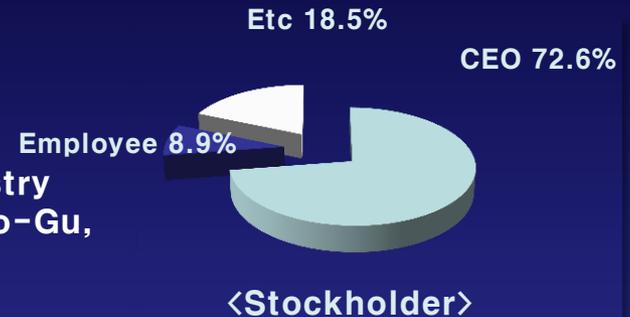
III. BUSINESS OVERVIEW

IV. INVESTMENT HIGHLIGHTS

II. COMPANY OVERVIEW

A. IK Semicon is...

Name	IK Semicon Co., Ltd.
Website	www.iksemi.com
Foundation	June, 1997
CEO	KD Yoon
Headquarter	Head Office) Rm.503, DMC Hi-Tech Industry Center, Sangam-Dong, Mapo-Gu, Seoul, Korea Design Center) Office 503 , 24A Volodko str., Minsk, 220007, Republic of Belarus
Business	Semiconductor Design & Manufacture
Capital	\$1.9M
Employee	46 Staffs (including 25 engineer in R&D)



II. COMPANY OVERVIEW

B. History

Build Up (2000~2004)

- 97.06. Foundation
- 03.08. Join in Government Project for Interface IC (RS-232)
- 04.04. Export 5M USD Achieve

Supply of Analog Standard Product

Stability (2005~2009)

- 05.07. R&D House Foundation
- 06.04. Certification for Innovation Business & ISO 9001
- 07.01. Certification for Special Company of Component & Materials
- 07.03. Certification for TS16949
- 08.01. Award for SVD TOP 100 CEO

Activity for full-scale R&D
Establish Independent-Technology
Stable & Continuous Sales-Growth

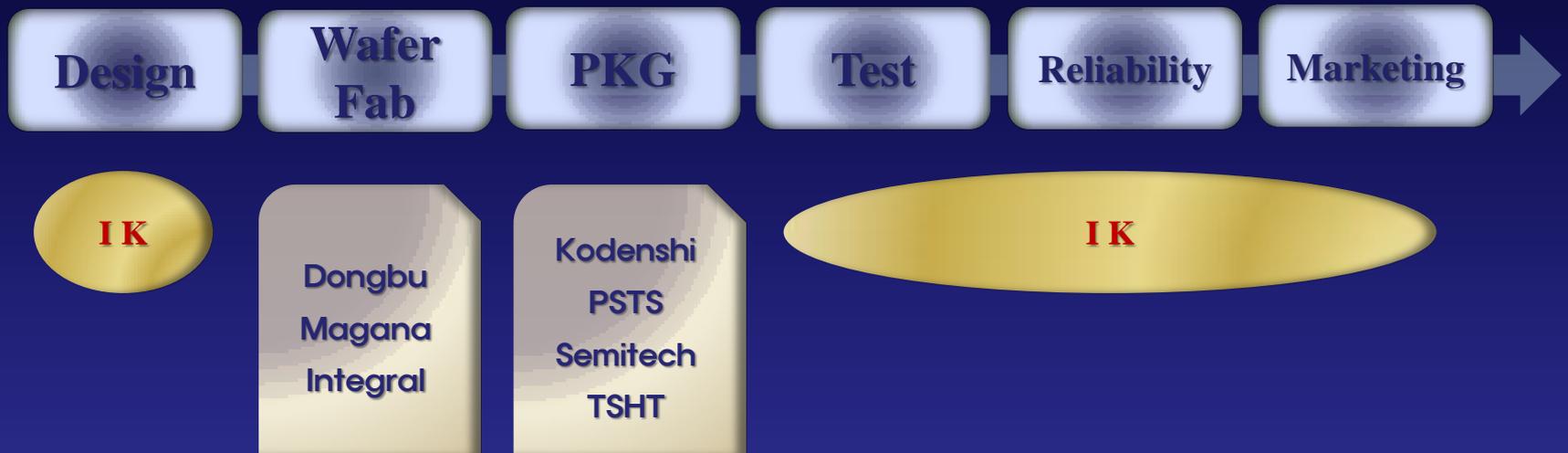
Jump Up (2010~)

