# **Supply Chain Explorer**

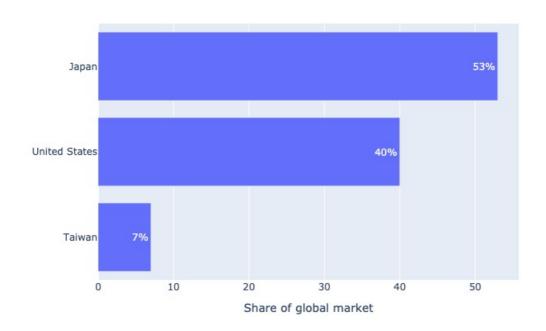
### By the Emerging Technology Observatory

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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. 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