SINCE 1976

JAEYOUNG

01 Company Overview

1.1 Capability & Product

1.2 Global Footprint

1.3 Sales Revenue

1.4 Accreditation

1.1 Capability by Product

Mold

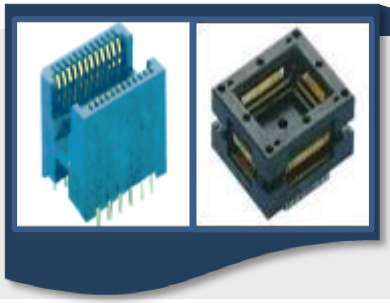
For Automotive, TV,

Electronics, Precision

Smart Devices

Rear Case

Accessories



Precision Part

Burn In Test Socket

Lens Module Parts

Optics

Aspheric Glass/Plastic Lens

Lens / Camera Module

Medical Devices

For GE, Siemens, etc.

Mold & Production

Pallet

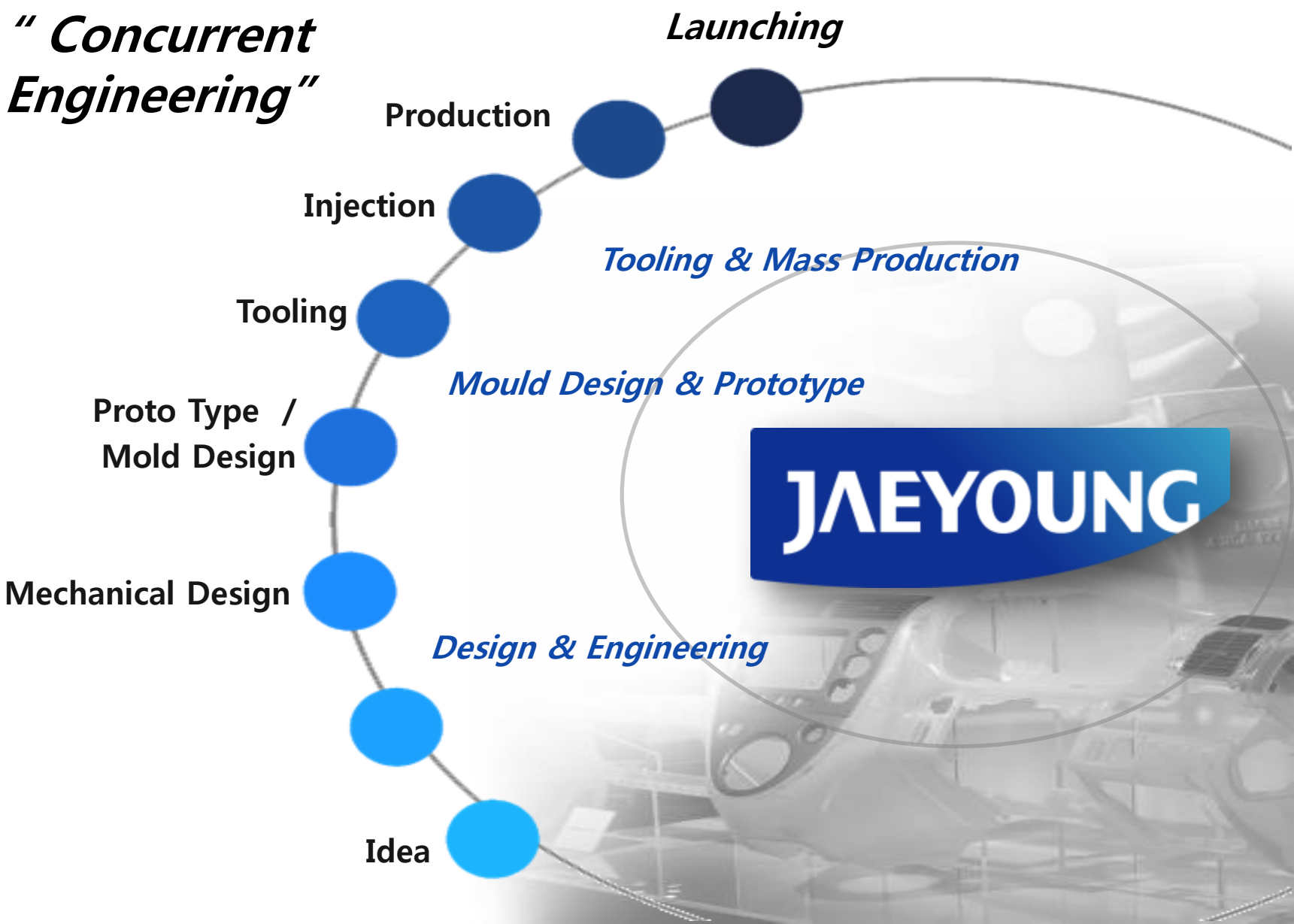
Up to 1500 x1500 x 120

Mold & Production

Advanced Tech R&D

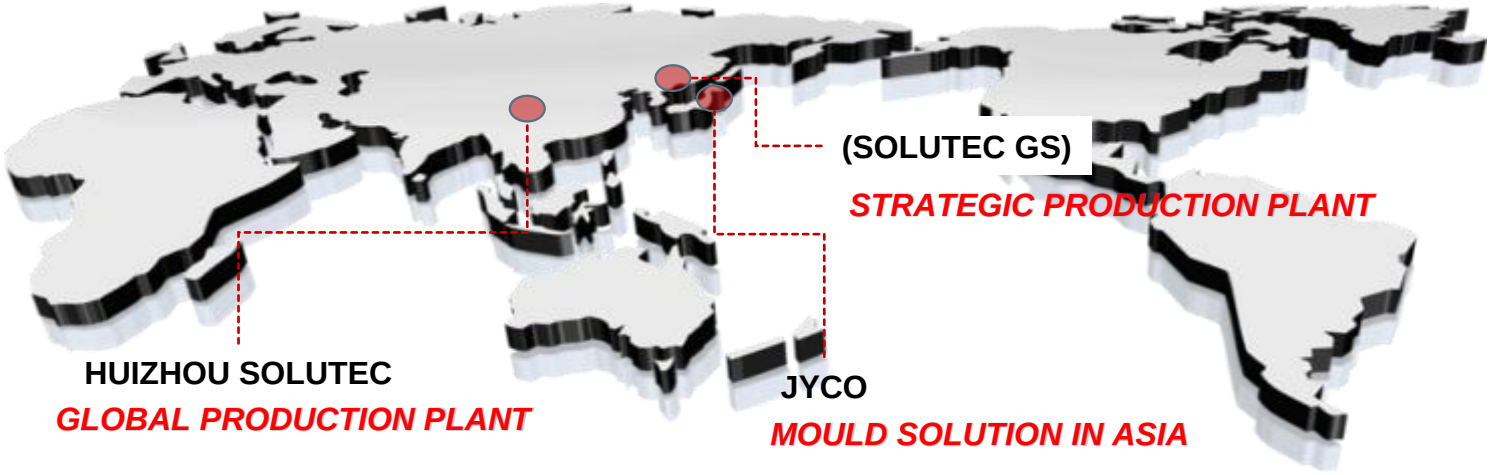
2K, NMT, Micro Pattern

1.1 Capability - One Stop Service From Concept to Product



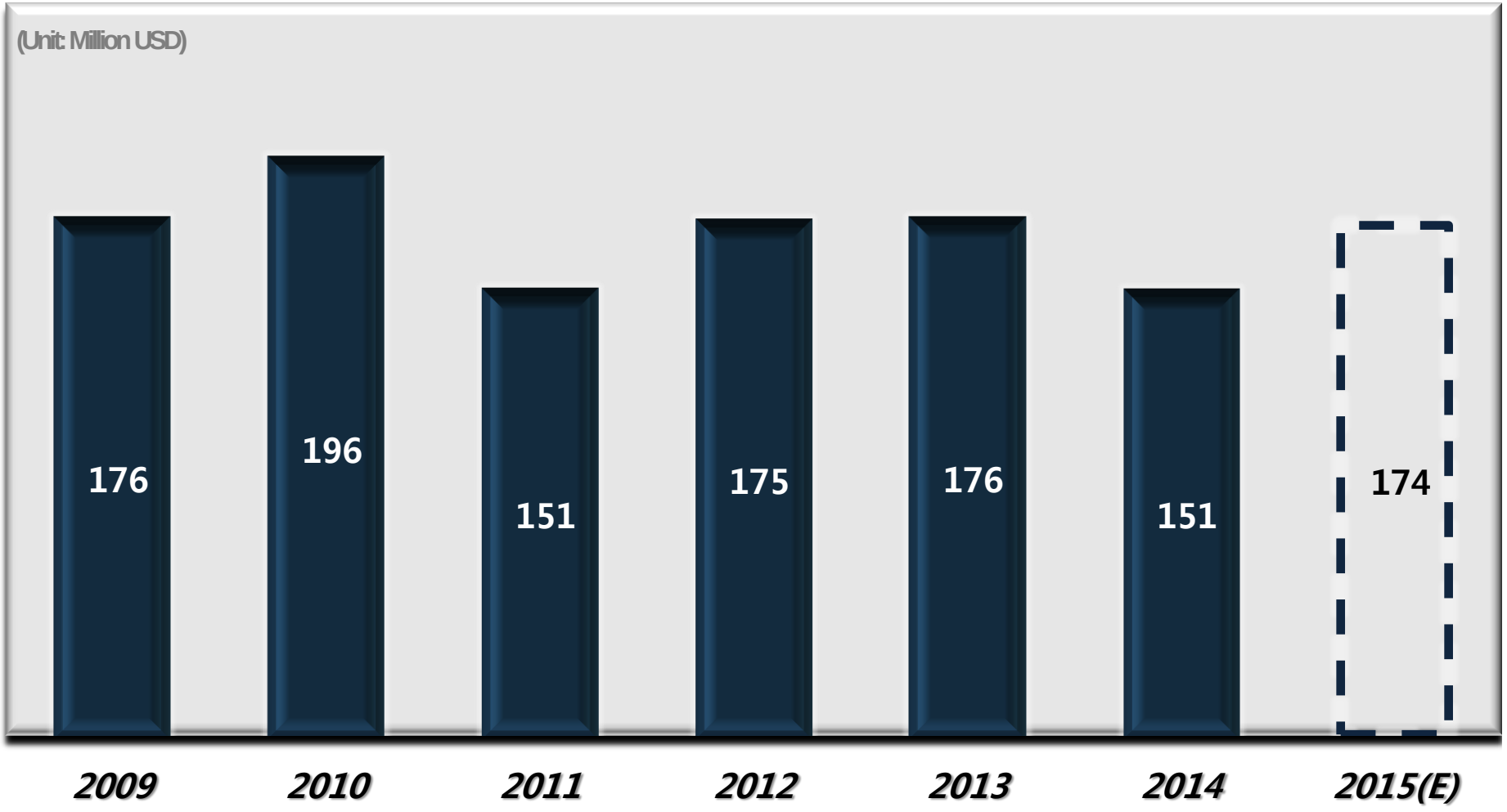
1.2 Our Global Footprint

Name	Capital (USD)	Employee	Major Products
Solutec	14M	410	Mold: Plastic Injection Mold (Automotive, Medical, TV, etc.) Production: Precision, Automotive, Mobile, Pallet Optics: Aspheric Glass/Plastic Lens and Camera Module
I-Tech	2M	55	Trial Injection Production: Medical Equipment, Automotive Parts Assembly: Automotive Parts
Huizhou Solutec (China)	8M	700	Mold: Plastic Injection Mold (Consumer Electronics) Production: Consumer Electronics Assembly: Consumer electronics Special Treatment: UV Coating
JYCO (Japan)	0.3M	33	Mold: Plastic Injection Mold & Mold Base Maintenance: Mold Repair, Engineering Changes
Solutec GS	7.6M	1,000	Mold: Standard Mold Component Machining Assembly: Optical & Automotive



1.3 Sales Revenue

“ 2015 174M USD “



1.4 Accreditation

1990’

1996 EM Mark

1997 ISO 9001
(ISO9001:2000 – 2002)

1998 UL Mark

1999 QS 9000

2000’

2000 KT Mark

2001 Q Mark

2004 ISO/TS 16949:2000

