LUMEL

YOUR
OEM | ODM | EMS
PARTNER

ELECTRONICS
HOUSING
MECHANICS
SOFTWARE

Plant area 3.650 m² powered by Lumel solar installation

COMPLEX
SERVICES

EMS, OEM, ODM

For close to 70 years, LUMEL is well-known in the international market for the production of highest quality of electronic measuring devices. Precision has been the instilled in the roots of LUMEL, our proficient employees and cutting edge technologies permit us to offer:

▶ **EMS** - Every year forward, we receive numerous orders for assembly of electronic subassemblies, determining us to invest in up-to-date and high-duty lines for SMT assembling of electronic elements, making us capable of producing prototypes, small , medium and large sized PCBs.

▶ **OEM / ODM** - Conceptualizing – Designing – Development – Production, in the scope of housing, electronics, mechanics, software.
All Under one roof. We offer sub-contracting services and industrial co-operation.
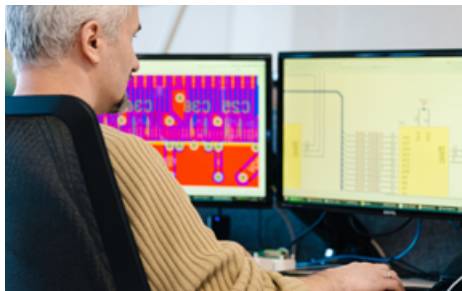
Knowing that your electronic products will be produced by a competent manufacturer, you can be free from responsibilities of manufacturing and can lay your focus on other sectors of your business such as marketing and sales while the goods are being prepared.

RESEARCH & DEVELOPMENT
LABORATORY SERVICES

In the capacity Research & Development services offered by Lumel, we have a team of 30 technically qualified engineers at your disposal, to transform your ideas into finished products.

Lumel laboratory is where your products go through a detailed series of tests like:

▶ Environmental,
▶ EMC,
▶ Vibration,
▶ Functional test.

SURFACE MOUNT TECHNOLOGY (SMT) SERVICES

IN TERMS OF SMT CAPABILITIES WE OFFER YOU:

▶ One-sided and double-sided assembling of SMD elements in the technology of reflow soldering, in accordance with European Directive for RoHS.

▶ Assembly of thread elements by flow soldering,

▶ Assembly can be carried out on the base of own or committed elements.

The first assembly line is composed of:

▶ Silk screen printer ERSA
▶ Two automatic machines JUKI (flexible KE-3020VA and high-speed chip shooter: FX-3RA).
▶ 7- zones reflow soldering oven ERSA HOTFLOW 3/14E.
▶ The whole line is completed by handling system, loader, conveyors and unloader of the circuit boards manufactured by ASYS - Germany.

The second assembly line is composed of:

▶ Silks creen printer JUKI K1760,
▶ Placement machine JUKI KE-2060,
▶ Reflow oven ERSA HOTFLOW 2/14,
▶ Magazine loader and line unloader – JOT,
▶ Conveyors and in-line workstation – JOT.

Additionally our machine park is equipped with:

▶ Tester AOI - PowerSpecter GTAz 350CE Dolphin
▶ Optical control stands,
▶ Flying Probe Takaya tester.

The entire assembly process is carried out under the strict supervision of a team of technologists and is in accordance with the European directive IPC-A-610G.

OUR SMT LINES CAN MOUNT UP TO 105.000 ELECTRONIC COMPONENTS PER HOUR.

PCB size **max. 410x360mm / min. 50x30mm / Optimum: 200x300mm / The number of layers: 36**

Components up to size **1005 – 74 mm x 74 mm**

Laminate thickness:	Materials:	Copper plating:
Maximum: 5.0mm Minimum: 0.5mm	FR4, CEM, Aluminium, flexibel	HAL RoHS, HAL Pb, OSP, chemical or galvanic gold plating, silver plating
Copper thickness Material [μm]: 12 /18 / 35 / 70 /105	**Final thickness after metallization [μm]:** 30 / 35 / 60 / 95 / 130	**Available soldermask colors:** green (standard), red, black, white, blue, other colors on customer's request
Minimum path width: Value [mm]: 0.1 / Recommended [mm]: 0.2	**The minimum hole diameter:** Value [mm]: 0.1 / Recommended [mm]: 0.3	**The minimum distance copper – copper** Value [mm]: 0.1 / Recommended [mm]: 0.2

Additionally:
carbon paste, UL peelable mask, marking

THROUGH HOLE TECHNOLOGY (THT) SERVICES

As part of the offered THT assembly service, we implement the following steps:

► Preparation of elements, automatic processing - cutting and bending.
► Placement of elements - manual assembly and soldering.
► Assembly of elements on a solder wave.
► Cable processing.

In addition, we also provide services in the field of:

► Programming
► Coating finished products with varnishes or protective compounds
► Performing functional tests
► Final assembly of the product
► Calibration of the devices.

Machine park:

► All stations are equipped with ESD protection measures in accordance with EN 61340 5-1 and 5-2.
► Solder wave - Nova Star 12D
► Washing and drying station - Pbt Super Swash

ADDITIONAL SERVICES

(Designing, Additional tests, Protective coats, Labelling, Package designing, Servicing)

We have more to offer than just regular EMS & ODM services. We offer a bunch of additional services as well to comply with your needs.

DESIGNING:

When customers come to us with ideas, we offer them our team of designers and programmers who prepare model, prototypes and perform necessary tests required which confirm that the product fulfills all the CE standards.

ADDITIONAL TESTS:

Our products are tailor made keeping our customers demand in consideration, therefore we also offer different sample size and medium of test for a minimum cost in case the customers want customized test samples to comply to the needs of their products.

PROTECTING COATS:

With high quality products, programmable selective coating on any part of the PCB with a protective varnish or resin is performed, which automatically increases.

LABELING:

After your product is mounted, we can place your logo and the details your require.

PACKAGE DESIGNING:

Every PCB and electronic device manufactured in our facility is precisely protected and we pack them in accordance to the customers guidelines. We make sure that the packaging is done to the best of our abilities so that the product is safe and sound

SERVICING:

Servicing of any parts (assembly and disassembly) is offered as an extra service by our team.

LUMEL S.A.

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The form is helpful in preparing a PCB assembly offer:

This form will help you choose the OEM services from our offer: