

# LAMAR NEWSLETTER

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Or call us on:-

**0845 702 3590/1**

## RoHS 2

- Article 6 of the RoHS directive required the European Commission to review the measures, part of this review concerned the restricted substances
- The list of restricted substances hasn't changed but 4 new substances have been identified for priority assessment with a view to possible future inclusion in the list.
- The four substances are:- HBCDD, DEHP, BBP and DBP all of these substances are also included in the candidate list of Substances of Very High Concern in the REACH Directive
- The good news is that none of these substances are used in the manufacture of laminate for PCB's
- However Environmental agencies in Sweden and Germany continue to call for a ban on TBBA, the flame retardant used in FR4, despite an EU risk assessment which found TBBA caused no risk to the environment or human health.

Is the future Halogen Free?

## ELECTROLESS NICKEL IMMERSION GOLD FROM UYEMURA

The ENIG process from Uyemura, the world leader in ENIG finishes. Is now available through Lamar.

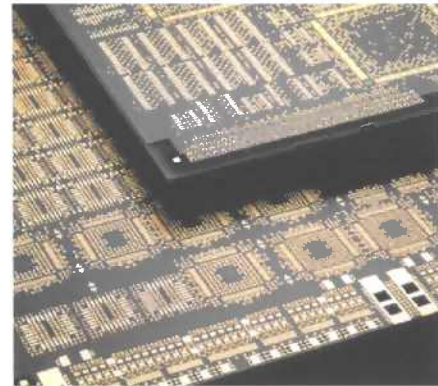
Uyemura's ENIG process has a number of advantages over ENIG from other manufacturers. Not least of which is the fact that NO dummy plating is necessary after bath make up.

- The lower operating temperature of 80°C gives better compatibility of solder masks.
- The palladium activator is free from chloride.
- An increase in nickel concentration over the bath life leads to a constant deposition speed during the entire bath cycle.
- It is possible to determine accelerators and stabilisers.
- The gold bath exhibits less corrosion to nickel than common processes.

### ENIG PROCESS COST SPREAD SHEET

To see how the Uyemura ENIG process can save you money contact Lamar and ask us to e-mail you the cost model spread sheet.

Using this you can see the full process cost based on your make up quantities and processing parameters.



## ENIPIG -ELECTROLESS NICKEL IMMERSION PALLADIUM IMMERSION GOLD

Also available from Uyemura is ENIPIG.

ENIPIG surface finish is excellent for wire bonding, due to a thin palladium layer which stops diffusion between the nickel and the gold.

ENIPIG is also an excellent finish for lead-free soldering.

Very thin palladium layers of 0.05µ are an effective barrier against nickel diffusion and this thickness can be achieved in less than 2 minutes in the immersion palladium bath.

The immersion palladium bath is very stable.

ENIPIG requires only thin deposits of palladium and gold and is therefore an economical process.

Many types of circuit boards are manufactured in Europe using ENIPIG including Insulated Metal Substrate (IMS) boards.

For further information on Uyemura's ENIG and ENIPIG contact Lamar

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**METAL BACKED (IMS) LAMINATE IN STOCK AT LAMAR**

Denka HITTPlate is a high thermally conductive, insulated metal substrate (IMS) consisting of an aluminium base, an epoxy-based insulation layer with a high inorganic content filler demonstrating high thermal conductivity, and a conductive foil, thereby realising thermal resistance equivalent to, or less than that of an alumina ceramic substrate.

Lamar have stocks of K-1 grade. The insulation layer has a thermal conductivity of 2 Wm/°K. As a comparison FR4 has a thermal conductivity of around 0.36Wm/°K

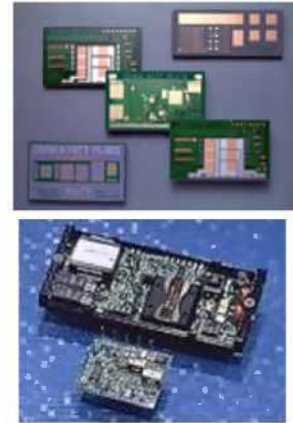
Denka HITTPlate is a high reliability substrate, with high voltage resistance, high heat resistance and high thermal shock resistance.

Normal processing techniques can be used for Denka HITTPlate with some adjustments to drilling and routing parameters and tools.

K-1 grade is available, in cut to size panels, for next day delivery.

**Contact Lamar sales for more information**

*Denka HITTPlate K-1 grade with a thermal conductivity of 2Wm/°K is available in cut to size panels for next day delivery.*



**NEW ROUTER FOR IMS LAMINATE**



**827**

Routing soft metals such as aluminium is best done with 2-flute routers rather than diamond or spiral patterned routers.

HP-Tec have introduced an improved 2-flute router specifically for IMS laminates.

The 827 router has excellent chip transport and gives outstanding results when routing soft metals as well as plastics.

The 827 router is also useful for inner contours and slots where a high quality surface finish is required.

The 827 router is in stock now at Lamar



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