

DRIVE INNOVATION • DELIVER EXCELLENCE >

ASM
INTERNATIONAL



ASM TO ACQUIRE LPE

ENTERING HIGH-GROWTH SILICON
CARBIDE EPITAXY EQUIPMENT BUSINESS

July 18, 2022

FORWARD LOOKING STATEMENTS

Cautionary note regarding forward-looking statements:

All matters discussed in this presentation, except for any historical data, are forward-looking statements. Forward-looking statements involve risks and uncertainties that could cause actual results to differ materially from those in the forward-looking statements. These include, but are not limited to, economic conditions and trends in the semiconductor industry generally and the timing of the industry cycles specifically, currency fluctuations, corporate transactions, financing and liquidity matters, the success of restructurings, the timing of significant orders, market acceptance of new products, competitive factors, litigation involving intellectual property, shareholders or other issues, commercial and economic disruption due to natural disasters, terrorist activity, armed conflict or political instability, changes in import/export regulations, epidemics and other risks indicated in the Company's reports and financial statements. The Company assumes no obligation nor intends to update or revise any forward-looking statements to reflect future developments or circumstances.

#1

ASM reached an agreement to acquire LPE, entering the high-growth silicon carbide epitaxy equipment business, driven by growth in electric vehicles

#2

Purchase price is a combination of cash and shares representing an enterprise value of €425m at the date of signing, with additional earn out of up to €100m based on certain performance metrics

#3

LPE is profitable and will contribute to net earnings immediately after closing, with expected revenue of >€100m in 2023

#4

ASM sees potential for meaningful value creation by combining LPE's design & process expertise in SiC with ASM's expertise in epitaxy, extensive sales and service footprint worldwide and manufacturing/supply chain prowess

DEAL SUMMARY

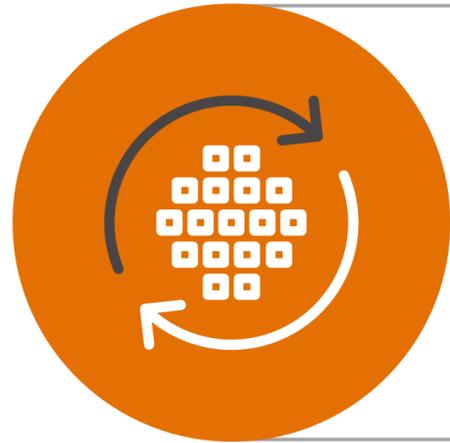
- ASM reached an agreement to acquire all outstanding shares of LPE S.p.A. (“LPE”), a privately held firm specializing in silicon carbide epitaxy and based in Milan, Italy, for an enterprise value of €425m at the date of signing
- An additional amount of up to €100m will be paid by way of an earn out based on certain performance metrics over a two-year period after the closing of the transaction
- Following closing, LPE will operate as a product unit under ASM’s Global Products organization

FINANCIAL IMPACT

- LPE is profitable and is expected to contribute to net earnings immediately after closing
- ASM will pay at closing an amount of €283.25m in cash, and 631,154 shares. The shares will be a combination of treasury shares (580,000) and a limited number of newly issued shares (51,154). The cash amounts will be financed from ASM’s net cash balance
- The earn outs are to be paid out exclusively in cash

CLOSING CONSIDERATIONS

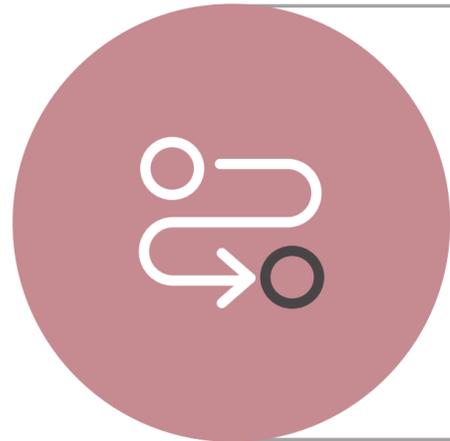
- Subject to FDI and anti-trust approval in a limited number of countries and other customary closing conditions which are expected to be met by the long stop date of November 10, 2022. Further reference is made to the press release issued on July 18, 2022



Address the fast growing SiC devices market and the emerging 200mm SiC wafer industry inflection