2005 ISO 14001 : 2004

2008 GM GLOBAL APPROVED TOOL SOURCE

2010’

2011 ISO 9001 : 2008
ISO 14001 : 2004
ISO/TS 16949 : 2009

2013 SQ ‘S’ GRAD

JAEYOUNG

02 Company Profile

2.1 Solutec

2.2 Itech

2.3 Huizhou Solutec

2.4 JYCO

2.5 Solutec GS

2.1 Solutec

Name	JAEYOUNG SOLUTEC CO., LTD.
Founded	September 1, 1976
Capital	14M USD
CEO	Hak Kwon Kim / Chairman
Employee	410 (Full time 310, Part Time 100) Affiliates: 1,788 Total: ~2,260

- 4 Sub Divisions for Professional Service -

Mold	Plastic Injection Mold (200kg ~ 50,000kg)
Component	Production of precision plastic parts Automotive, Semiconductor, IT, and Mobile
Optics	Aspheric glass / plastic lens & module Auto Focus cameral module
Injection	Large Plastic Parts (Pallet)

2.1 Solutec (2nd Mold Shop)

Name	**Jaeyoung Asan Plant**
Founded	May 13, 2008
Location	Asan City, Korea
Scale	36,314 m²
Employee	60

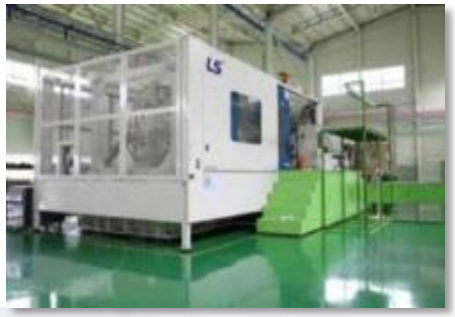
Big Machines are located for tooling

- Service Scope -

Plastic Injection Mold

Trial Injection

Pallet Production



2.2 I-Tech

Name	JAEYOUNG ITECH
Founded	December 22, 2000
Capital	2M USD
CEO	Ki Yong Choi
Employee	55

- Service Scope -

Production

- Medical Device
- Automotive Parts

Trial Injection

2.3 Huizhou Solutec

Name	**Huizhou Solutec Co., Ltd.**
Founded	January 6, 1994
Capital	8M USD
CEO	Young Suk Sim
Location	Huizhou, GwangDong, China
Employee	700

- Service Scope -

Plastic Injection Mold
- Consumer Electronics
- Mobile Device and Peripheral

Production
- Consumer Electronics
- Mobile Device and Peripheral

Assembly
- Consumer Electronics
- Mobile Device and Peripheral
- UV Coating Equipment Available
- Validation Test Equipment Available