- 10.08. IC Design Eco-Partner by Dongbu-Hitech
- 10.12. Minsk Design Center Foundation (Belarus)
- 11.01. Development-Contract with KDAC for Alternative Voltage Regulator Chip
- 11.04. Development-Contract with HSL for Power Folding Chip
- 11.04. Development-Contract with UNICK for Handle Warmer Chip

ASIC Development for
Automotive & Home Appliances
System in(on) Package Biz Penetration

II. COMPANY OVERVIEW

C. Business Area



I. CORPORATE IDENTITY

II. COMPANY OVERVIEW

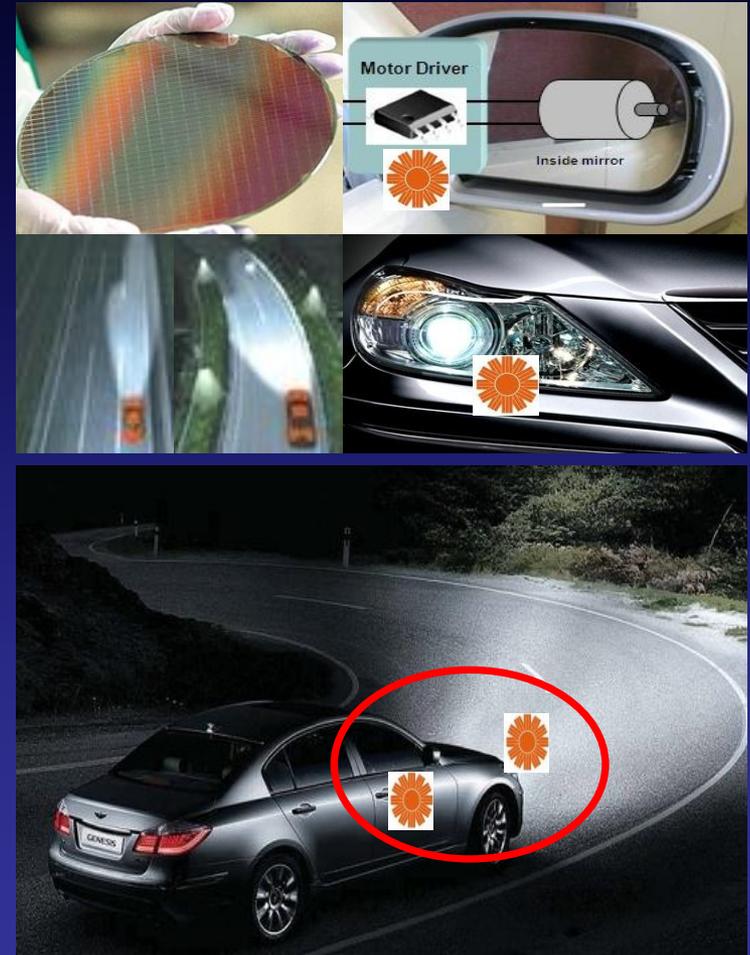
III. BUSINESS OVERVIEW

IV. INVESTMENT HIGHLIGHTS

III. BUSINESS OVERVIEW

A. Automotive

- **Alternative Voltage Regulator**
 - ✓ IK8001, Bare Chip, Delphi Project
 - ✓ Competitor : Bosch, STM
 - ✓ MP : 4Q. 2012 ~
- **Power Folding**
 - ✓ IK8509, Chip Package, HSL Project
 - ✓ Competitor : STM, Infineon
 - ✓ MP : 3Q. 2012 ~
- **Handle Warmer**
 - ✓ IK8002, 3Chip_1Package, Unick Project
 - ✓ Competitor : Infineon, Freescale
 - ✓ MP : 3Q. 2012 ~



III. BUSINESS OVERVIEW

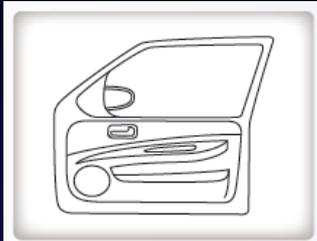
- **Motor Driver for Light Leveling**
 - ✓ IK8508, Chip Package , HSL Project
 - ✓ Competitor : Infineon, STM
 - ✓ MP : 3Q. 2012 ~

- **CAN Transceiver, LIN Transceiver**
 - ✓ IK830 1& 8302, Chip Package, HSL Project
 - ✓ Competitor : Freescale, Onsemi, Infineon, NXP
 - ✓ MP : 2014 ~

- **Others**
 - ✓ IK8507, IK8901, IK8003...
 - ✓ Customer : Woory Ind., Dong-A elec., Kamtec, S&T Daewoo, Kwangjin-wintec, Daesung-elec., Shinchang-elec., etc.
 - ✓ App. : 1ch Full Bridge, H-Bridge Asic, Heating Seat, Sun-roof, LED Driver, etc.

