

Company Presentation

sarnikon

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Overview
&
Highlights

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II

SMT/ THT
Line

19-33

III

Aluminium
Heatsink
Production

34-53



Establishment
2008



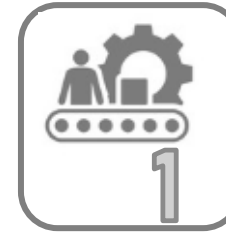
Head Office
ISTANBUL



Sales Office
EGYPT
ROMANIA
UNITED
KINGDOM



Employees
170+



SMT/THT Assembly Line
2500 mt2
ISTANBUL



Aluminium Heatsink
3300 mt2
ISTANBUL



History



2008

- Import component from Far East, Europe, USA
- Production of electronic component heatsink
- Business in LED sector with Osram LED chip , LED Heatsink.



2012

- Sales of OSRAM OS
- Became « Solution Partner» of «LED LIGHT FOR YOU»



2013

Registered TR Dist.
of Comus, OKW, Sirectifier,
Belfuse



2015

Became TR Dist. Of OSRAM OS
and Khatod

History



OSRAM

Digital Lighting
Systems



2016

SMT & THT
assembly line
established.

Signed TR Dist. Agreement with
WAGO, Bi-Sonic, Brightking,
Landwin,
StarPower.

2017

Became Dist of
Osram OS
Egypt, Qatar,
UAE,
Suudi Arabia
Pakistan

Started to sell
OSRAM DS
Products

Started to
DIP Assembly

2019

Became EMS
(Electronic Manufacturing
Service) supplier of
OSRAM

SMT/THT
Assembly line
capacity increased.

References



References

INDUCS®

Invertek
Drives.com

LEDS C4

SCHMIDT
STRAHL  **RADEMACHER**

Technobis

group

LED NOVATE
INNOVEREND IN LED-TECHNOLOGIE

 **EMIRATES**
LIGHTING

 **LUMIÈRES DE FRANCE**


F8 Solartechnik

AWR  **الرستماني**
OSTAMANI

LIGHT
IN THE
LED

 **TRON**

KANDEM

AIR

ELKOM®

 **ELAL COM**
Electrical Albanian Company

WEISS
— LIGHT —

 **omega software**

sarnikon

Our Business Focuses



Led and Electronic SMT/THT Line

- Highly Quality and Reliable
Electronic / Led Module Assembly Line
- 100% Automatic machine park.
- The importance of human health and high quality.



Aluminium Heatsink and Led Housing Production

- Casting, Extrusions, High Fine Ratio ,Forging
- Custom Design
- Indoor and Outdoor Lighting Solutions



Electronic Component Supply

- Electronic Component Supply, Distributorships.
- Cross Reference Product Research Technical Support
- Discontinued Material Supply

Product Groups We Sell

LED & LED Modules

- Osram LED
- LED Modules (Indoor/Outdoor)
- More than 100 standard products
- Ability to design Acc. to customer request



LED Module Complementary Products

- LED Driver
- Optic lens
- Connectors
- Controlling Systems



Aluminum Heatsink & LED Housing

- Die Casting,
- Extruded,
- High Forging
- Customer Specific Products
- 44 Different Patented Products



Electronic Components

- Passive Comp.
- Winding Circuit Elements
- Opto Electronics
- Electro acoustic Comp
- Electro mechanic Comp.
- And More...*

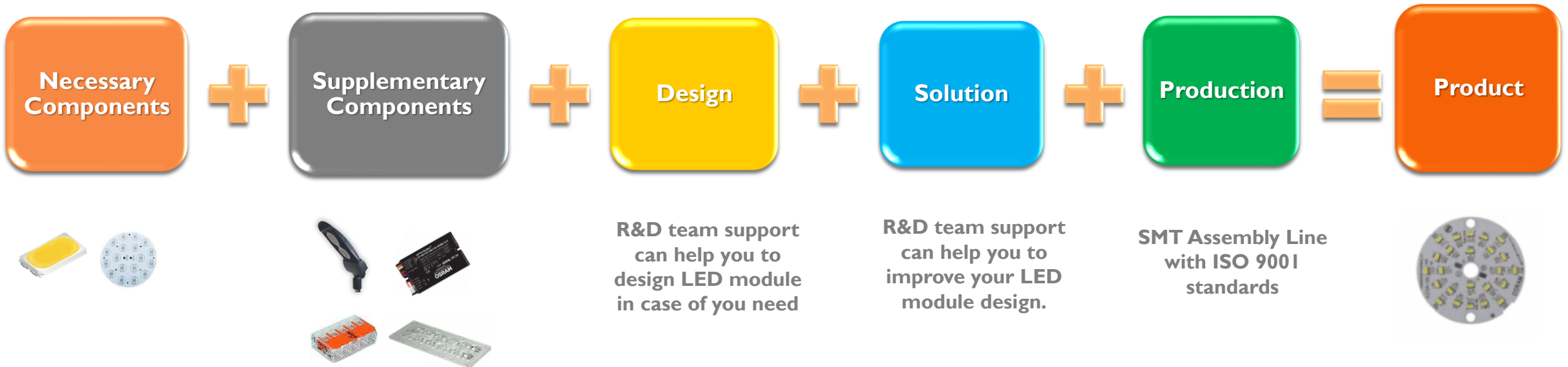
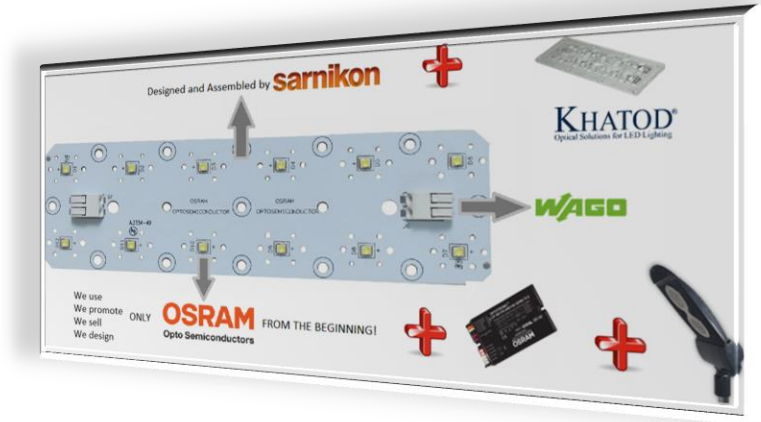


Brands We Distribute

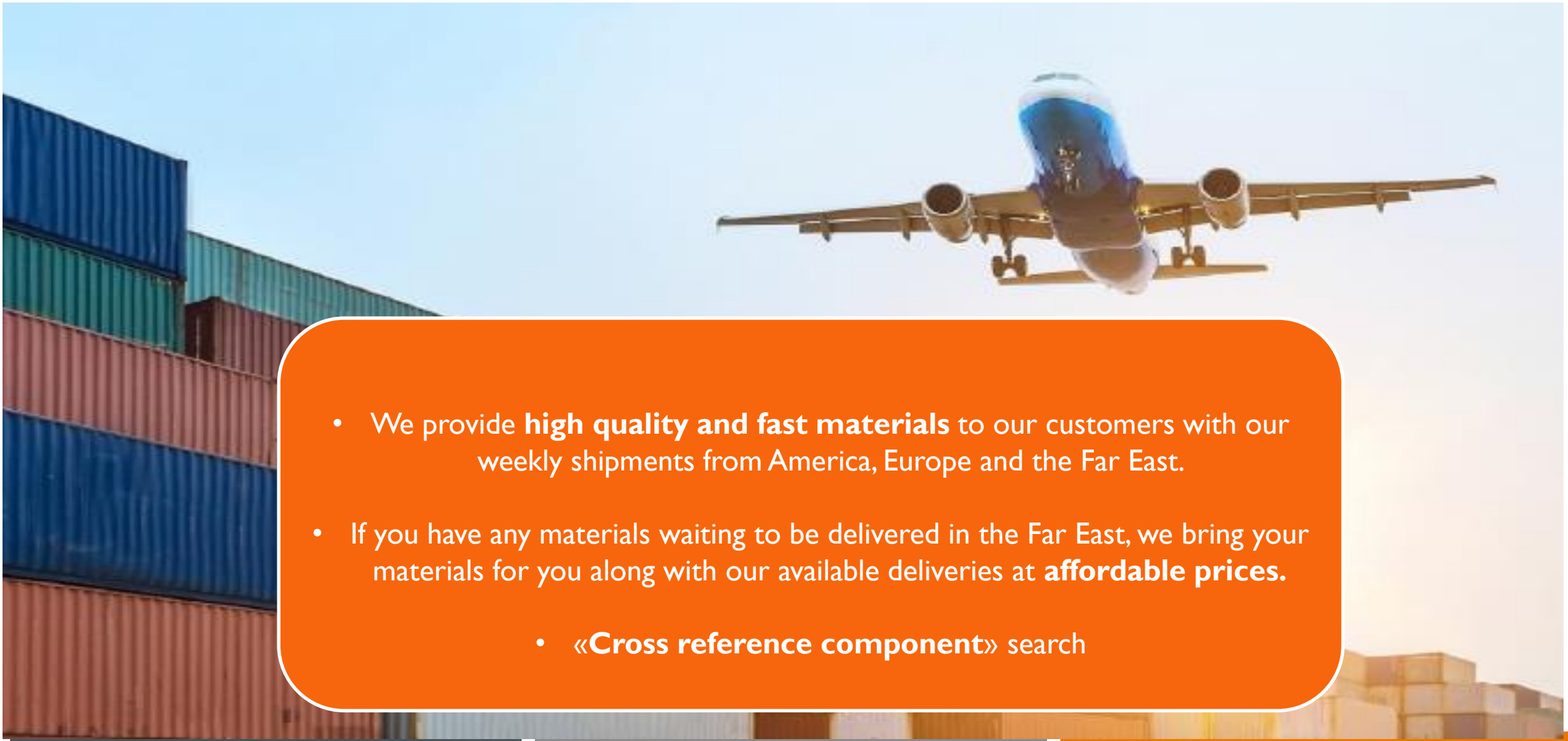


All in one hand

- We design
- We solve
- We supply all components from best brands
- We produce with high quality standards