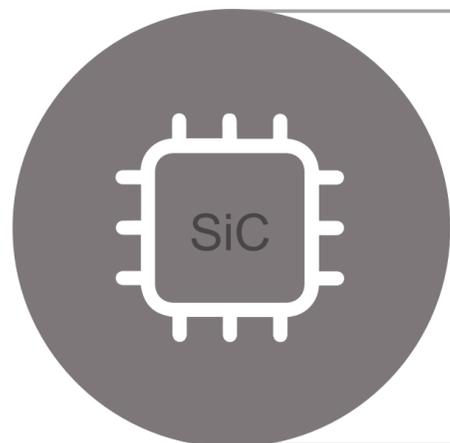
Leverage ASM sales, product development, manufacturing & supply chain capability to accelerate value creation



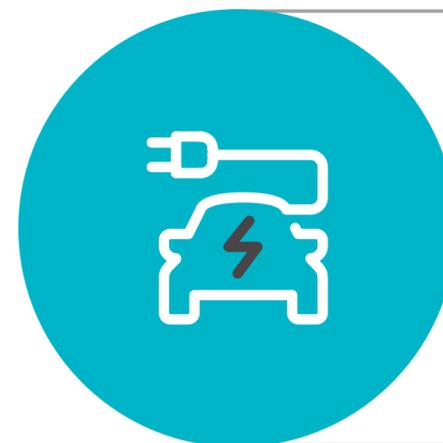
Accelerate customer roadmaps towards more efficient next-generation power electronics



Combine LPE's talented team of R&D engineers with ASM's epitaxy expertise to improve on-wafer performance, tool productivity and total cost of ownership



Complement ASM's leading position in silicon Epi for power electronics with high-growth SiC Epi solutions



Contribute to ASM's target to accelerate sustainability, by enabling increased power efficiency in sustainable transportation



PE106A

150mm single-chamber SiC system



PE108

200mm single-chamber SiC system

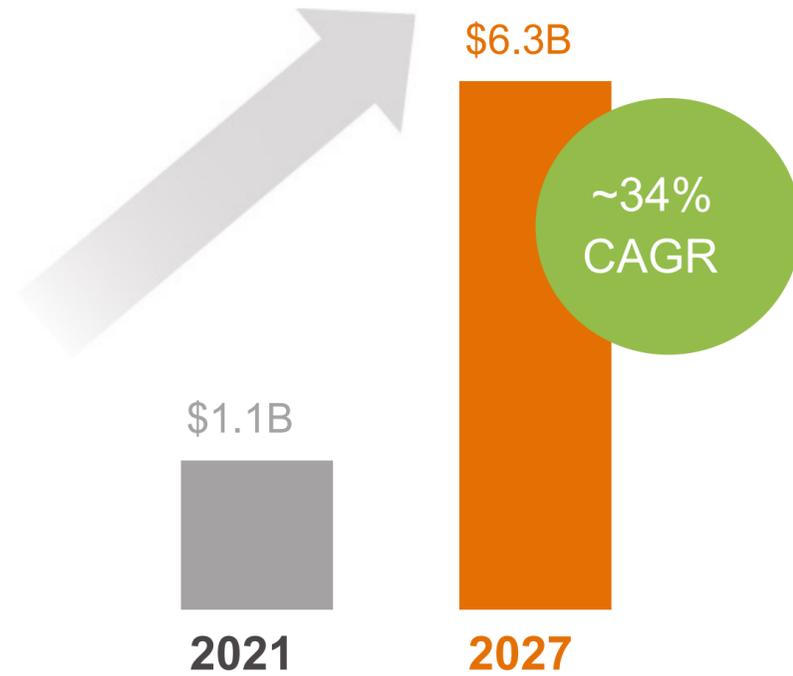


PE208

200mm dual-chamber SiC system

- Founded in 1972
- Privately held
- Milan, Italy: HQ, R&D, Manufacturing
- Catania, Italy: Process R&D
- Sales and Support office in Shanghai, China, and global network of sales partners
- Many active & pending patents
- > €100m revenue expected in 2023, mainly driven by SiC epitaxy equipment business
- Large installed base of 150mm SiC reactors
- Single-chamber 200mm system in pilot phase evaluation at multiple customers