2.4 JYCO

Name	JYCO Co., Ltd.
Founded	November 19, 2003
Capital	0.3M USD
CEO	Hak Kwon Kim
Location	Chiba, Tokyo
Employee	33

- Service Scope -

Plastic Injection Mold & Mold Base

Mold Maintenance

Sales & Contact Window for Japanese Customer

2.5 Solutec GS

Name	**Solutec GS Co., Ltd.**
Founded	October 7, 2005
Capital	7.6M USD
CEO	Yong Joo Cho
Location	36-8 Gaesong Industrial Complex
Employee	1,000

- Service Scope -

Mold Standard Component

Assembly

Optical Parts

Automotive Parts

JAEYOUNG

03 Business Scope

3.1 Mold

3.2 Component

3.3 Optics

3.4 JYCO

3.5 Solutec GS

3.1 Mold _ Service Scope

Electronics

- TV, Home Theater
- Medical Device
- Home Appliance
- Mobile Device
- OA Device

Automotive

- Exterior / Interior Plastic Parts
- Functional Plastic Parts

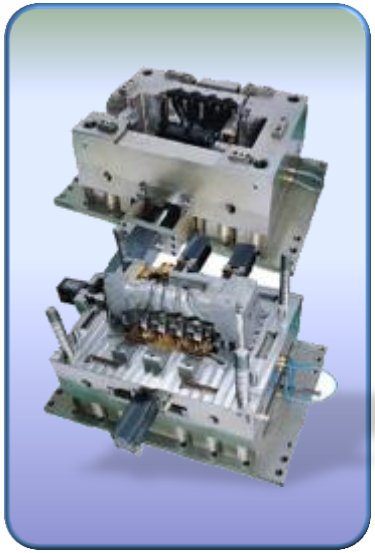
Precision Parts

- Plastic Lens
- Lens Assembly Parts
- Semiconductor Test

Tooling for Mass Production

Variety Customers

Rich Experience



Variety Catagories

3.1 Mold _ Major Product

Automotive Exterior _ plastic injection mold

Front Bumper

Rear Bumper

Wheel Guard

HVAC

Air Cleaner

Intake Manifold

Water Pipe

Light Housing

Lamp Housing

Fan Shroud

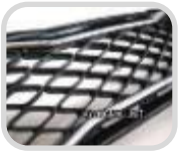
Air Duct

Spoiler

Washer Tank

Cowl Top

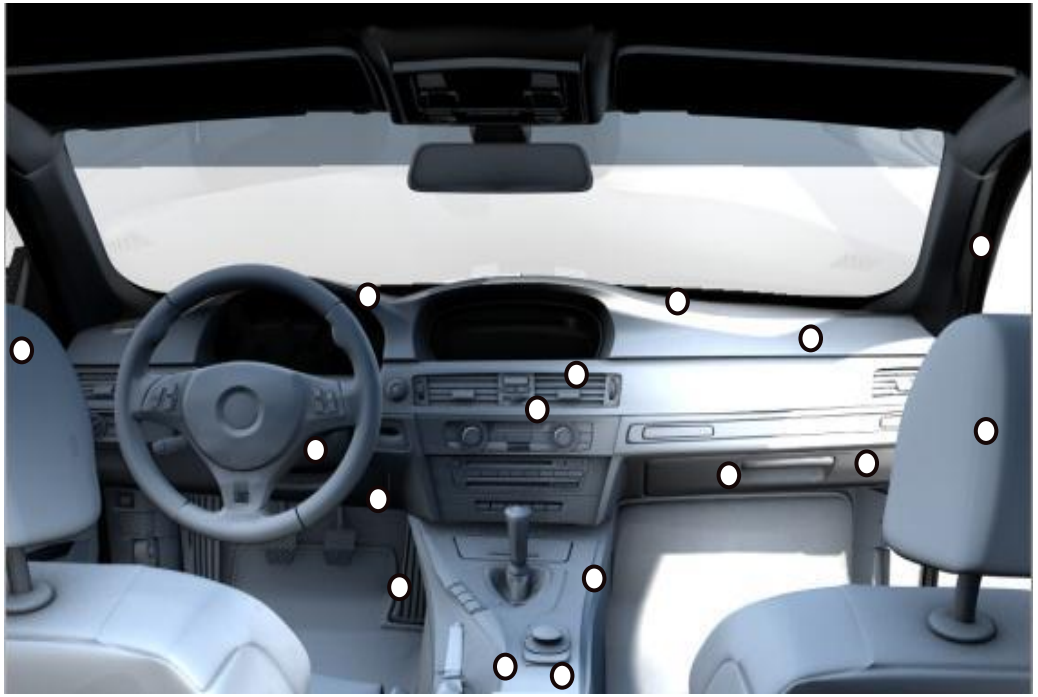
Front Grille



Side Skirt

3.1 Mold _ Major Product

Automotive Interior _ plastic injection mold



IP

Console

Door Panel

Glove Box

Glove Box Lid

Pillars

Cover Instrument Lower Panel

Steering Column Cover

Arm Rest

Pedal

Defroster Grille

Air Vent

Center Facia

Panel Instrument Under Cover

Lid Cluster

Panel Lower

3.1 Mold _ Major Product

Electronics _ plastic injection mold

Television

Home Theater

Medical Device

Air Conditioner

Play Station 3

Washing M/C

Mobile Phone

Speaker

Refregirator

Projector

Printer

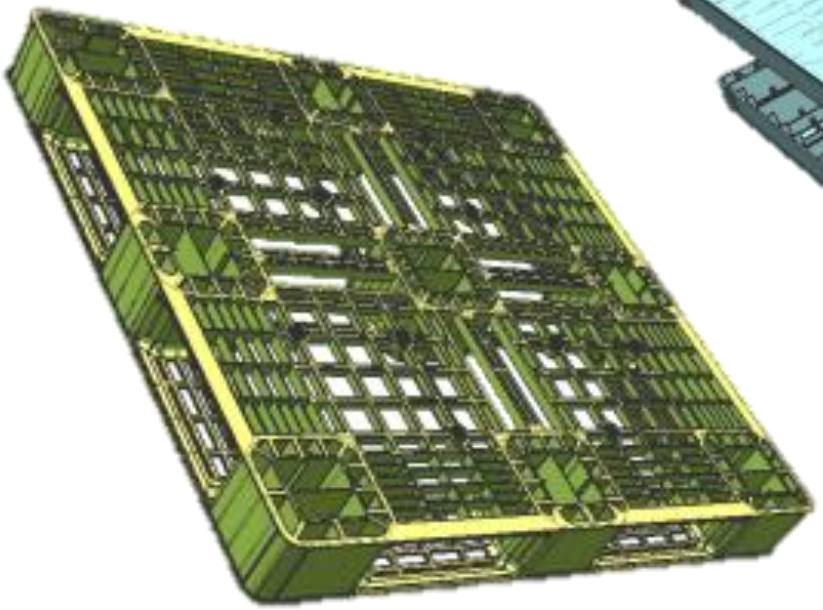
Copy Machine