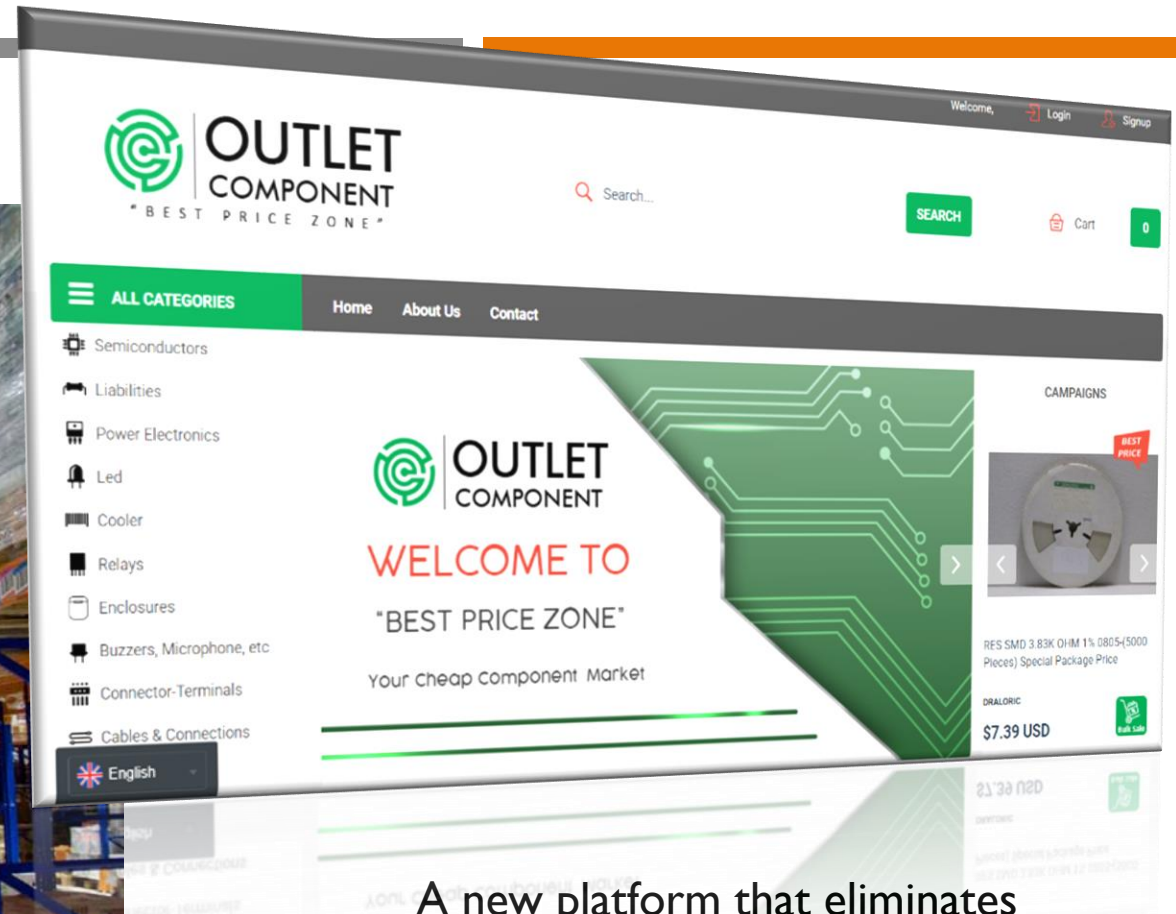


Quality and Fast Material Supply



- We provide **high quality and fast materials** to our customers with our weekly shipments from America, Europe and the Far East.
- If you have any materials waiting to be delivered in the Far East, we bring your materials for you along with our available deliveries at **affordable prices**.
 - «**Cross reference component**» search

Our E-Commerce Project



A new platform that eliminates
idle stocks and offers solutions to
those looking for **cheap**
components.

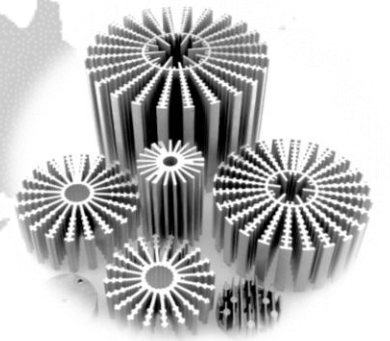
Global Sales Network

>300
International
Customer

>55
Country

Export
Product
Group

%52 Aluminium Heatsink & LED Cases
%43 LED ve LED Module
%5 LED Driver



Global Sales Network

Export to 55 different countries in 5 continents

We're heatsink supplier of Sharp

We're supplying heatsink to
ABB/ Switzerland.

Avnet Israel
is our heatsink and LED modules
distributor

We offer our products in the fields of aluminum case, heatsinks, LED modules, optical solutions, thermal solutions from Finland to South Africa, Russia to India, France to America, Indonesia to Egypt..

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We are one of
EMS (Electronic Manufacturing Service) supplier



Production Facilities



Area : 2500 mt2
Capacity : 220.000 component/hour
Production : SMT/THT Assembly

Area : 3300 mt2
Capacity : 25.000 product/month
Production : Aluminium Heatsink & LED Housing