SiC POWER DEVICE MARKET

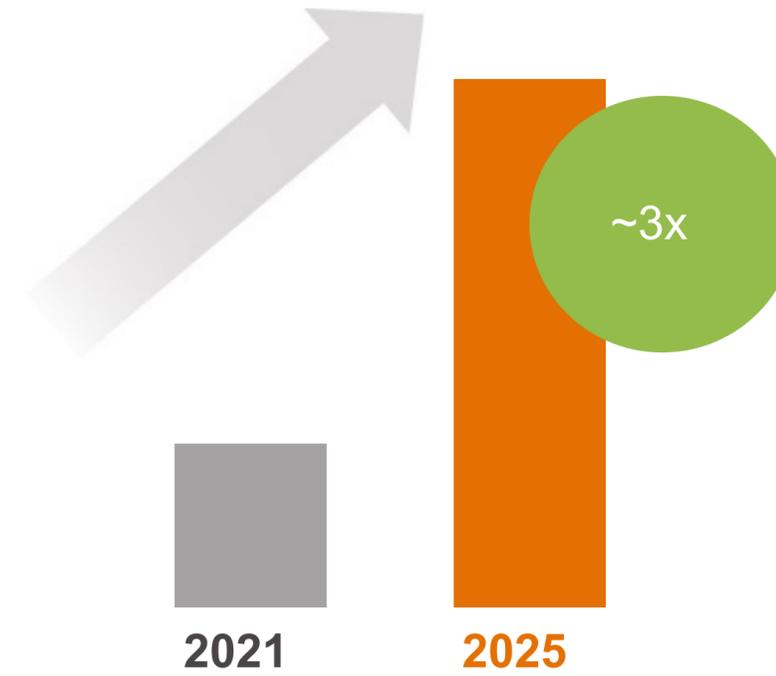


Demand for more efficient SiC power devices is expected to result in ~34% CAGR growth over 2021 - 2027

Automotive (electric vehicle) the biggest growth sector

Source: Yole

SiC EPITAXY WAFER DEMAND FOR EV ONLY

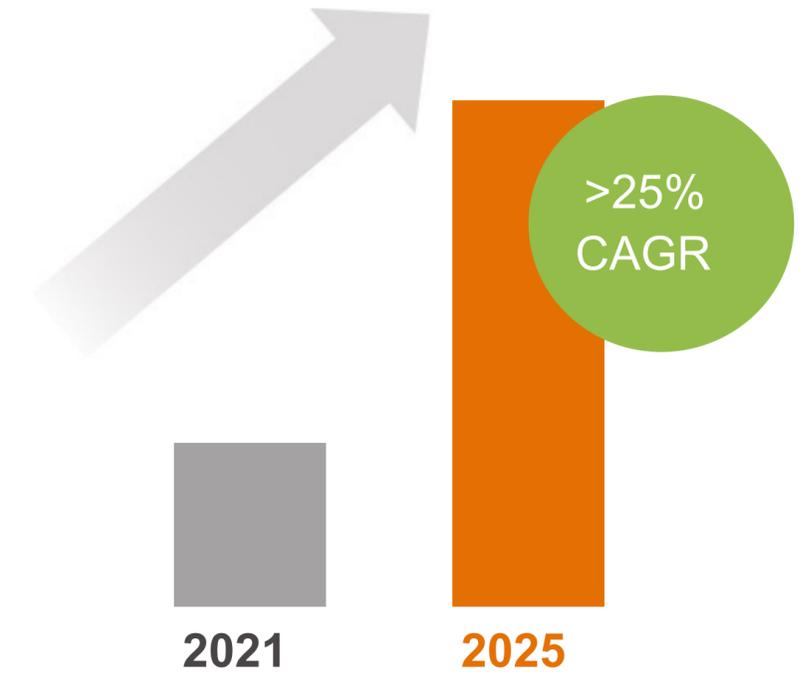


SiC devices provide longer range and battery life in electric vehicles (EV)