3.1 Mold _ Major Product

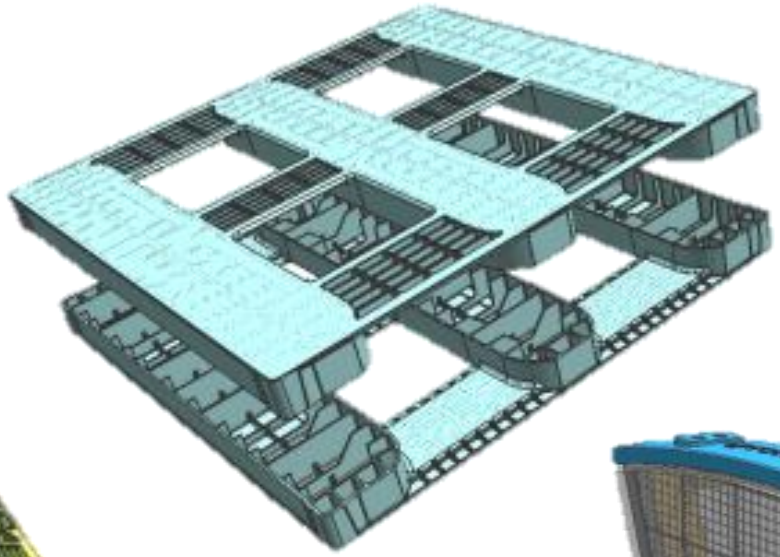
Industrial Parts _ plastic injection mold

Patent Acquired

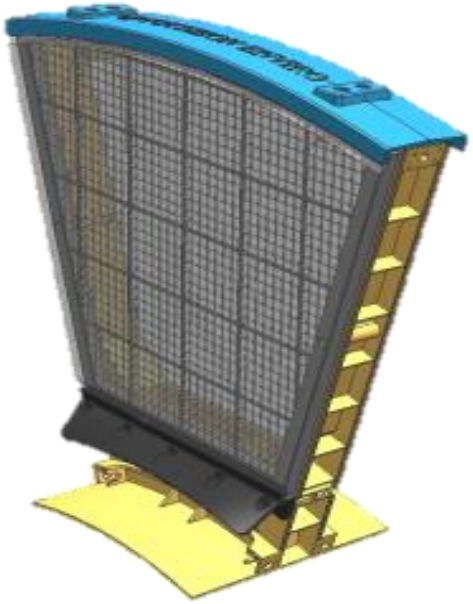
Handcar Pallet Mold Structure
10-2008-0089954



Palette – 1Body

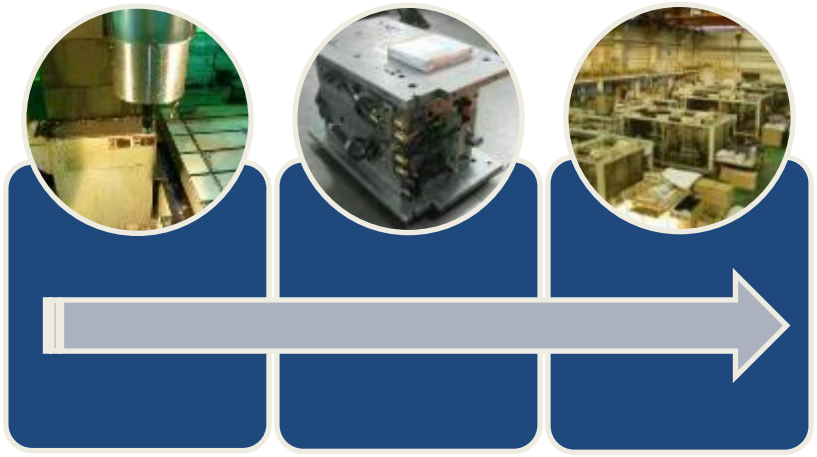


Palette – Welding



Water Large Filter

3.1 Mold _ In-House Trial Capability



IN-HOUSE TRIAL

- 50 TON
- 75 TON
- 100 TON
- 120 TON
- 170 TON
- 220 TON
- 380 TON
- 450 TON
- 650 TON
- 850 TON
- 1300 TON
- 1600 TON
- 2000 TON
- 3000 TON

3.1 Mold _ Customer Region

3.1 Mold _ Worldwide Partners

ASIA

JAPAN	CHINA	THILAND	INDONESIA	MALAYSIA	INDIA
JYCO	WOOSUNG MOLD DSI MOLD	T K	T K	LEADPLUS TECHNOLOGIESN EXPLOT RESOURCES SDN	MASTERCRAFT ENG QUAD TOOLING TECH

AMERICA

U.S.A	MEXICO	BRAZIL	ARGENTINA
OVERTON IND	SAMU DIES INTEGRITY MOLD	TECH MOLD FESMA	TMBASA PEMVAL

EUROPE

SLOVAKIA	U.K.	SPAIN
YOUNG TECH	MITCHELLE MOLD CHAPTER ENG	THERMOLYMPICS

AFRICA

S. AFRICA

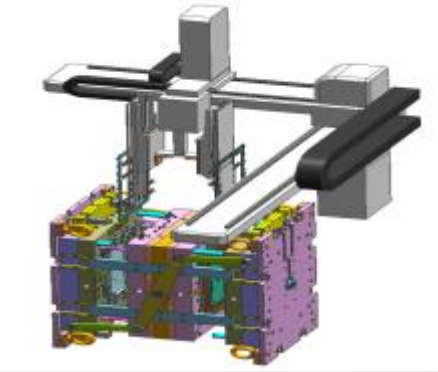
SYNC

3.1 Mold _ Major Technology

STACK MOLD

STACK MOLD

Double sided injection mold for same or family parts



- Lower production cost
- Increase productivity by up to 2.5 times
- Steam mold applicable

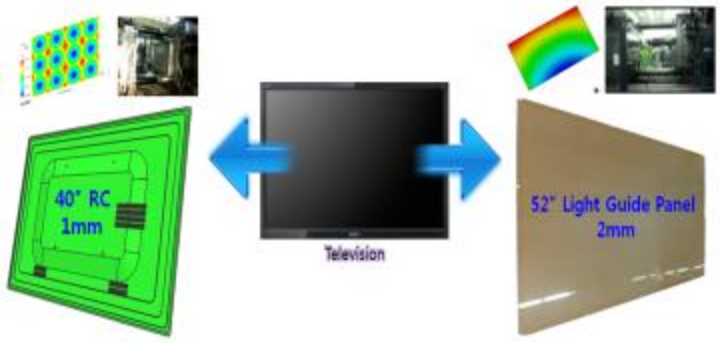
◈ APPLICATION

42 inch Bezel STACK(+RHCM) MOLD

THIN WALL

LARGE THIN-WALL PRODUCTION MOLD

Slimmer plastic parts



◈ APPLICATION

1mm 40" Rear Cover

2mm 52“ Light guide panel

(4 Patents Owned)

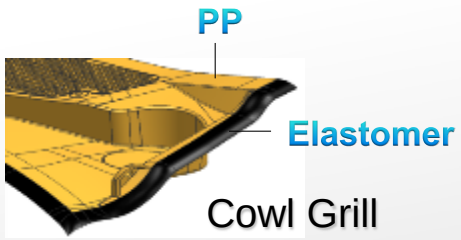
3.1 Mold _ Major Technology

2K INJECTION

- **2 DIFFERENT MATERIAL AT ONE SHOT**
  - **Uniformed Injection**
    - Less process and Lower overhead cost
    - Higher productivity

PP basic mold → Elastomer insert mold → PP + Elastomer

◈ APPLICATION



2 COLOR INJECTION

MICRO PATTERN

- **PATTERNING ON MOLD FOR 3D & GRAIN EFFECT**
  - Less process and Lower overhead cost
  - No post process required. Only from injection molding.