Total Quality Management



ISO 9001:2015

Quality Management System

ISO 14001:2015

Environmental Management System

ISO 10002:2018

The Customer Satisfaction and Compliance
Management System

LED Light For you

Certified Partner for Region of EUROPE



sarnikon

IATF 16949:2016 (*) Automotive Quality System



(*) Certification Process will be finalized on Dec. 2021

SMT & THT Assembly Line



Overview



Establishment
2016



Location
Ataşehir / İstanbul



Square
2500 m²



Capacity Increase
2019-2020

sarnikon



HIGH CAPACITY



SHORT LEADTIME



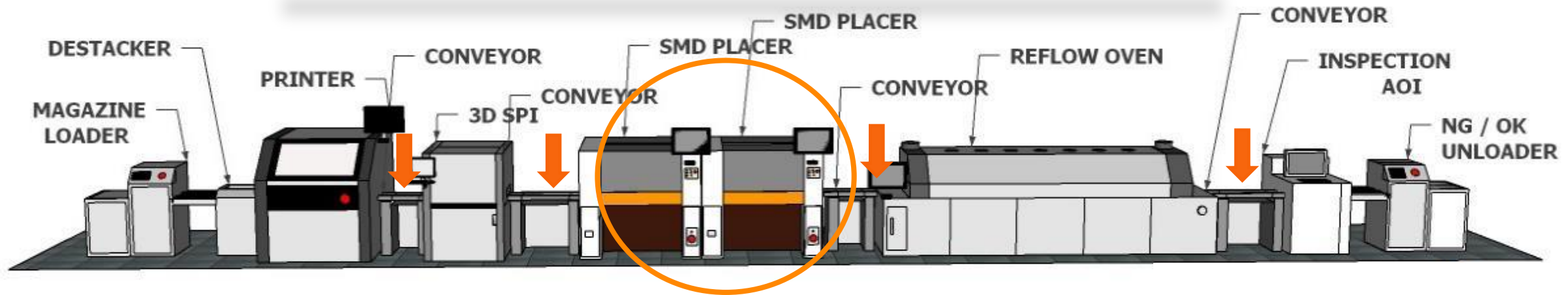
HIGH QUALITY

HIGH CAPACITY

SHORT LEADTIME

HIGH QUALITY

FULL AUTOMATIC LINE



**Double Conveyor
PCB Transfer**



**Double SMD
Technology**

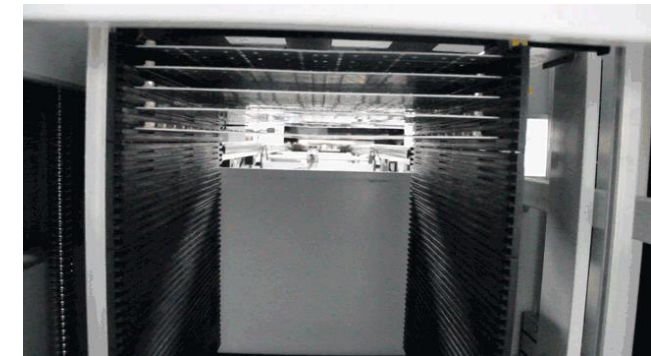
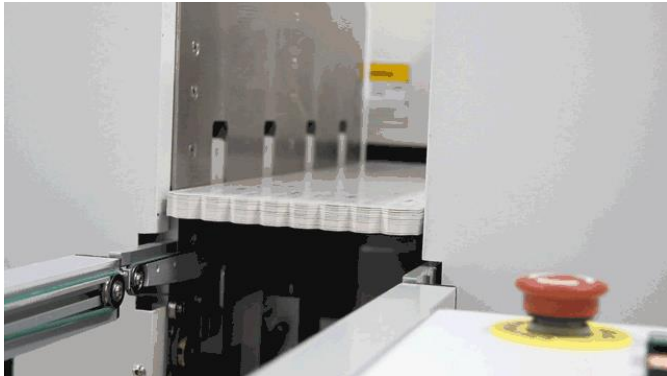
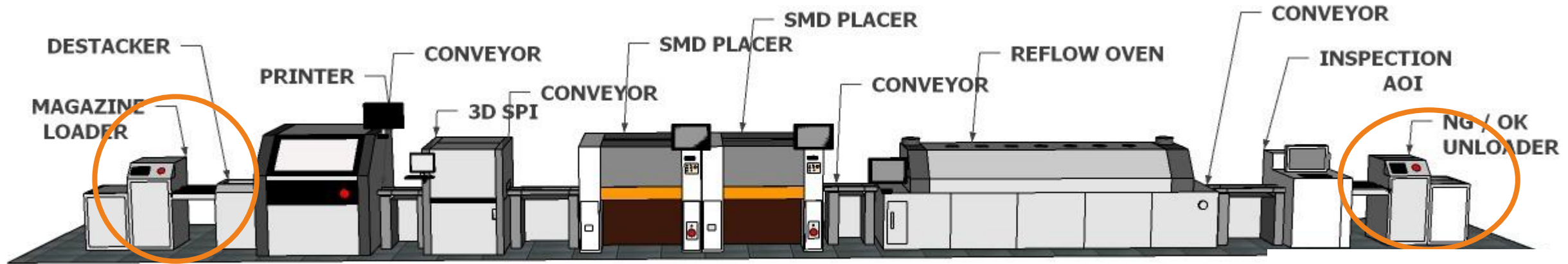
220.000
component /hour

HIGH CAPACITY

SHORT LEAD TIME

HIGH QUALITY

ONTouched PRODUCTION

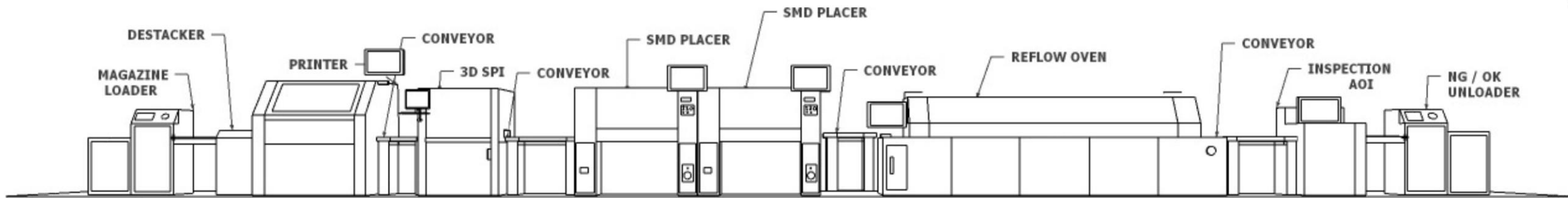


HIGH CAPACITY

SHORT LEADTIME

HIGH QUALITY

The Machine Range Produce High Quality



Printing



Pick &Place Machines



Reflow Owen



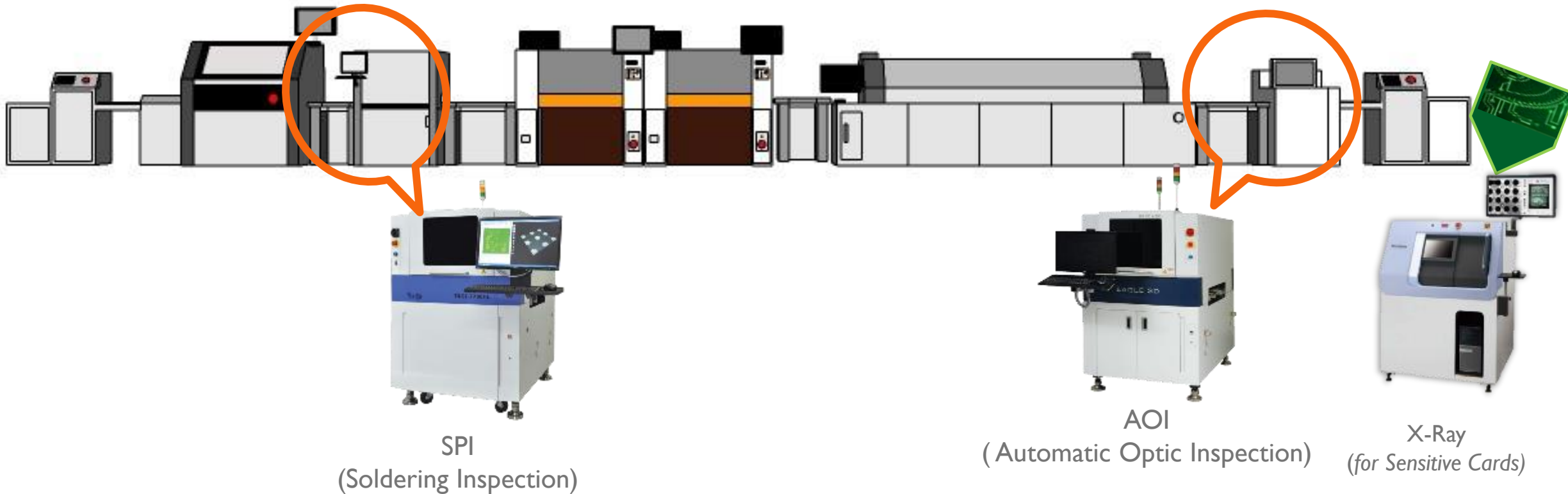
Selective Soldering

HIGH CAPACITY

SHORT LEADTIME

HIGH QUALITY

Quality Control Machines

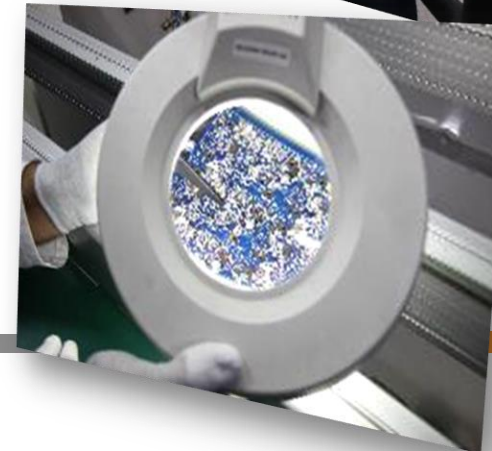


HIGH CAPACITY

SHORT LEADTIME

HIGH QUALITY

Expert Engineer Team



sarnikon

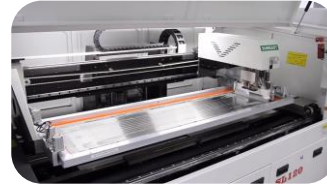
Have You Asked These?

1. Which brand of solder cream are you using?



We use long-lasting British Brand Alpha lead-free cream solder. Quality soldering is guaranteed. We prefer solder with different silver weight in LED lighting and electronic card assembly.

2. Is the printer manual, semi-automatic or fully automatic?



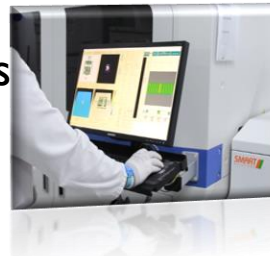
We are aware that the %64 of the errors due to solder problems, therefore, we use fully automatic printers. We prefer a fully automatic printer that can solder 120cm automatically at one time; whose investment cost is 60 times more than manual printers and 10 times more than semi-automatic printers.

3. How is the soldering quality gets controlled?



We own a SPI (Solder Paste Inspection) machine to inspect homogeneous solder dispersion. We control solder length, width and height with 3D Imaging technology to provide %100 solder quality.

4. To how much length, can SPI devices control cards at one time?



Can inspect boards with up to 120cm at one time, the only SPI machine in the World which is custom designed to do so.

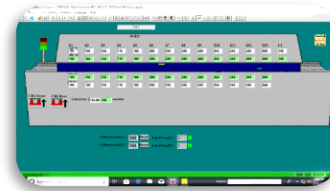
5. What is your assembly capacity and what are your deadlines?



We provide high capacity and short delivery time with our line which has double SMD production technology (double head assembly & double machine) and double conveyor, which can assembly 220,000 components per hour **according to the IPC standards.**

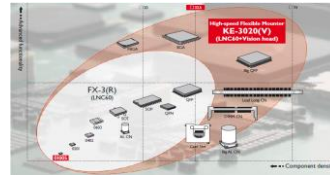
Have You Asked These?

