

Supply Chain Explorer

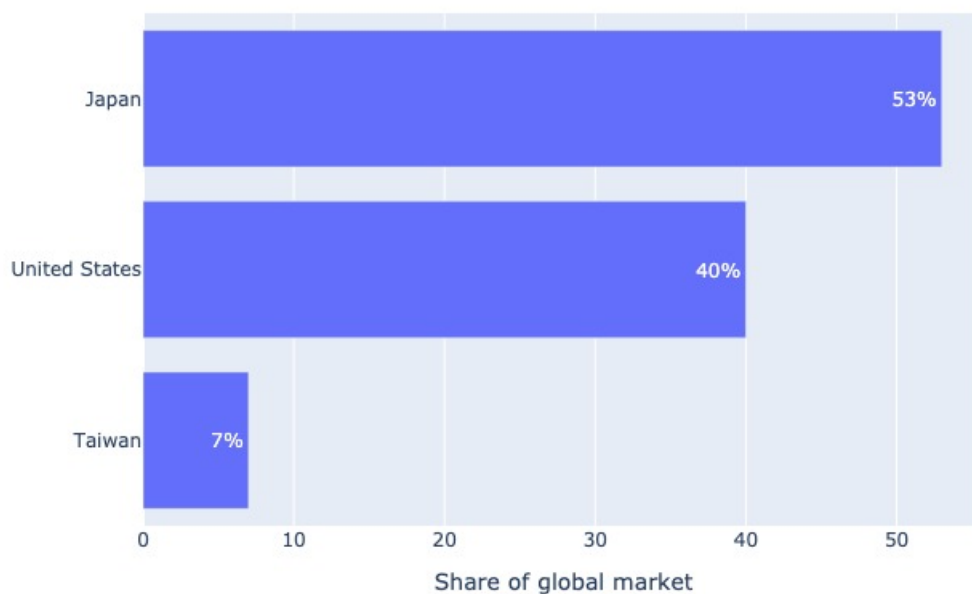
By the Emerging Technology Observatory

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Advanced photomasks

Photomasks are transparent plates containing a circuit pattern to be fabricated in a chip. Photolithography equipment produces light that passes through this pattern so that the photomask's pattern is transferred to the chip. Each photomask is specific to one chip design (itself specific to a node). Photomasks are produced by captive mask shops (businesses within large semiconductor manufacturing firms) or merchant mask shops (which sell to semiconductor manufacturers). Japan, the United States, Taiwan, and South Korea lead production of leading-edge photomasks.

Country provision



Notable supplier companies

- Dai Nippon - Japan
- GlobalFoundries - United States
- Hoya Corporation - Japan
- Intel - United States
- Photronics - United States
- SMIC (negligible market share) - China (mainland)
- Samsung - South Korea
- Shenzhen Newway (negligible market share) - China (mainland)
- TSMC - Taiwan
- Taiwan Mask Corporation - Taiwan
- Toppan Photomasks - Japan