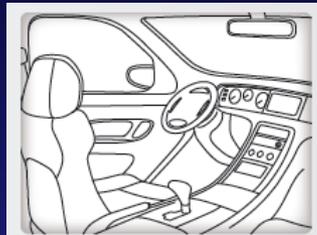
III. BUSINESS OVERVIEW

Target Applications



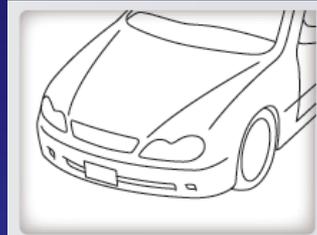
Window, Mirror

- ILE4278
- IK8511(Relay Driver)



Switch, Indicator

- IK8507
- ILE4264-2G
- ILE4275/6
- ILE4278
- IK1003(L4949)



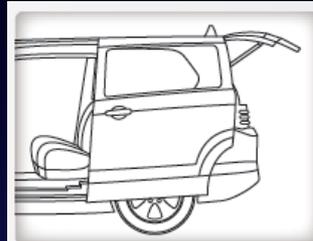
Lighting

- IK8508
- IK8507
- ILE4264-2G
- IL33193



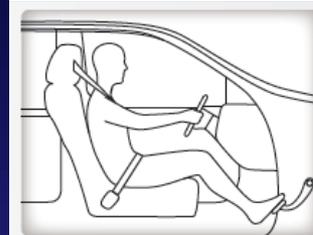
Wiper

- IK1003(L4949)
- IK8511
- IL33197



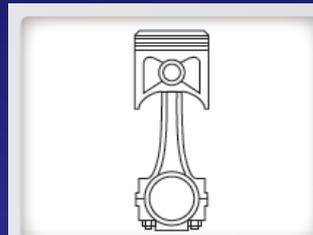
Door (slide, rear)

- ILE4278
- IK8511(Relay Driver)
- ILE4264
- ILE4266



Seat

- IK8901(Smart FET)
- IK8002(Handle Warmer)



Engine

- ILE4278
- IK8501(HBridge Driver)
- IK8001(Alter Reg)



Remote Keyless Entry

- SW Develop
- Module Develop

III. BUSINESS OVERVIEW

B. Green Industry : LED Lighting & Display

- LED Lighting

- ✓ IK2804, IK6019, IL9910
- ✓ App. : Home Appliance (LG, Samsung, etc.),
Lighting Instruments(Kumho Elec., etc.)
- ✓ Competitor : UTC, Toshiba
- ✓ MP(Home Appliance) : 2Q. 2011 ~

- LED Display

- ✓ IK2108, IK2102, IK2107, IK2108
- ✓ App. : Home Appliance (Samsung, LG etc.)
- ✓ Competitor : UTC, Toshiba, KEC
- ✓ MP : 2Q. 2011 ~



III. BUSINESS OVERVIEW

C. Green Industry : Smart Grid

- Advanced Smart Meter Business
 - ✓ ILX485, ILX488-3
 - ✓ App. : E-Meter, Power Line Communication Modem
 - ✓ Competitor : TI, Maxim
 - ✓ Customer : LG U+ (G-Type)
 - ✓ Stage : prior Biz Approval (Kepco)