6. How many heating and cooling zones does your oven have?



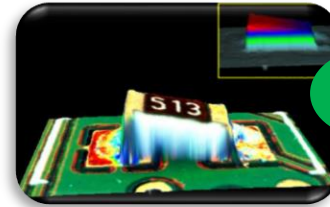
We cook precisely with a total of 13 zones, which is the ideal zone number that makes the solder, liquid, by slowly melting it in a healthy way and leaving it to cool so that it does not form cracks. Thus, we are able to create special oven conditions for each card.

7. Which packages/cases of components are your Pick & Place machine capable of assembly?



Our machine can assemble components in the package style from 01005 up to -74x74mm - 50x150 mm. Thanks to this feature, we can address different sectors such as automotive, medical and defense.

8. Do you own AOI (Automatic Inspection) machine?



3D

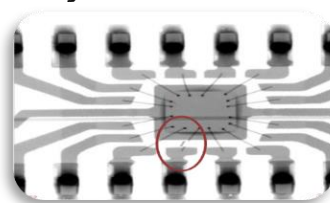
With our in-line AOI machine, we provide 100% control on each board. We take high resolution photographs and compare the cards produced with the witness sample. We prevent major errors by controlling also the height of the components with 3D technology.

9. How do you Assembly THT components, by hand?



With our Selective Soldering machine, which is a requirement for the automotive standards and used for THT assembly, we provide flawless and fast soldering. Hence, eliminating human errors.

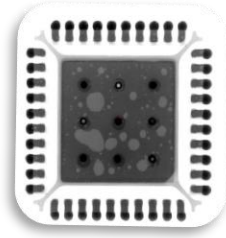
10. How do you Inspect the errors which can not be seen by naked eye?



With our X-Ray device, by looking at the internal structure of the components and the solder, we are able to detect problems such as solder coating bubbles, broken wires in the component, short circuit between legs, and prevent them with the right machine adjustments. For example, we examine with an X-ray whether the contact between the PCB islands and the legs of the chip is fully established.

Have You Asked These?

11. Do you check for air bubbles inside the solder?



In-solder oxidation is the oxidation of air bubbles formed in the solder, over time. We control the number of the air bubbles according to the IPC standards.

12. According to which standards do you follow up your assembly processes?



Association Connecting Electronics Industries®

IPC is the Rework, Repair and Modification Standard for Electronic Board Sets. We follow our processes and create our production rules according to the IPC Standards. Our staff consists of people who have received IPC training.

PRODUCT DEVELOPMENT STEPS

RFQ Review & Feasibility

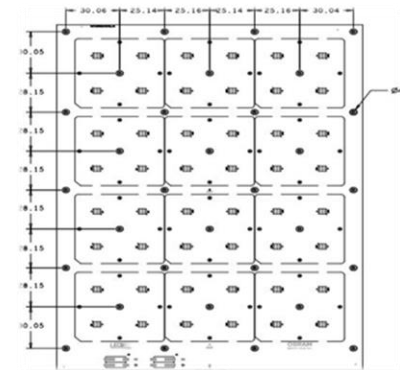
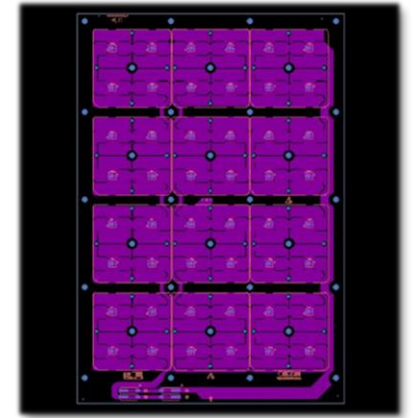
Designing via Allegro

Evaluation of the Design with Customer

Sample & Pilot Production

FMEA, Control Plan, PPAP

Material Planning & Serial Production



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PCB from Design to Volume Production | Best Value & One-Stop-Shop



PCB Design Parameters According to IPC-A-600J: Acceptability of Printed Boards

Raw Material

FR4 CEM1,
CEM3
MCPCB (Alu)

Soldermask

White, Black,
Green, Red,
Blue

Thermal Conductivity

Type 1-2-3 &
4

Copper Thickness

0.5oz, 1oz ,
2oz, 3oz

PCB Thickness

0.8 -3mm

Panelling

Optimum panelling
according to
provide maximum
production
efficiency

Stencil

According to the
PCB optimum
Stencil design

Surface Cover

LF-HAL or OSP

CTI & TG

CTI max. 600V &
TG min. 110°



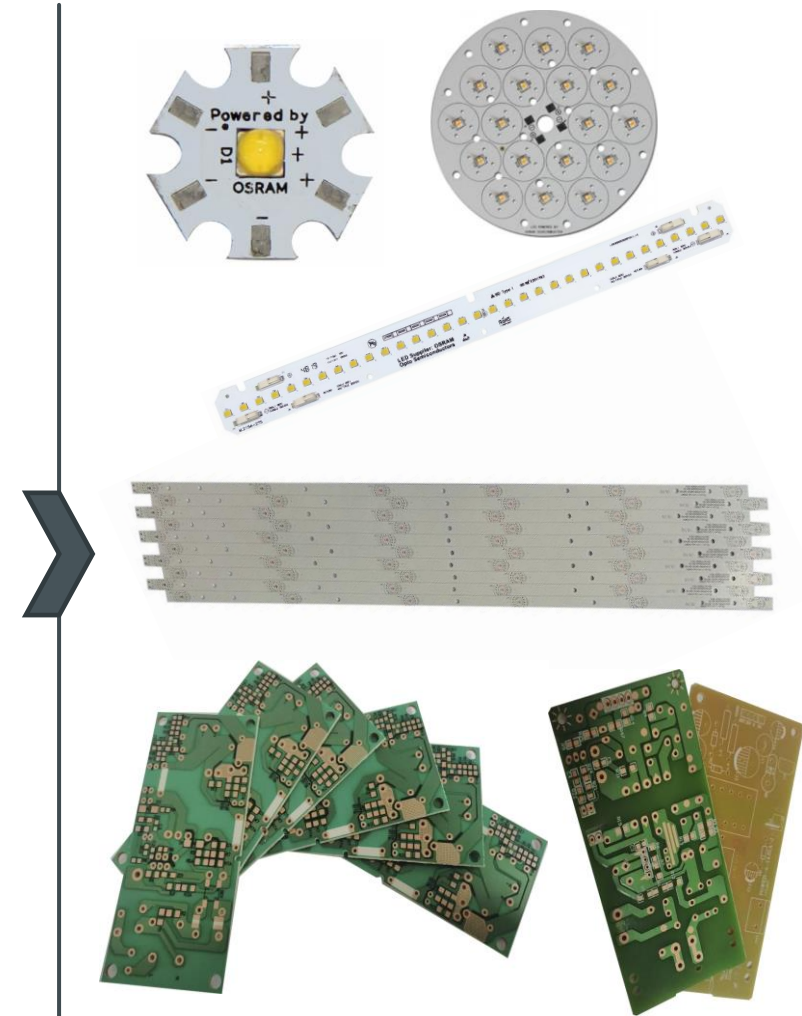
Fast Quotation

PCB Quote

- ☐ Gerber
- ☐ Material Type
- ☐ Copper Thickness
- ☐ Soldermask Color
- ☐ Thickness

Stencil Quote

- ☐ Size
- ☐ Stencil Side (Top, Bottom etc.)
- ☐ Stencil Type (Framework, Nonframework)



Aluminium Heatsink & LED Housing Production

You imagine , we design and create!

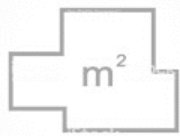


Overview



Location

Sancaktepe / İstanbul



Area

3300 m²



Employee

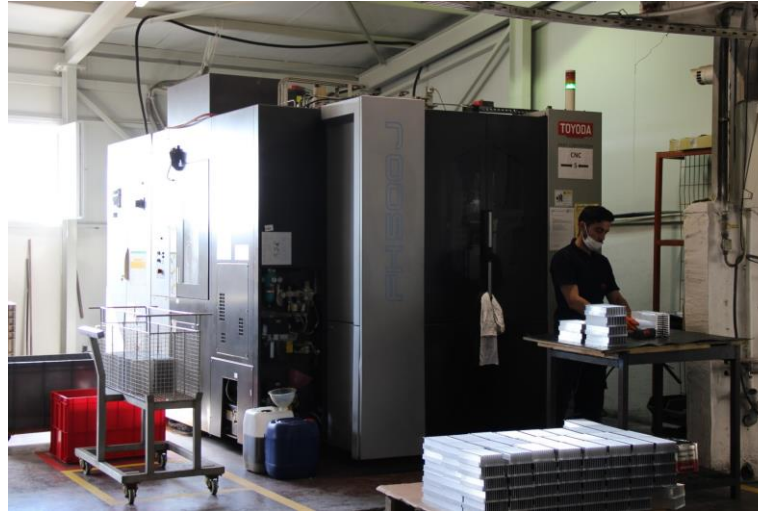
30



Production/Month

> 25.000 products

Production



Cutting Process

CNC Work Process

Production



Drilling Process



Ultrasonic Washing



Warehouse



Product Groups



Outdoor

- Street Lighting
- Projector Lighting
- Wallwasher Lighting
- Park & Garden Lighting
- Tunnel Lighting
- Skiving Heatsinks