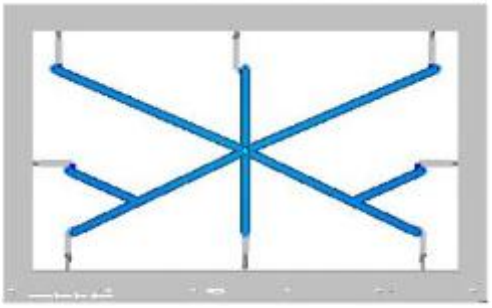
◈ APPLICATION

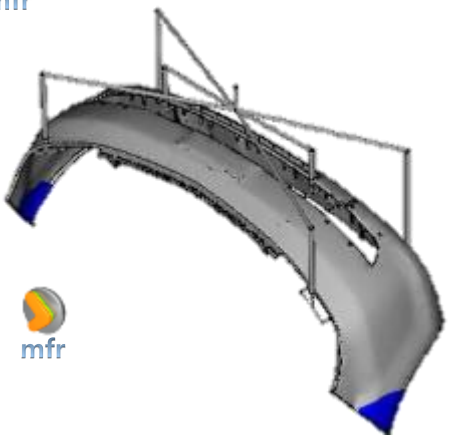
1. NC milling
2. Laser
3. NC prick

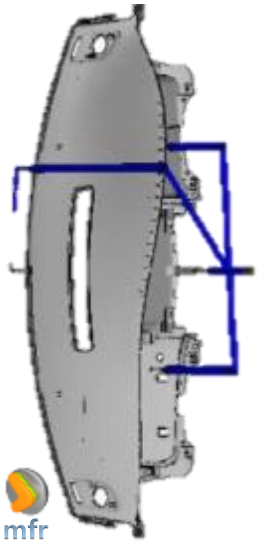
2 patents owned

Fluid Analysis

- Fluid Analysis for all manufactured tools
  - Filling Cavity
  - Temp. Distribution
  - Shrinkage
  - Clamp Force
  - Gate Location

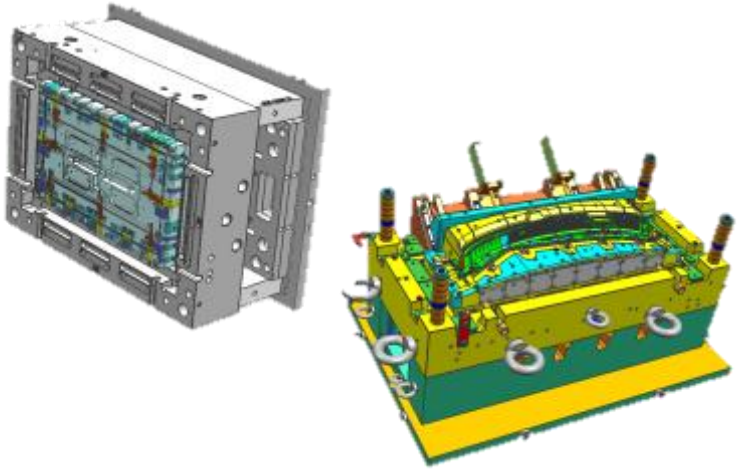






3.1 Mold _ IT System

ramdes — Rapid Advanced Mold Design Export System



Full 3D

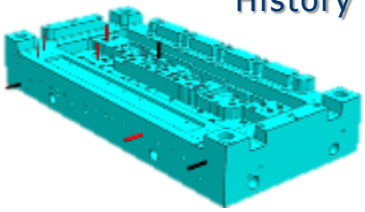
Automatic 3d Design Tool
Automatic Digital CAM