<Energy Saving Mechanism>



III. BUSINESS OVERVIEW

D. Other Products

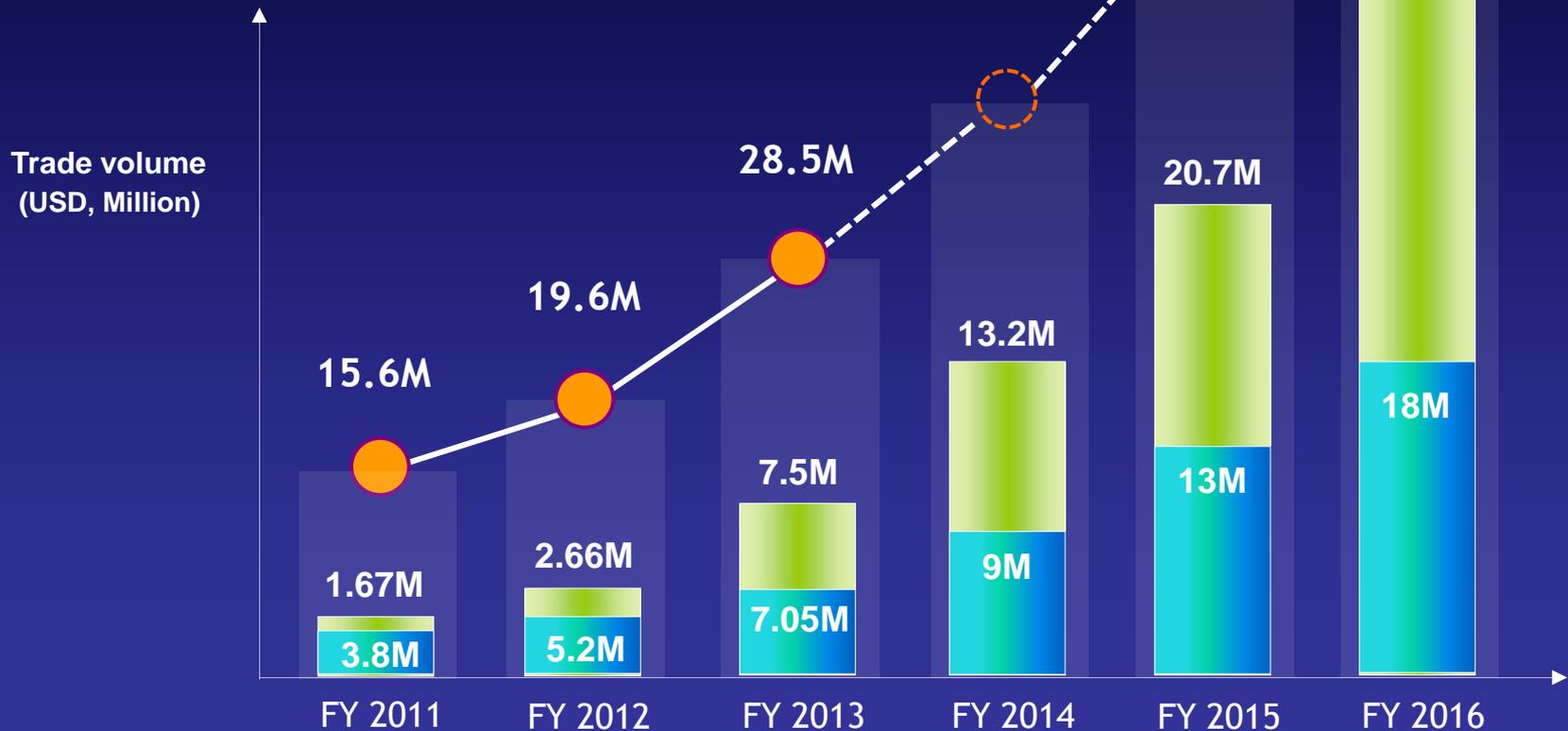
- **Power Management**
 - ✓ Circuit Breaker, DC-DC Converter, Motor Controller, PWM, Power Peripheral(TR Array), etc.
 - ✓ App. : Earth leakage circuit breaker, LCD TV, Home Appliance, etc.
- **Standard Logic & Analog**
 - ✓ OP amp, Comparators, Audio System, Telephone, Melody IC
Video Filter, Timer
 - ✓ App, : Set To Box, Printer, Charger, etc.
- **Interface**
 - ✓ RS232, RS485 (Government Project)
 - ✓ App. : Home network system, STB, DVR, CCTV Camera, Card Reader

III. BUSINESS OVERVIEW



E. Market Performance of New Business

- Due to Automotive & LED Business, Sales will be increasing about 25~45% annually.



III. BUSINESS OVERVIEW

F. Major Primary Customers

Automotive

KDAC, HSL, Unick, Eskor, Kamtec, Woory Ind., Dong-A elec., S&T Daewoo, Kwangjin-wintec, Daesung-elec., Shinchang-elec.

