STAR PLASTICS

A DEPENDABLE COMPOUNDER OF

ENGINEERING GRADE PLASTICS

YOUR CUSTOM COMPOUND SPECIALIST

COMPREHENSIVE CAPABILITIES

Laser Direct Structuring

激光直接成型(LDS)工程塑料

设计灵活，节省空间

工艺流程环保:

有利于产品体积再缩小

性价比高

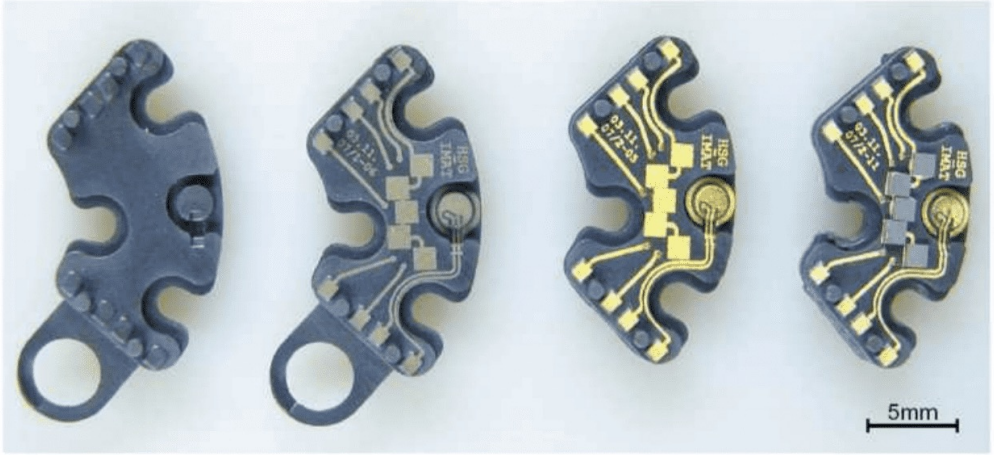
Laser Direct Structuring

LDS INTRODUCTION

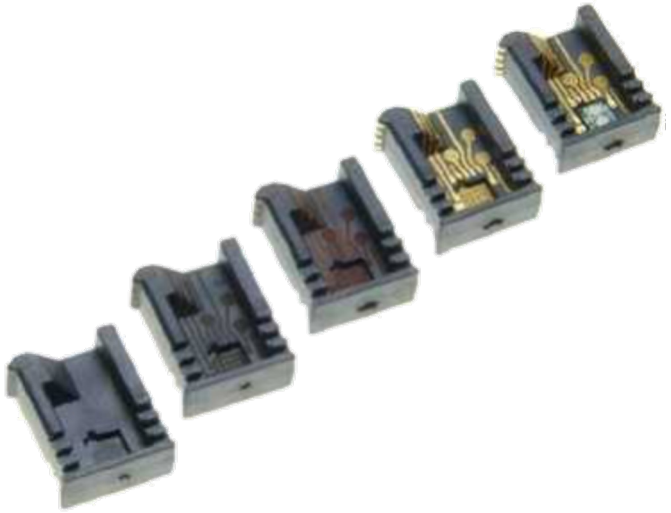
What is LDS?

LDS was invented by the German LPKF Laser & Electronics AG Group. The trace of conductive pattern was pre-computerized and lased onto the molded three-dimensional plastics part and activate the circuit pattern within seconds It briefly means that LDS can engrave and electroplate the metal line directly on the plastic part from design and production perspective.

Source: from LPKF Laser & Electronics AG Group



Injection molding | Laser processing | Plating | SMD Assembly wire bonding



Source: from LPKF Laser & Electronics AG Group

- Injection molding 注塑成型
- Laser activation 激光成型/活化
- Metallization 形成金属路线

LDS process means the laser beam is directly projected on the surface of the injection molded part, designs the laser pattern, activates metal compound part, to generate self-catalytic reaction activity, then form the metal electro-less plating in further with a certain thickness until a metallized three-dimensional pattern is formed based on a pre-designed pattern.

Advantages of LDS technology

LDS INTRODUCTION

Why LDS?

LDS process is quick, easy to operate, flexible in production, high precision in line width and spacing, which is currently one of the main production processes for three-dimensional circuit devices and molded interconnect devices (MID).

