

# Supply Chain Explorer

By the Emerging Technology Observatory

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## Electronic gases

Gases are widely used in semiconductor fabrication, including common gases like nitrogen, hydrogen, helium, argon, helium, and carbon dioxide as well as speciality electronic gases like nitrogen trifluoride, tungsten hexafluoride, hydrogen chloride, ammonia, disilane, germane, high-purity carbon dioxide, and nitrous oxide. In particular, the photolithography process uses various noble gases, such as neon, argon, and krypton, to create lasers to draw circuit patterns on wafers. (However, the most advanced photolithography equipment, EUV, uses a tin light source rather than a gas-based light source.)

### Country provision

- China (mainland)
- France
- Germany
- Japan
- United States

### Notable supplier companies

- Air Liquide - France
- Air Products - United States
- BASF - Germany
- Entegris - United States
- Huate Gas - China (mainland)
- Jinhong Gas - China (mainland)
- Linde - Germany
- Merck Group - Germany
- Nata Opto-electronic Material - China (mainland)
- PERIC - China (mainland)
- Praxair - United States
- SK Materials - South Korea
- Showa Denko - Japan
- TNSC - Japan
- Wonik - South Korea