MDIC — Mold Design Information Center

System Standardization
Web Data Base

3.1 Mold _ RAMDES

Change History

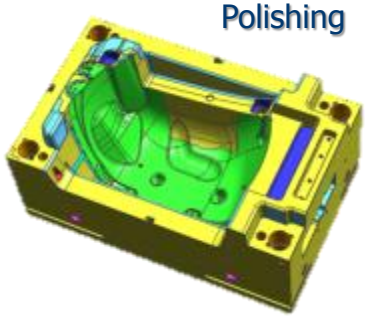


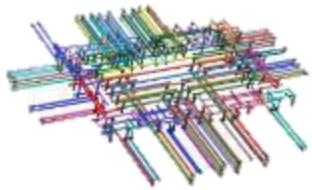
Standard Color

3D - Gundrill CAM

Auto Drawing

NCM Polishing





3D - Gundrill CAM

Drawing-less

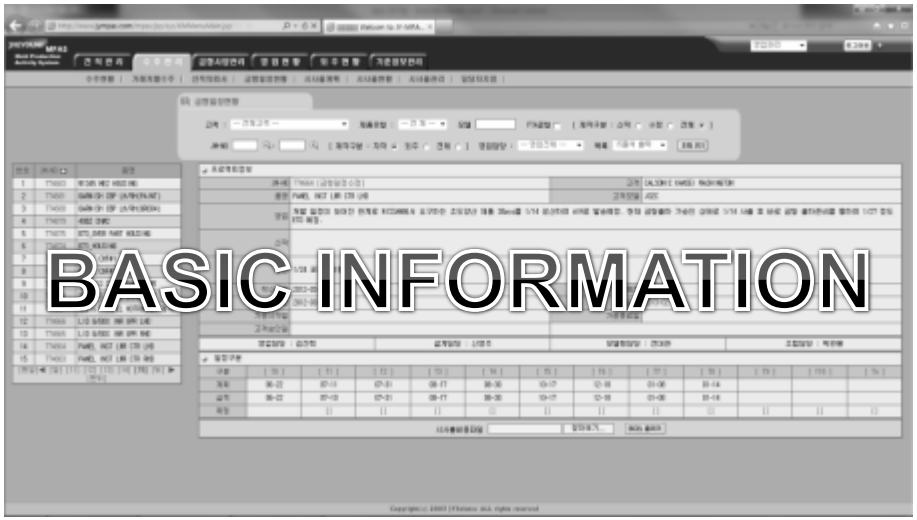
CAD,CAM PROCESS

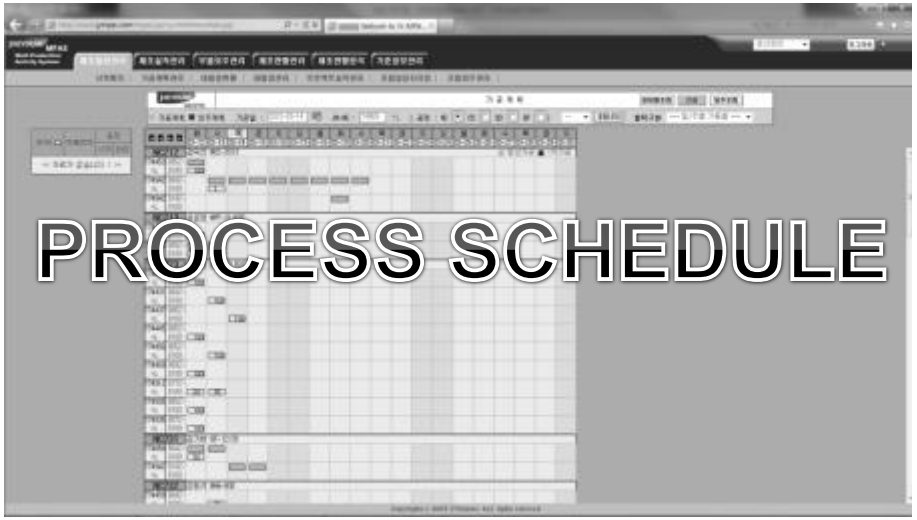
kmold ramdes2

Rapid
Advanced
Mold
Design
Export
System

JAEYOUNG MPAS
Mold Production Activity System

Systematic Solution for each mold

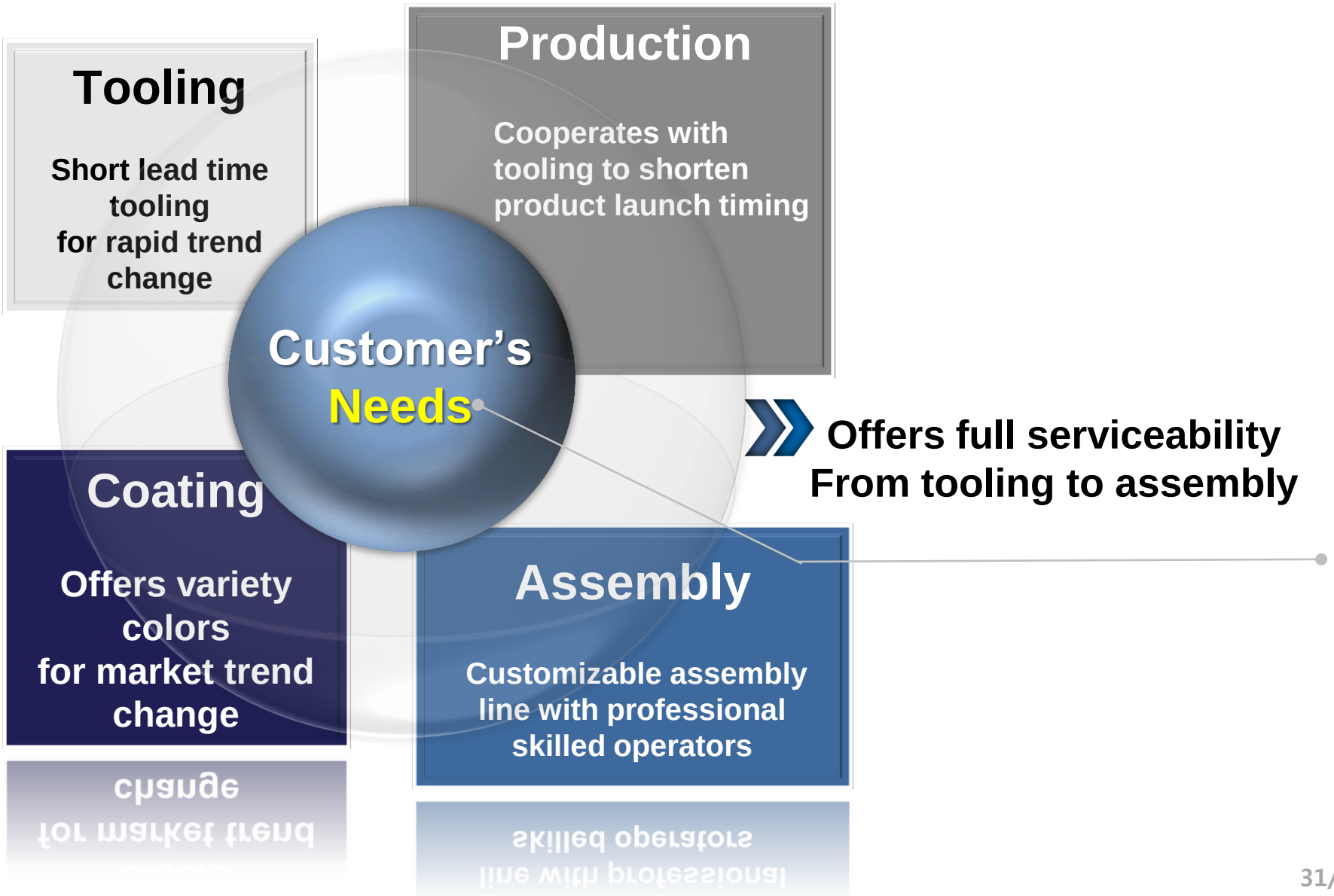




3.1 Mold _

Major Customer

3.2 Component _ Service Scope



3.2 Component _ Major Product

Medical Device

Siemens
Cover
Monitor Rear

GE
Rear Cover

GE
Key Top Lower

Burn In Test Soket Division

BGA
M-BGA
(Ball Grid Array)

TSOP
(Thin Small
Outline Pkg)

LGA
(Land Grid Array)

Mobile Accessory & Case

GALAXY S4

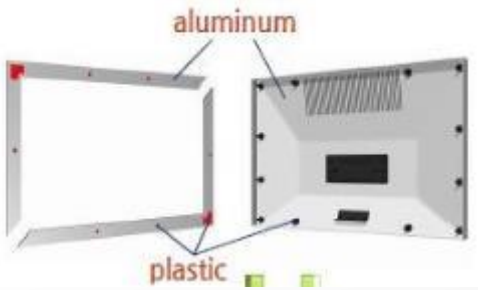
BACURA

3.2 Component _ Major Technology

NMT

NANO MOLDING TECHNOLOGY

Adhesive technology for plastic with metal by insert molding



- Chemical treatment on metal to create nano size holes
- Mold with plastic material and cool down
- Strength proven by long term test
- Under production for MP3 player

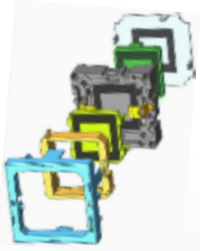
◈ APPLICATION

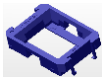
Automotive, Electronics, Medical Device, Mobile Device

PRECISION MOLDING

PRECISION MOLDING TECHNOLOGY

Cassette Type Changeable Mold for cost-saving and shorter lead-time





- Machining by 1μm unit
- Thin wall machining technology
- Vacuum molding, High temp. molding technology
- Mold assembly with controlling stack tolerance

◈ APPLICATION

Burn-in Test Socket for Semiconductor

3.2 Component _

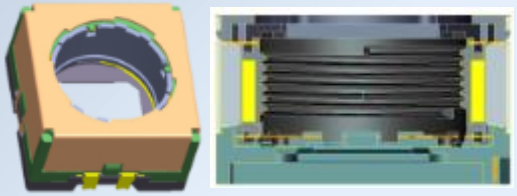
Major Customer

3.3 Optics _ Service Scope

Auto Focus Module

VCM(Voice Coil Motor)

- Based on Fleming's left hand rule
- Control movement position by spring

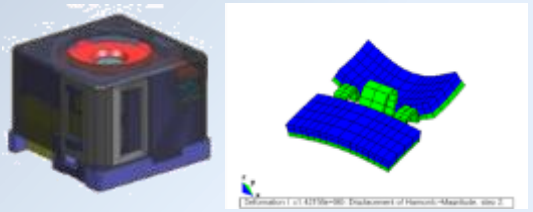


Encoder Actuator

- Control movement position by sensor
- Positioning control is more precise

Piezo Type Actuator

- Control movement position by Piezoelectricity
- Easy to reduce packing size



Design → Mass Production

Platform technology for auto focus module
"Mass Production of Camera Module Components"