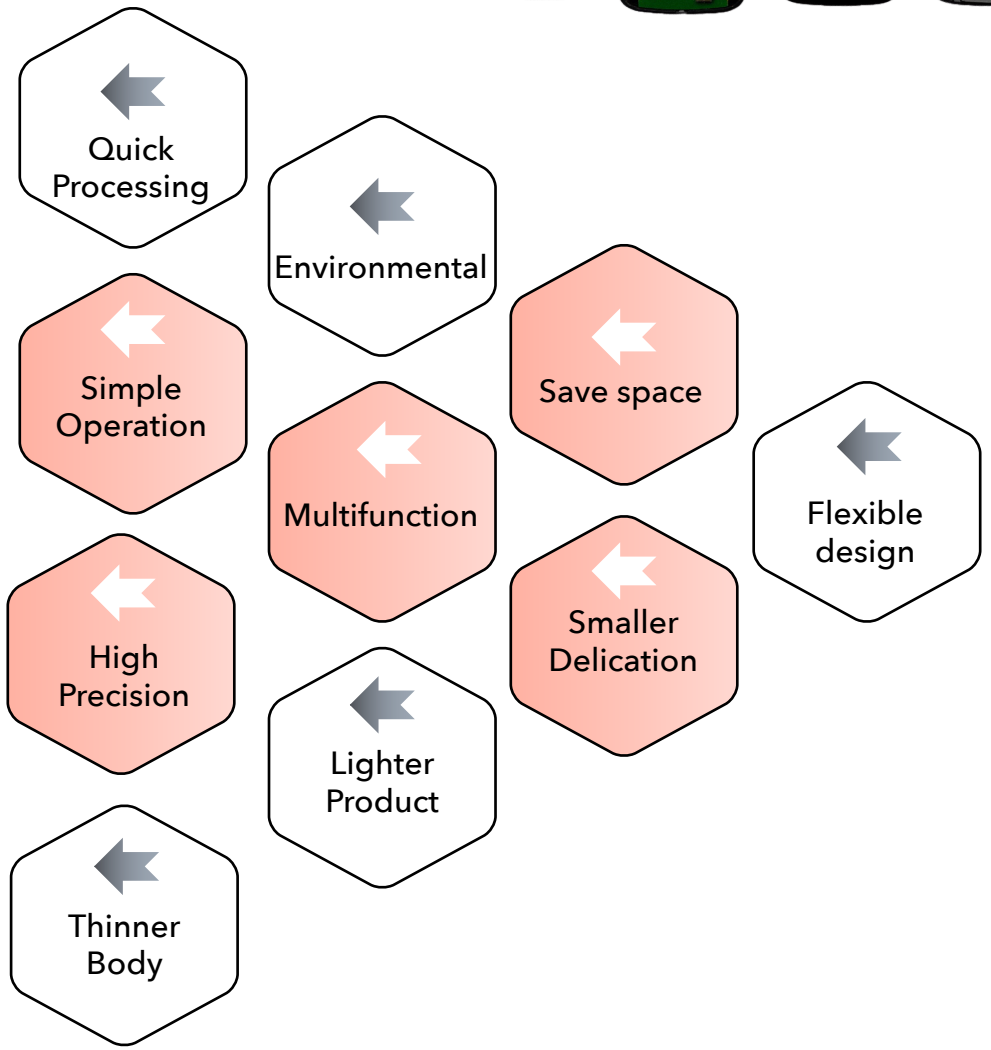
What we are benefitted from?

(1) The design is flexible, room saving and create much smaller and lighter device with more functions

(2) The process is an environmentally friendly electro-less plating.

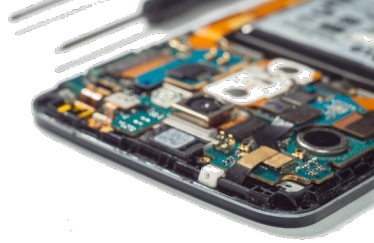
(3) It is conducive to the further reduction of product size, which is in line with the development trend of miniaturization and thinness of smart terminals such as mobile phones.

(4) High cost efficiency: implementation of three-dimensional assembly in limited space and avoid unnecessary plug-ins and hardware/circuit boards.



LDS Application/Trends

LDS INTRODUCTION



Trends of Mechatronic Components
机电一体化零部件的趋势

Miniaturization

Use of bare dies | 裸芯片的使用

Reduction of component size | 零部件尺寸减小

Increase of Functional Density

Integration of mechatronic functionality | 一体化功能的集成

Use of application specific ICS | 特殊应用程序半导体

Reduction of Manufacturing Costs

Reduction of the semiconductor chip size | 芯片尺寸的减小

Use of innovative assembly technologies | 创新的技术

Sustainability

Environmental Care | 环境保护

LCA (Carbon Emissions) | 产品碳排放

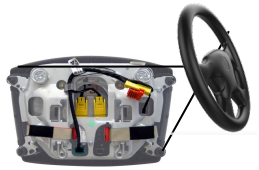
Antenna Market

Mobile Phone.