Indoor

- Flush Mounted
- Surface Mounted
- Downlight
- Ray Spot
- Fluorescent Model
- Linear Lighting



Industrial

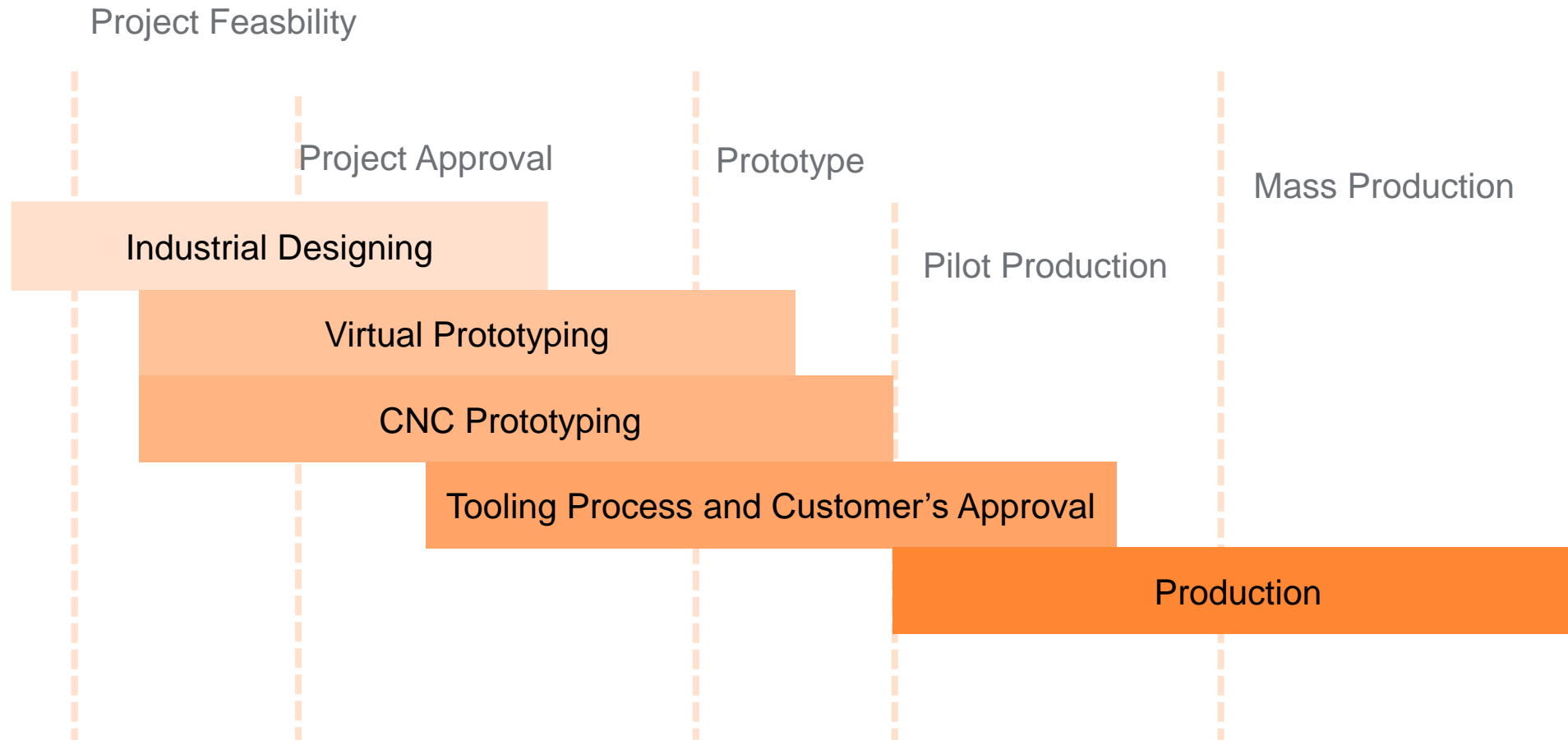
- Etange Armatures
- Canopy
- Ex-Proof

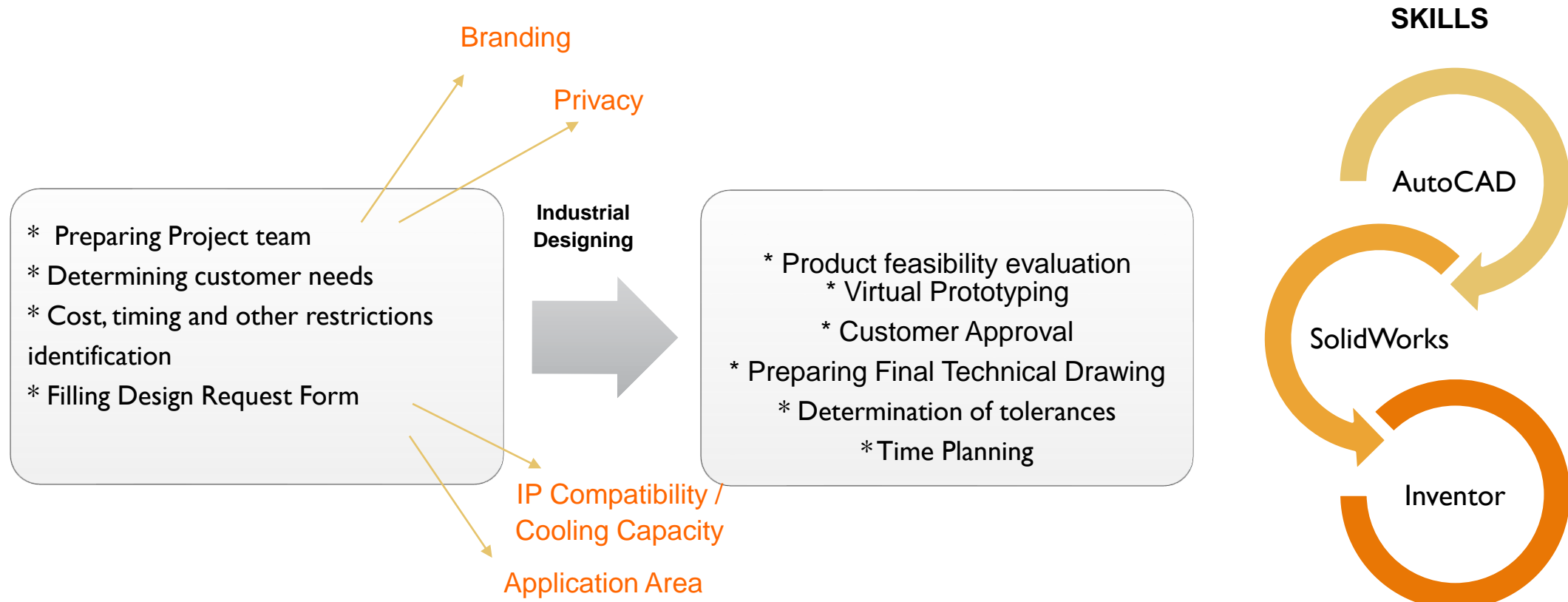


Component Heatsink

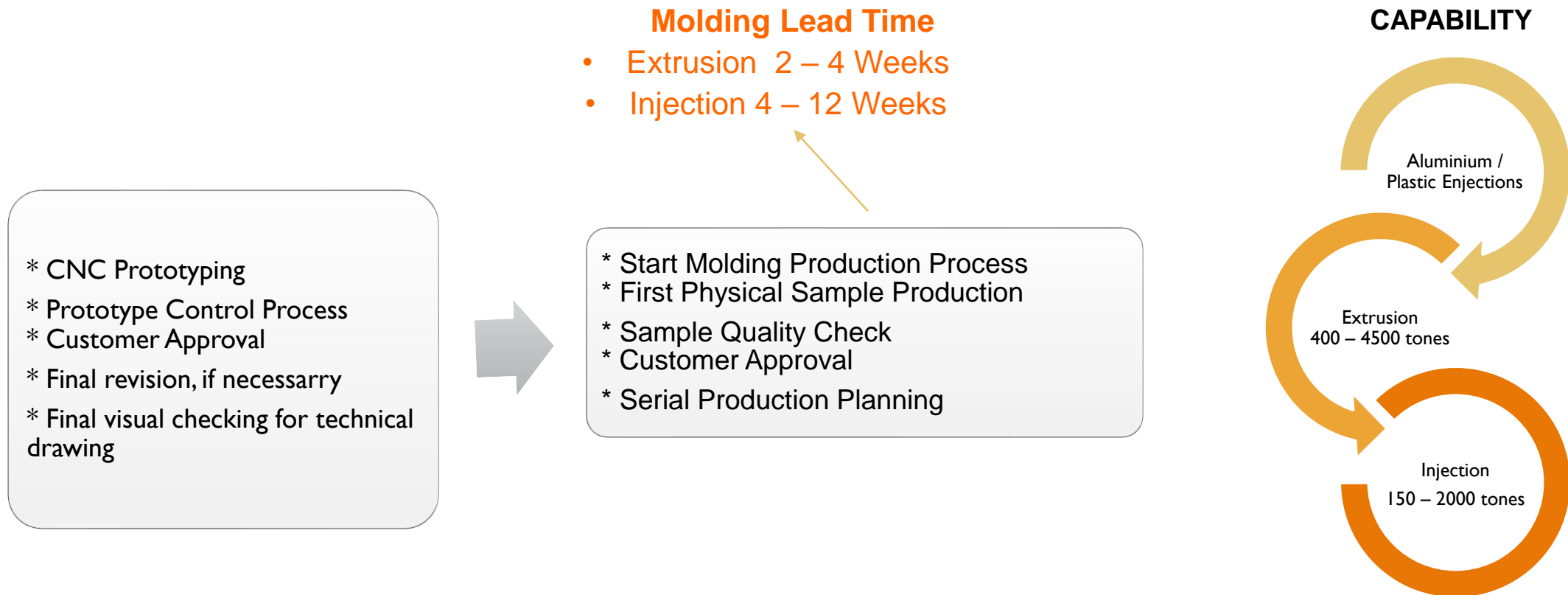
- Injection Heatsinks
- Press Heatsinks
- Integrated Heatsinks
- Electronic Circuit Heatsink
- Regulator Heatsink
- Standard Extrusion Heatsink
- Fan Type Heatsink
- Lamella & Skiving Heatsink

Product Development Planning Steps





We design according to customer needs and expectations.