3.3 Optics _ Major Product

Auto Focus Module

Samsung Galaxy S Ⅲ
8M Encoder (8.5㎜)

Samsung Galaxy S Series
5M VCM (8.5㎜)

Samsung Galaxy Tab Series
3M VCM (7.5㎜)

3.3 Optics _ Service Scope

Aspheric Glass, Plastic Lens / Lens Unit

Automotive

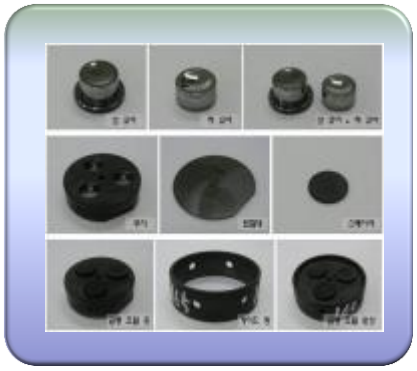
- Blackbox
- Rear View
- Automotive Cam

Mobile & CCTV

- 8M-1GM3P Lens
- 13M-1GM3P Lens
- Reflow 1.3M&2.0M-2GM Lens
- CCTV

Aspheric / Spherical

- Pick-up lens for CD, DVD, BD
- Digital Camera
- Mobile Camera
- Automotive Rear View Camera



Turnkey Solution Service

Offers mold design, tooling, production, and assembly in house

3.3 Optics _ Major Product

Aspheric Glass/Plastic Lens

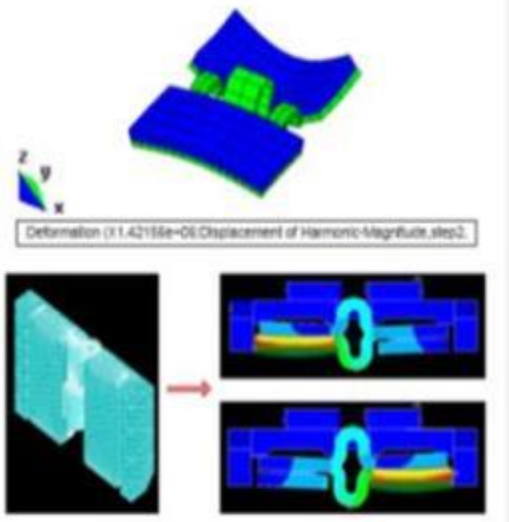
Lens Unit

3.3 Optics _ Major Technology

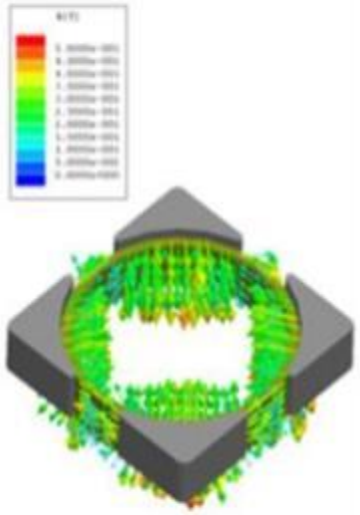
A/F DESIGN

- Auto Focus Actuator Design (VCM, PZT, Encoder, Zoom → 3M ~ 13M pixels)

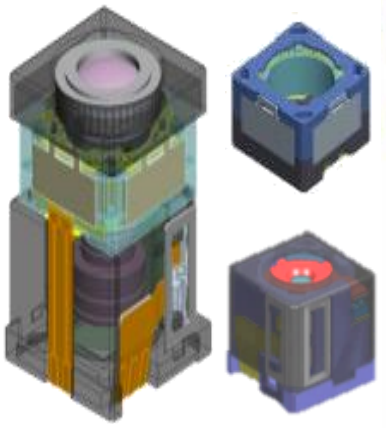
Piezoelectricity Design

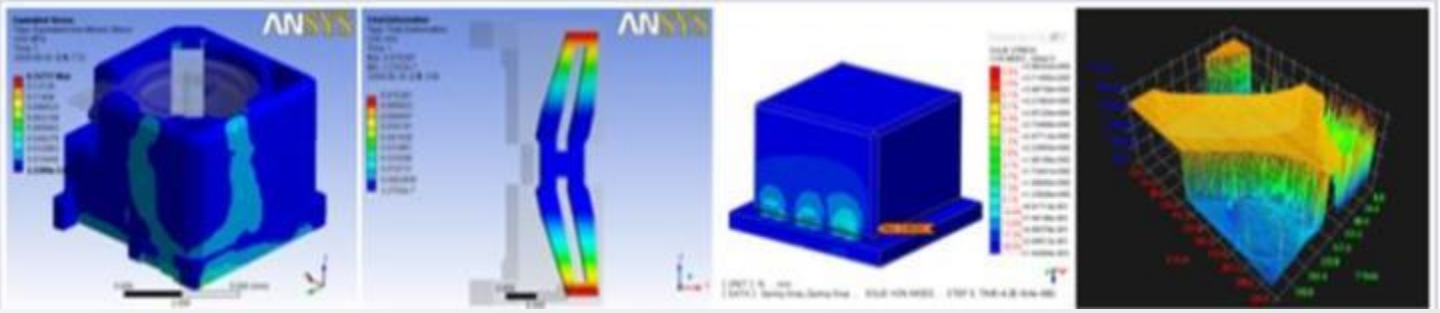


Electromagnetic Analysis



Product Design



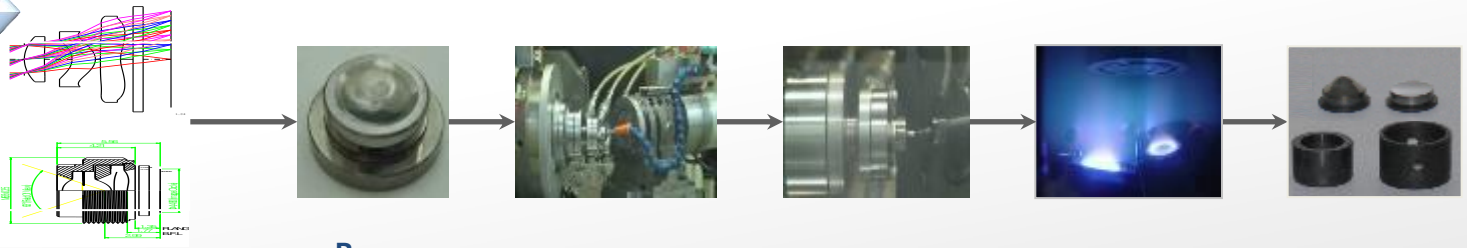


Impact Analysis

3.3 Optics _ Major Technology

LENS MOLD

- **NANO PRECISE TOOLING FOR ASPHERIC/SPHERICAL GLASS/PLASTIC LENS**
  - Mold Tolerance: 10nm~100nm
  - Re-Ir or DLC Coating operation for longer life and better release of part
  - Coating Thickness: min. 1um