Portable Computer

Electronics Housing

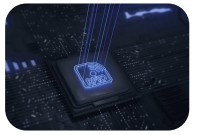
Automotive



Source: from LPKF

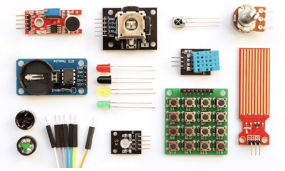
Security Shields

RFID



Medical Devices

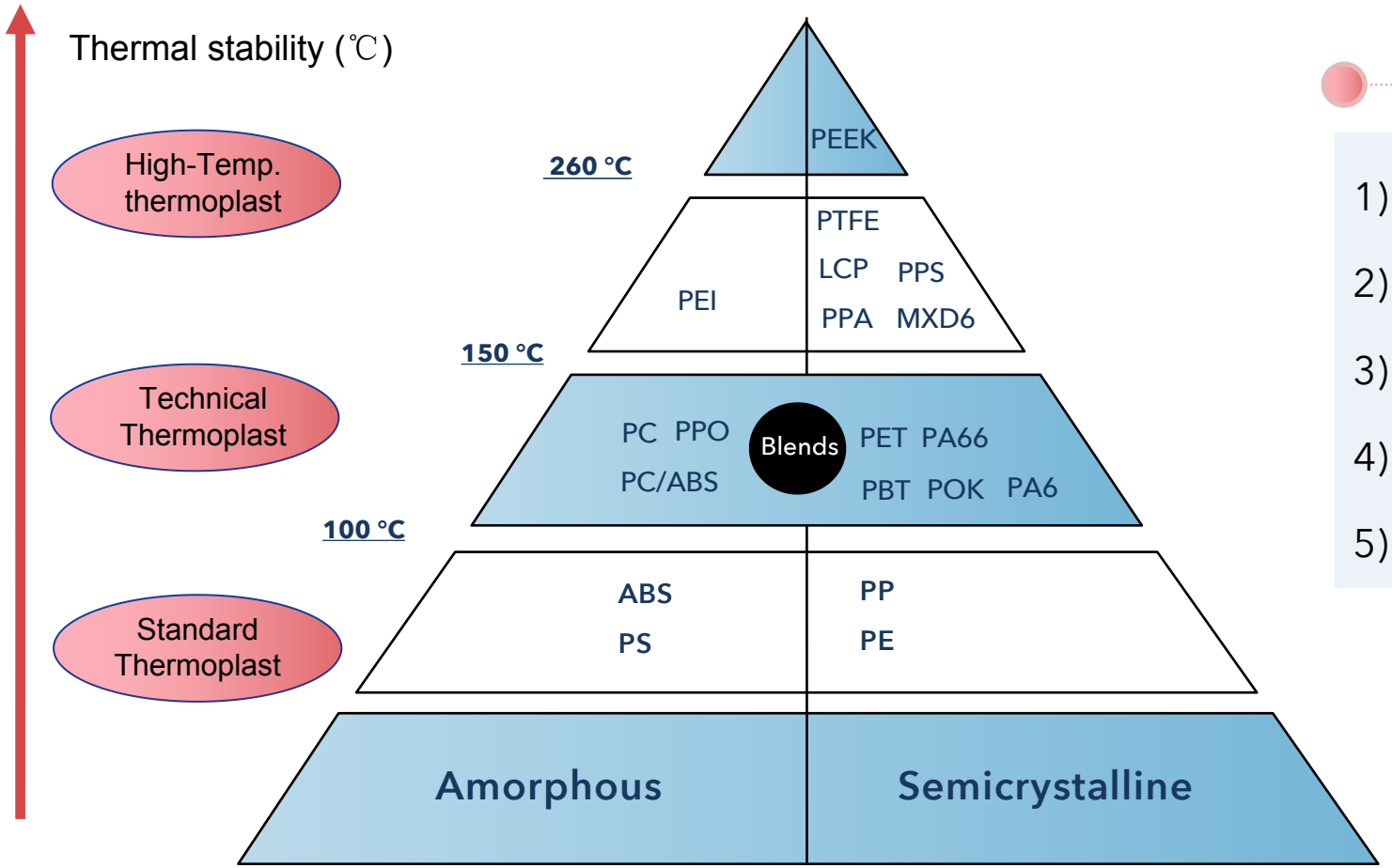
Sensor Packaging



Recycle LDS | 35% PCR

Product Lines for LDS Engineering Plastics

LDS Material Portfolio of Polymers



Why STAR ?

1) Certified US Corp.

2) Full-Range LDS Product

3) Stable Quality In Coloured

4) High Cost-Performance

5) Sustainability

THANK YOU!

www.starplastics.com