Forecasted ~3x growth for SiC epitaxy wafer (150mm and 200mm) to meet demand

Source: Exawatt

SiC EPITAXY EQUIPMENT GROWTH



SiC epitaxy tools with high yield & performance needed

> 25% growth for SiC epitaxy equipment forecasted

Source: ASM internal estimates

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ANNEX



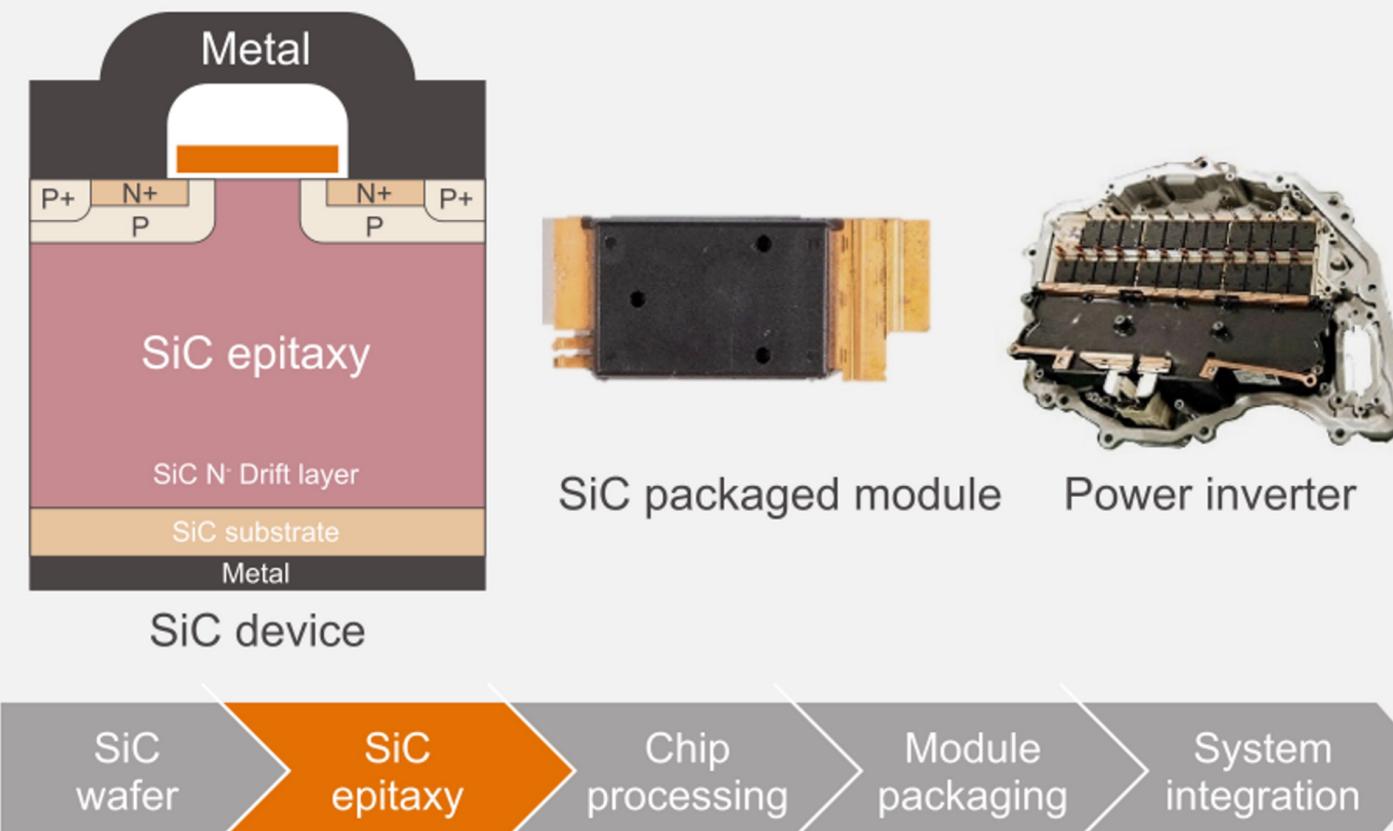
SiC VERSUS Si MATERIAL PROPERTIES

Material Properties	Compared to Si	SiC device benefits
Bandgap*	SiC 3x larger	Enable high voltage operation, low leakage with thinner devices
Electron saturation mobility	SiC 2x faster	Higher switching frequency operation, lower conduction losses
Thermal conductivity	SiC 3x higher	High temperature operation with reduced cooling requirement

SiC has excellent materials properties compared to Si

* Bandgap: energy required to excite an electron bound to an atom to become a charge carrier to conduct electric current

SiC MOSFET MANUFACTURING PROCESS



SiC epitaxy is a critical process in the manufacturing of SiC MOSFET devices

Source: Rohm, STMicroelectronics

EV CHALLENGES



Range anxiety

Out of mileage before destination/charging station

EV vs ICE* price

Battery a significant cost adder

* ICE: internal combustion engine

VALUE PROPOSITION OF SiC POWER INVERTER

Benefits of SiC power inverter



Power inverter

Converts battery DC to AC for motor traction

Efficiency improvement: **5 - 10%**

Size and weight reduction: **50%**

Reliability: **extended lifetime in use**

EV largest single growth market for SiC

Cost parity achieved at EV system level (compared to Si IGBT*) - smaller battery for similar range, less thermal cooling

Major automotive OEMs have adopted SiC or announced adoption plans

* IGBT: insulated gate bipolar transistor

Benefits at overall EV system level



+33 Miles
337 → 370 Miles

Increased range +10% same battery capacity, or

Reduced battery capacity for the same range

Reduced charging time for same range

Reduced cost from battery, cooling components

Source: STMicroelectronics, Tesla



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