Home Appliance

Samsung Electronics, LG Electronics, Techrein, Kocom, Commax

Consumer Device

CNS Links, Kumho Electronics, Woongjin Coway, LeadersTech, Thinkware, Novita, Samhong-tech

Overseas

ABB, PHILIPS, HITACHI, SHARP, SONY, PIONEER, HISENSE

Industrial goods
& Others

LG U+, LS-IS, Jeil Electronics, Autonics, Hanyoung Nux, Sungho Electronics

I. CORPORATE IDENTITY

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IV. INVESTMENT HIGHLIGHTS

IV. INVESTMENT HIGHLIGHTS

A. Winner Takes All in Automotive

- **Automotive Market is an early Stage in Domestic**
 - ✓ **A Small number of Players**
 - ✓ **Inexperienced Players in Analog, Application, S/W**
- **Long-term Product Life**
 - ✓ **About 10~15 years Supply Guarantee**
 - ✓ **Higher Entry Barriers**
- **IK's developing Products are just before Mass Production.**
 - ✓ **IK8001 (Alternator Voltage Regulator) : Single Masking in Jan. 2012.**
 - ✓ **IK8508 (Motor Driver for Light Leveling) : Evaluation in HSL**
 - ✓ **IK8509 (Power Folding) : AEC-Q100 in 2Q 2012**
 - ✓ **IK8002 (Handle Warmer) : Fab out in Feb. 2012**

IV. INVESTMENT HIGHLIGHTS

B. Application Technology Capability & S/W Development

- **IK can meet Customers Demands rapidly, due to App. & S/W.**
 - ✓ **Gone from a Standard Analog Product manufacturer**
 - ✓ **To be a capable ASIC Designer**
- **IK can develop New Products more quickly, due to App. & S/W.**
- **App. & S/W are leading IK to a Higher Value-added Business.**
- **IK can develop SiP & SoP containing variety of Contents .**
 - ✓ **System in Package, System on Package, System on Chip**
 - ✓ **Realization of old Dreams, Feelings with much experience in App. & S/W**
- **App. & S/W make the Entry Barriers more higher for IK.**

IV. INVESTMENT HIGHLIGHTS

C. Steady and Continuous Demands of Customer Industries

- Automotive and Home Appliance(LED) market should be distinguished from “Smart Device” market,
which is short-term and rapidly changing market leaded by Samsung and LG.
 - ✓ Many system semiconductor players in Smart Device have been falling off.
- The Life Cycle of the Customer Industries products is relatively Long.
 - ✓ Automotive : about 10 ~ 15 years
 - ✓ Home Appliance : about 5 ~ 10 years
- Non “Price elasticity of Demands” market

IV. INVESTMENT HIGHLIGHTS

D. The New Growth Engine Industry in Korea

- LED Lighting & Display and Smart Grid Business in IK
- Government supplies Financial Aid and builds Institutional Apparatus for the Industries.
 - ✓ “Green Certification” : Requirements for IPO relaxed

E. Steady Cash Cow, existing Analog & Logic IC Business

- Sales growth rate, about 10~15% annually
 - ✓ about 10,000 Mil KRW in FY 2011
- Operating Profit rate, about over 10% annually

IV. INVESTMENT HIGHLIGHTS

E. Capable R&D House

- R&D manpower
 - ✓ Seoul : 17 engineers (Schematic, Layout, Test, QC, Application, S/W)
 - ✓ Minsk Belarus : 8 engineers (Schematic, Layout)

- 4 Patent Rights & many Patents Pending & 1 Utility Model Right

2006.09.06 (No. 10-0623873) Precision MOS Current Mirror circuit
2006.09.06 (No. 10-0623874) Efficiency Cascade Current Mirror circuit
2009.04.27 (No. 10-0896091) Measurement of Earth Resistance Leakage Current
2009.03.18 (No. 10-0949466) Driver for Luminous elements

- Intellectual Property

PWM (Pulse Width Modulation) Technology	PFM (Pulse Frequency Modulation) Technology
LDO (Low Drop Output) Technology	DAC (Digital to Analog Converter) Technology
Step-up/Step-down DC-DC Converter Technology	Precision Operational Amplifier Technology
Precision Voltage Comparator Technology	Temperature Stable Band-Gap Reference Technology

THANK YOU