Aluminium Extrusion

- 6xxx series material
- Anodizing / Alodine (8μ - 12μ up to 18μ)
- Electrostatic Powder Painting
- CNC Operation
- Extendable length

Plastic Extrusion

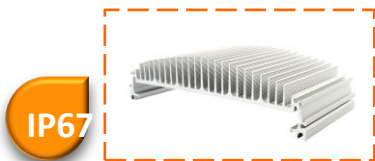
- Polycarbonate/ PMMA / ABS / PVC etc...
- Light Transmittance Options
- Extendable Length

Aluminium Injection

- Aluminum Alloy Ingot
- Mold size is limited
- Electrostatic Powder Painting
- Cathopheresis Coating
- CNC Operations
- Handwork operations

Plastic Injection

- Polycarbonate / ABS / %30 Fiberglass / Acrylic and etc...
- Mold size is limited



Material

- **6063 Quality Natural Anodized Aluminum**
- High-strength Tempered Glass / Polycarbon Cover (IK08 Certificated)
- Injection Side Covers
- Possibility of application in the desired length

Technical Spec

- Design suitable for IP-67 waterproof

Application Areas

- General Lighting Areas
- High ways
- Stadiums
- Production Areas
- Car park



Material

- **Etial 150 Aluminum (Injection)**
- High strength Tempered Glass / Polycarbon Cover / Lens (IK08 Certificated)
- Connection Accesories
- Easy montage

Technical Spec

- Design suitable for IP-67 waterproof
- Electrostatic Powder Coated

Application Areas

- General Lighting Areas
- High ways
- Stadiums
- Production Areas
- Car park



Material

- **6063 Quality Natural Anodized Aluminum**
- High-strength Tempered Glass / Polycarbon Cover (IK08 Certificated)
- Injection Side Covers
- Possibility of application in the desired length

Technical Spec

- Design suitable for IP-67 and IP-65 waterproof

Application Areas

- General Lighting Areas
- High ways
- Stadiums
- Production Areas
- Car park



Material

- **Etial 150 Aluminum (Injection)**
- High strength Tempered Glass / Polycarbon Cover / Lens (IK08 Certificated)
- Connection Accesories
- Easy montage

Technical Spec

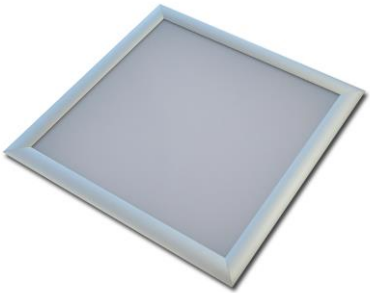
- Design suitable for IP-67 waterproof

Application Areas

- General Lighting Areas
- High ways
- Stadiums
- Production Areas
- Car park



- LP-63 Surface mounted



- LP-66 Flush Mounted

Material

- **6063 Quality** Natural Anodized Aluminum
- PMMA Plexi
- 30x30 - 30x60 - 30x90 - 30x120 -
- 60x60 - 60x90 cm

Technical Spec

- Plexi with high light transmittance and homogeneous distribution

Application Areas

- Shop
- Office
- The mall
- School
- Hospital
- Market



- Eks.



- Enj.



Material

- **6063 Quality** Natural Anodized Aluminum / **Etial 150** Aluminum (Injection)
- Stainless reflector & ring
- PMMA Plexi
- COB LED compatible extrusion heatsink

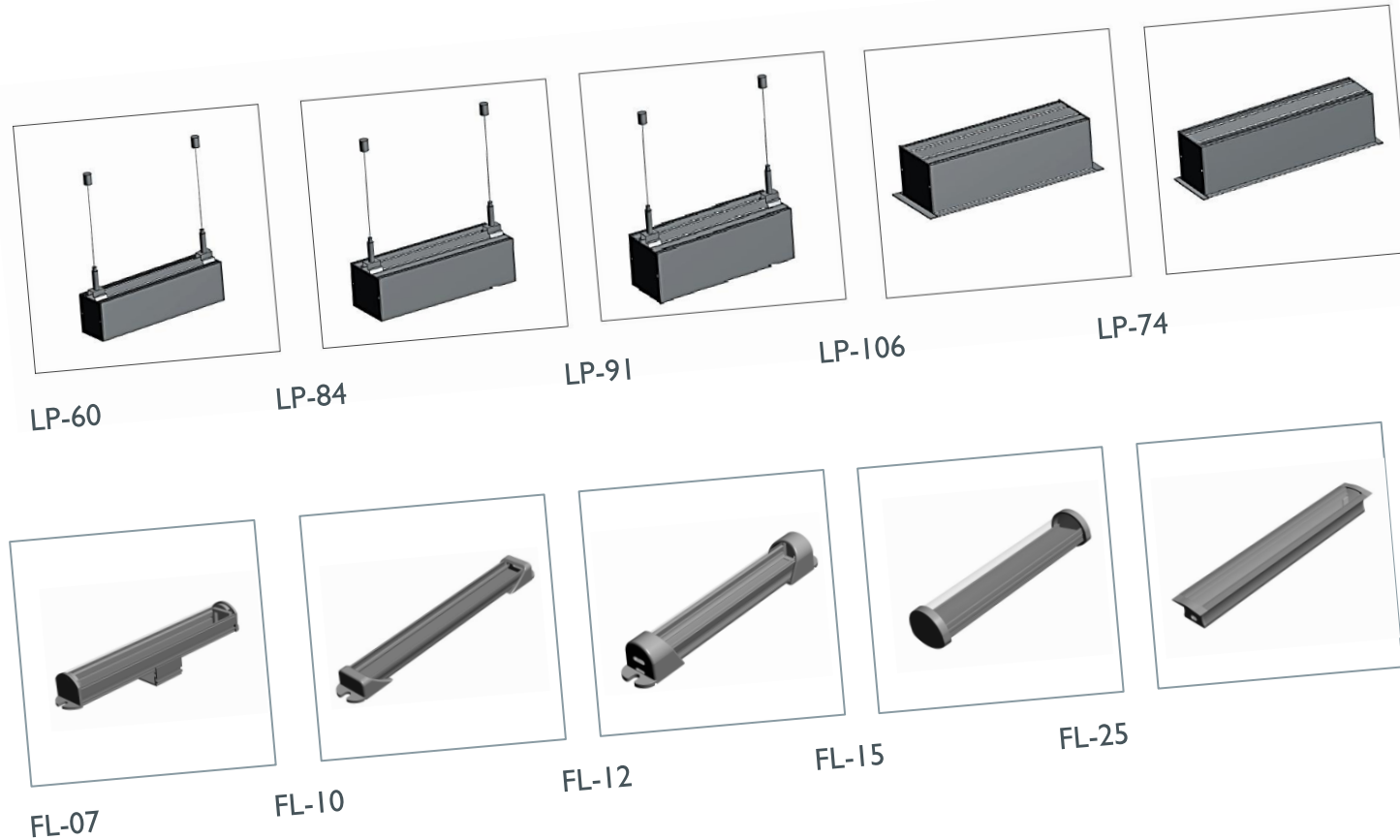
Technical Spec

- Plexi with high light transmittance and homogeneous distribution

Application Areas

- Shop
- Office
- The mall
- School
- Hospital
- Market

ALUMINUM HEATSINKS & LED HOUSING | INDOOR | Florescent & Linear Lighting



Material

- 6063 Quality Natural Anodized Aluminum
- Anodizing and Paint Option
- Polycarbonate plexi
- Plastic End Cap
- Steel suspension kits

Technical Spec

- PC with non-yellowing high light transmission
- IP-40
- Application up to 6 m

Application Areas

- Shop
- Office
- The mall
- School
- Hospital
- Market





• Exp-17/18

Material

- 6063 Quality Natural Anodized Aluminum
- IK08 Tempered Glass
- Aluminum Casting Side Covers

