

April 1, 2020

NEWS RELEASE

MicroThin[™] License Agreement with Circuit Foil Luxembourg

Mitsui Mining & Smelting Co., Ltd. (President NISHIDA Keiji) announced today that Circuit Foil Luxembourg Sarl (CEO Fabienne Bozet, hereinafter Circuit Foil) has entered into a new non-exclusive patent license agreement with us for a fine line PCB fabrication process called MSAP (Modified Semi Additive Process) which widely uses our extremely thin copper foil with carrier foil "MicroThin[™]".

Given the above, we welcome Circuit Foil as an additional licensee, and we believe that this agreement ensures to increase awareness of our right for MSAP process. And we expect extremely thin copper foil with carrier sales would be expanded more.

[About Circuit Foil Luxembourg Sarl] Location: 6, Salzbaach, L-9559 Wiltz, Luxembourg CEO: Fabienne Bozet Established: 1960 Main Product: Electrodeposited Copper Foil

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PCB Circuit Formation Process Comparison —Subtractive Method (conventional) vs MSAP Method—

Process	Subtractive Method (Conventional)	Modified Semi-Additive Process
Lamination		
Half-Etching		
Laser Drilling		
Electroless Cu Plating		
Circuit Forming	Panel Plating	Dry film Exposure/ Development
	Dry film Exposure/ Development	Pattern Plating
	Hard Etching	Dry film Stripping
	Dry film Stripping	Flash Etching

Feature

Not good for fine circuit

Cross section of Circuit



Good for fine circuit

[APPENDIX]