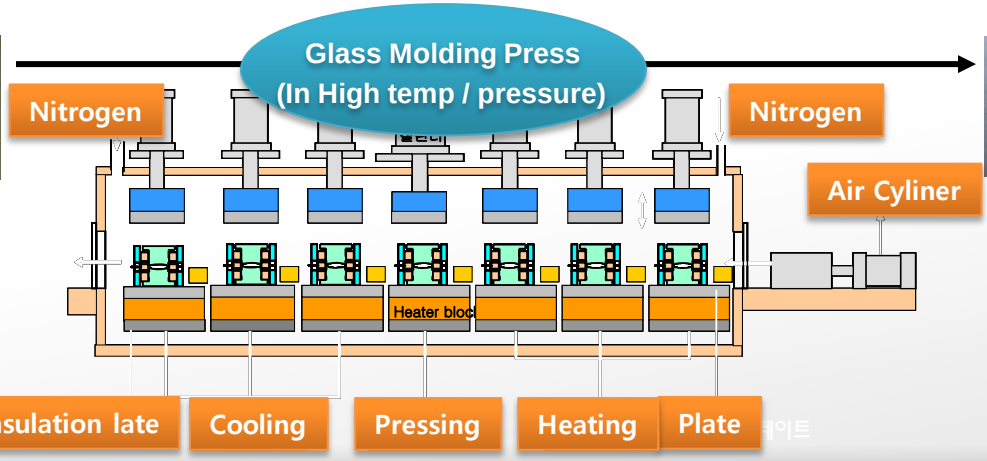


Design | Base Machining | Tooling (profile error < 100 nm) | Coating | Mold

ASPHERIC GLASS LENS

- **MOLDING GOB INTO ASPHERIC GLASS LENS**
  - Heating → Pressurization → Cooling

BALL GOB



Aspheric Glass Lens

3.3 Optics _

Major Customer

SAMSUNG
POWERLOGICS
CAMMSYS
LITEON
partron
NAMUGA Multimedia Lab
mcnex Multimedia Core of the Next...
HK HANKWANG OPTO CORP (주)한광옵토
PANTECH
ISUZU GLASS
DAIWON OPTICAL
3H VISION 쓰리에이치비젼(주)
MANDO
LG이노텍
SS TECK www.ssteck.co.kr

Equipment

(injection molding machine)

18ton ~

200ton Under

Total 77

TON	MAKER	NUMBER					TIE BAR (H*V)
		total	COMPONENT	OPTIC	ASAN	I-TEC	
18	SUMITOMO	1	1				235*235
30	SUMITOMO	10	4	6			290*290
	SODICK	2	2				260*260
50	SUMITOMO	19	15	4			310*310
	MIGADA	1				1	310*310
55	SODICK	5	5				310*310
	TOSHIBA	1				1	310*310
75	SUMITOMO	3	3				360*360
100	SUMITOMO	4	4				410*410
110	WOOJIN	12	8			4	410*410
120	WOOJIN	6				6	410*410
125	SUMITOMO	5	5				460*460
130	WOOJIN	2	2				460*460
	TOSHIBA	3	3				510*460
160	LG	1				1	560*560
170	WOOJIN	1				1	510*510
180	DONGSHIN	1	1				510*510

Equipment

(injection molding machine)

200ton ~

3000ton

Total 21

TON	MAKER	NUMBER					TIE BAR (H*V)
		total	COMPONENT	OPTIC	ASAN	I-TEC	
220	WOOJIN	1	1				950*360
		2				2	510*510
250	WOOJIN	2	2				610*610
	LG	1				1	700*700
280	WOOJIN	2				2	610*610
300	WOOJIN	3	3				720*720
350	WOOJIN	1				1	710*710
380	WOOJIN	1				1	710*710
450	MITUBISHI	1				1	810*810
650	MITUBISHI	1				1	950*950
680	WOOJIN	1	1				950*950
850	MITUBISHI	1				1	1060*1060
1300	MITUBISHI	1				1	1320-1280
1600	MITUBISHII	1				1	1520*1280
2000	LS	1	1				1800*1600
3000	LS	1	1				1900*1900

Equipment (MOLD_Large)

Process		Equipment	Maker
EDM / Discharge	Discharge processing	EDNC-156W,157,85S,64 (4ea)	MAKINO
		ROBOFORM-85P (2ea)	CHARMILLES
		TURBO-450TM	DAEHAN EDM
Grinding / JIG	Surface grinding	FG211/MSG-250M	NICCO
	Plastic grinding	SG211/JFG200M	JINYOUNG
		SG212/MSG-250M	MITSUI
Wire	WIRE	WC201/ROBOFIL-510	CHARMILLES
NCI / Mill	Milling Processing	HMTH-1100 (3대)	HWACHEON
		FDNC-178/FDNC-1710(대)	MAKINO
		MPF-3116DS, BTD-13F.R22(2대)	TOSHIBA
		MCC, GF12, BN2-85(3대)	MAKINO
		KBT-15DXA	KURAKI
		MHA-800	O.K.K
	High speed processing	YBM-8120V	YASDA
		SIRIUS-UL(1대)/SIRIUS-UL+(2대) SIRIUS 1250	HWACHEON
		MCC2013 A60	MAKINO
	Gun drill	FGS-310A	SHIBAURA
		KHG-3000CNC	KOREAGUNDRILL
	Graphite	SNC-106/SNC-86	MAKINO
	Radial	RD211,RD212 (2대)	NAMBUK
		RE213/YR3-115	YOSHIDA
	Diespotting	DSP-1800A	ASAI
		KSRP-400	KUKDONG

Equipment
(MOLD_Precision)

Process		Equipment	Maker
Design / CAM	CAD	2D S/W	AUTO CD (5EA)
		3D S/W	PRO-E (10EA)
	CAM	CIMATRON	(2EA)
		UG	(2EA)
		3D S/W	PRO-E (5EA)
		HYPER MILL	OPEN SOLUTION(2EA)
		POWERMILL & POWERSHAFE	(Associated P/G) (1EA)
EDM / Discharge	Discharge processing	TURBO-300S(1)	DAEHAN
		JDE-35	JINYOUNG
		AQ35L	Sodic 2ea ATC (32EA)
		ROBOFORM400	CHARMILLES
		ROBOFORM4000	CHARMILLES
		CHARMILLES 35P	CHARMILLES 3ea ATC (16EA)
Grinding / JIG	Plastic grinding	Plastic grinding M/C	NICCO 2ea
		Plastic grinding M/C	CHANGHAN
		JIG	MOORE
	HOLE Processing	S50L-406	HAUSER
Wire	WIRE	AP200L	Sodic WIRE (0.05)
		2030	CHARMILLES WIRE
NCI / Mill	Milling processing	NO.2	HWACHEON
	High Speed processing	MC430LV E32TYPE	Sodic 2ea ATC (60EA)
		MC430LV E25TYPE	Sodic 1ea ATC (16EA)
		HSM400 5축	Micron 2ea ATC (80EA)

Software

CONTENTS	S/W	MAKER	NUM
CAD	MTD	AUTODESD USA	13
	Unigraphics	Unigrapics USA	33
	Pro/ENGINEER	PTC USA	18
CAE	Mold flow – Mpi	Mold flow USA	2
	Mold flow – Mpa	Mold flow USA	1
INTERFACE	CAD doctor	Elsium USA	1
	CATIA V5	Dassault systems	1
	One Space	Colcreate	2
VIEWER	Spinfire Pro	Actity USA	23
NC	NCG		19
	NC Brain	NSB	17
	Hypermill	Delcam	2
	CimatronE	Cimatron	2

R&D Center

Institute of Plastic Applications Technology

Approval number : no.19951022

- **Researchers : 36**

Specialty : 25

Assistance : 14

JDH R&D

Approval number : no.20051558

- **Researchers : 14**

Specialty : 11

Assistance : 3

Continuous research and development for Promising technology acquisition
(Material Analysis, Engineering, Plastic & Mold Technology)

SINCE 1976

JAEYOUNG

THANK YOU