Technical Spec

- Zone 1 & 2 compatible
- IP-67

Application Areas

- Factory and Workshops
- Petrol Stations



Material

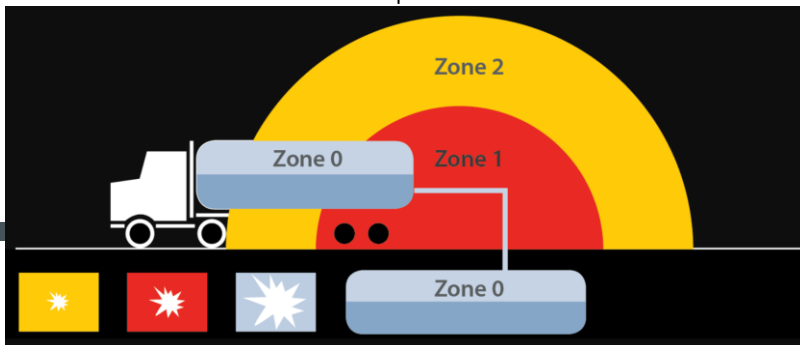
- 6063 Quality Natural Anodized Aluminium IK08 Tempered Glass
- 1,5 MM DKP Painted Canopy Frame
- Lens Compatible design
- Easy Assembly
- Esthetic look

Technical Spec

- IP-67

Application Areas

- Factory and Workshops
- Petrol Stations



Designing

Quality
Material

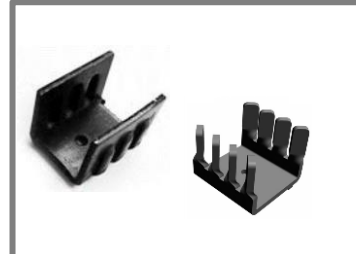
On Time
Delivery

Quality
Workmanship



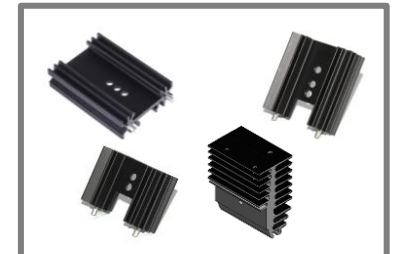
Injection Heatsinks

- Design according to customer request
- Covering
- Drill work



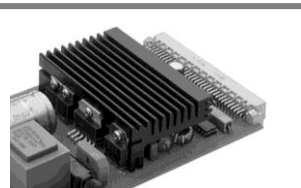
Press Heatsinks

- Design according to customer request
- Anodizing option
- Drill work/ Standard length



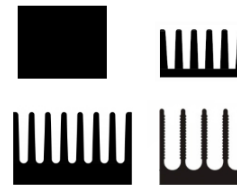
Integrated Heatsinks

- Cutting service to desired length
- Anodizing option
- Drill and CNC works
- Pin and Pin driving work



Electronic Circuit
Heatsinks

- Design according to customer request
- Anodizing option
- CNC
- Cutting to desired length



Regulator Heatsink

- Cut to desired length
- Anodized
- Drill and CNC



Standard Heatsinks

- Cut to desired length
- Anodized
- CNC



Fan Heatsinks

- Standards compatible with fans
- Different design options
- CNC
- Cutting to desired length
- Anodizing option

Voltage Regulators



- 29KS
- 49KS
- 151AS
- 21AS ...

Welding Machines



- 110AS
- 102AS
- 154AS
- 45AS
- 276AS

Thyristor Modules



- Müşterilere özel tasarımlar

Uninterrupted Power Supply

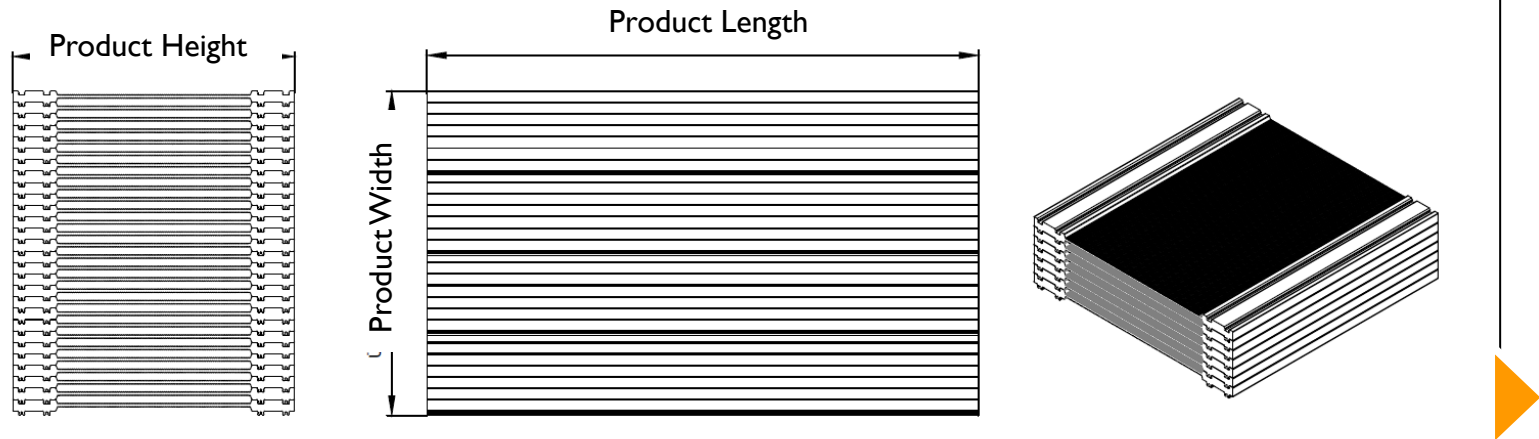


- 192AS / 193AS
- 160AS
- 185AS ..

Inverters



- 732AS
- 733AS
- 735AS



Product Code	Product Height	Product Width	Product Length
806BS	145,63 MM	5,95 MM x Number of Fin	0 < 3000 MM
121BS	121 MM	6,00 MM x Number of Fin	0 < 3000 MM
145BS	145,60 MM	6,00 MM x Number of Fin	0 < 3000 MM



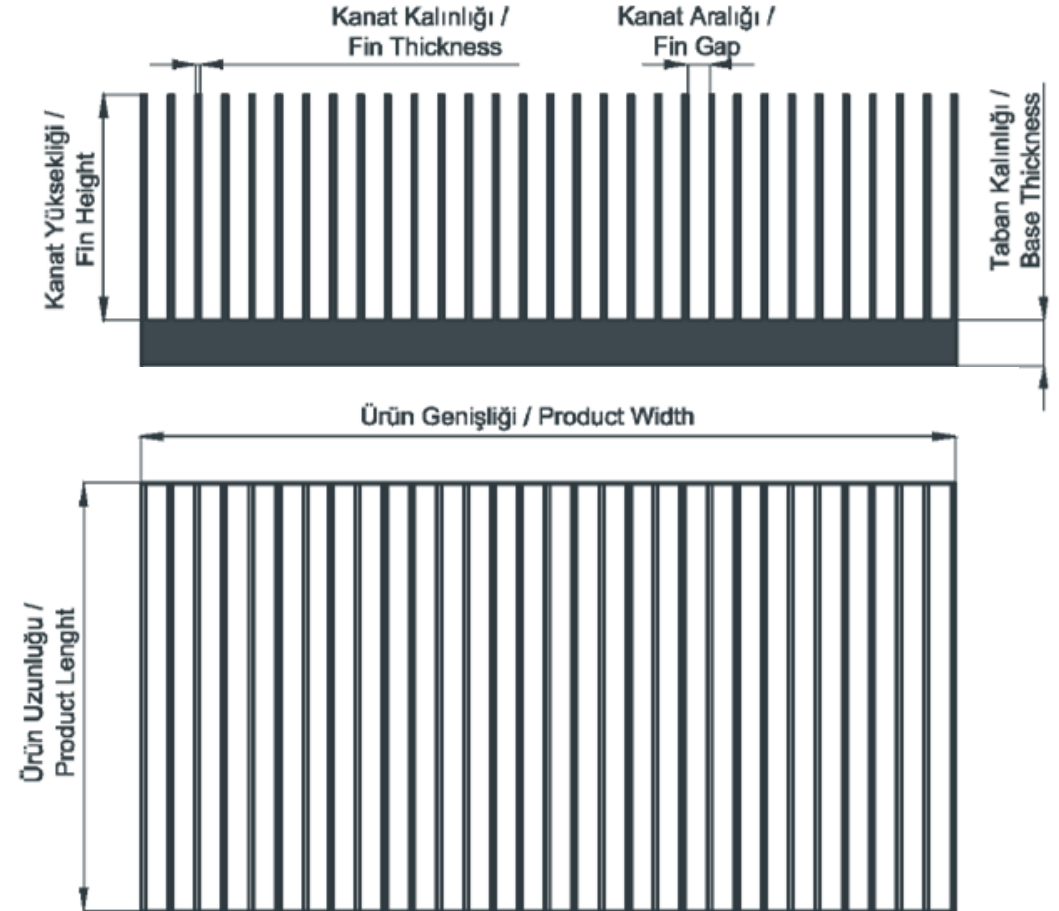
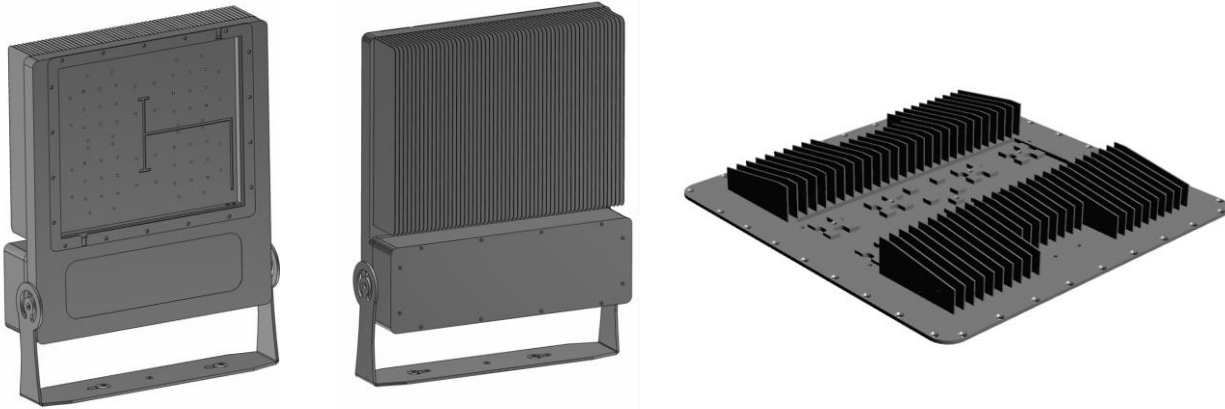
Features

- Fin density which cannot be achieved with extrusion technology,
- It does not require extra interface between the fins and the base,
- More design flexibility,
- High power cooling performance in narrow space,
- High fin density and aspect ratio possibility,
- Thermal conductivity superior to extrusion and injection,
- It does not require mold cost and extra welding labor.
- Can be customized with embedded heat pipes to increase performance when required.

Applications

- Lighting
- White appliance industry
- Automotive components
- Computer and electronic components
- Telecommunication equipment
- Industrial equipment and components





Fin Thickness	Fin Gap	Fin Height	Base Thickness	Product Width	Product Length
0,8 mm – 1 mm	> 2 mm < 8 mm	< 60 mm	< 25 mm	< 660 mm	< 300 mm

Optional Servies | CNC Service



Planning

Pre-production technical drawing and CAD preparation



Manufacturing

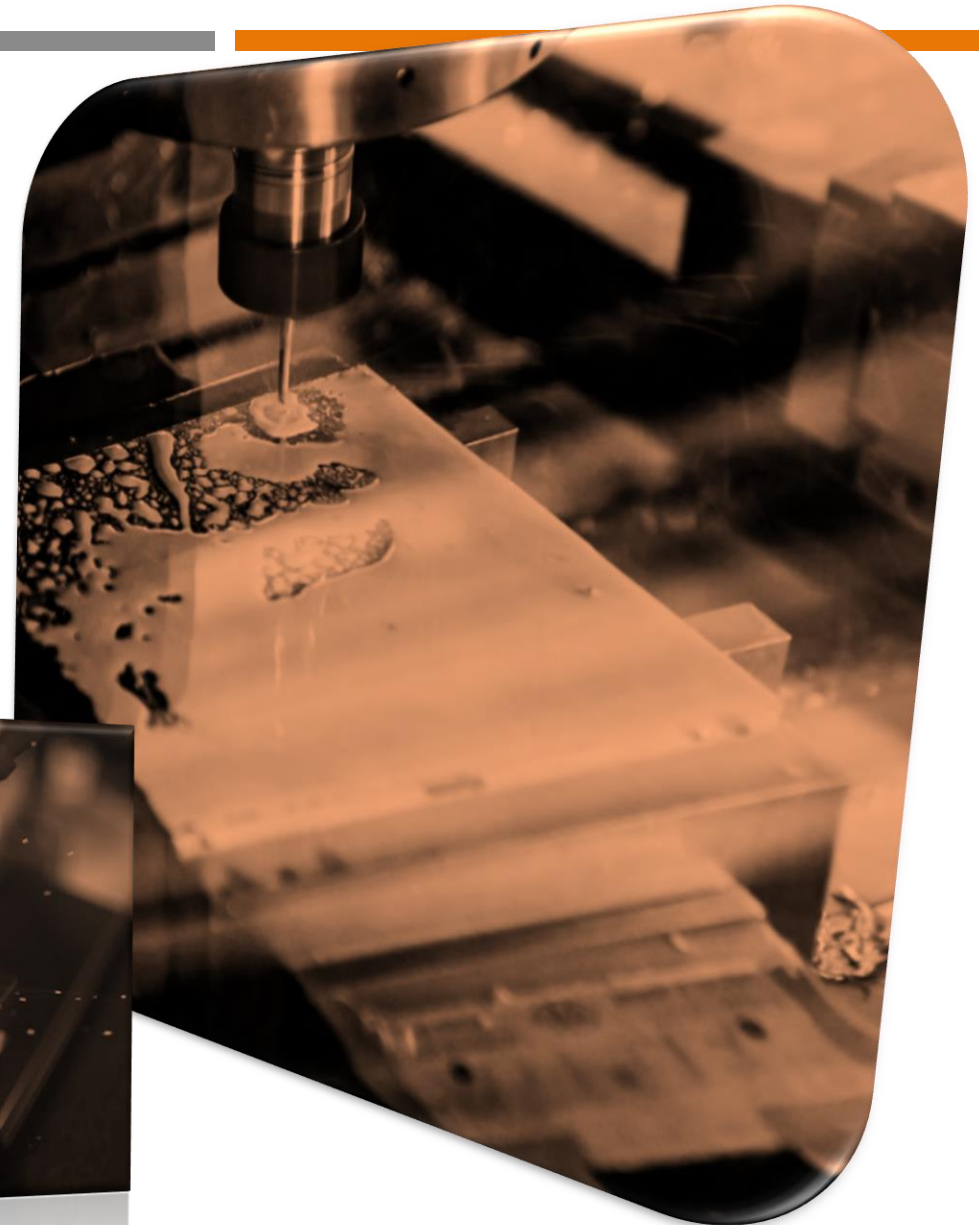
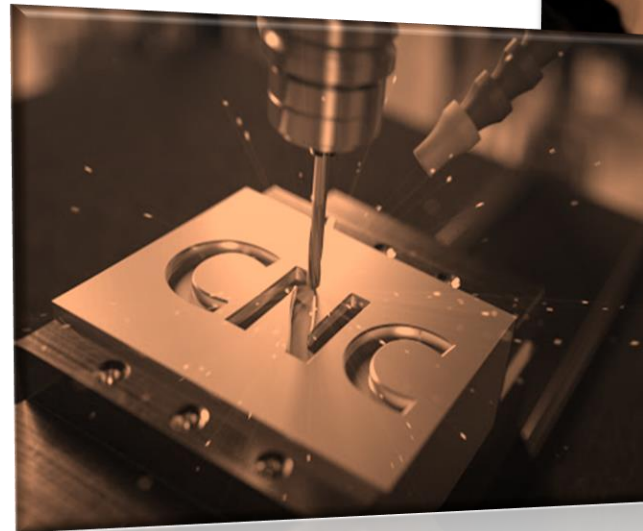
Production with new generation CNC machines

- CNC vertical machining
- CNC deep hole drilling
- Stoning



Quality Control

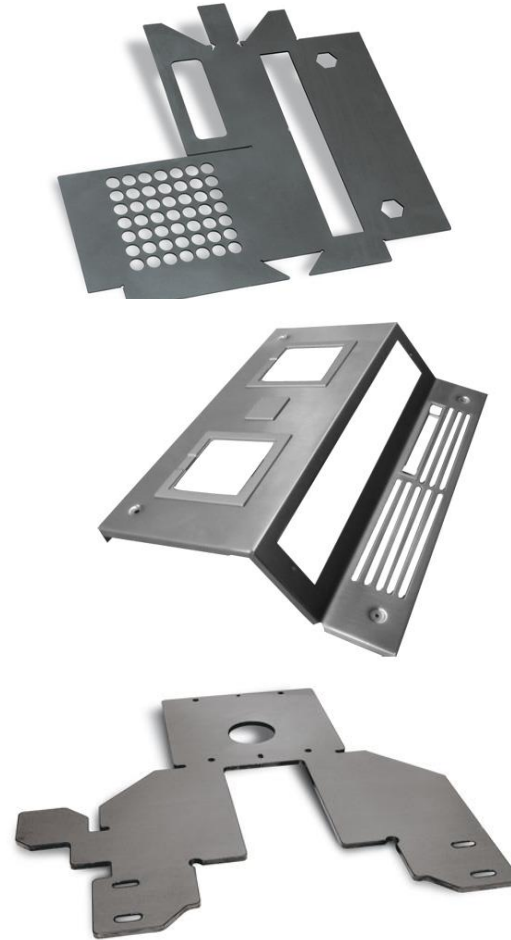
Perfect work delivery with post-production quality control processes



Optional Servies | Metal Processing Services

Works

- R&D
- Cutting, grid, punching and forming operations on copper, brass, plastic and galvanized sheet products
- Laser cutting up to 25 mm
- Cutting and twisting up to 16 mm
- Welding
- Assembly



THANK YOU



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