

Market evolution: Lasers and optics (CN 9013) — 2015–2025

Introduction

The customs heading 9013 groups lasers (excluding laser diodes), telescopic sights, other optical appliances and their parts. Between 2015 and 2025 the European Union's external trade in these high-technology goods underwent a dramatic transformation. The EU swung from a sizeable trade deficit to a substantial surplus, the product mix moved decisively towards high-value lasers, and the geography of supply was reshaped by collapsing flows from some Asian partners and surging imports from the United States. This report describes and interprets those dynamics using only the data provided.

From red to black: the EU's trade-balance turnaround

The headline aggregate trade figures for CN 9013 signal a radical improvement in the EU's external position.

Export value grew strongly, driven by unit prices, while import value fell despite soaring unit prices because volumes collapsed.

Indicator (EUR mn or tonnes)	2015	2025	Change
Exports – value	1 857.8	2 991.5	+61.0 %
Imports – value	2 807.0	2 070.3	–26.2 %
Trade balance	–949.2	+921.2	+197.0 %
Exports – quantity	5 575	5 656	+1.5 %
Imports – quantity	28 637	7 200	–74.9 %
Exports – unit price (EUR/tonne)	333 177	528 829	+58.7 %
Imports – unit price (EUR/tonne)	98 017	287 527	+193.3 %

EU trade overview

The flip from deficit to surplus was the arithmetic consequence of import volume implosion and robust export price growth.

- Export value rose by over €1.1 billion, almost entirely because the average price per tonne climbed 58.7 %; quantities were virtually flat.

- Import value contracted by €0.74 billion. However, the average import price nearly tripled (+193.3 %), and the 74.9 % drop in quantity more than offset that price increase.
- Consequently, the trade balance moved from –€949 million in 2015 to +€921 million in 2025 – a swing of almost €1.9 billion.

This pattern indicates that the EU stopped importing large volumes of relatively cheap optical goods while importing far fewer but much more expensive items.

The quantity-price divergence is a first hint that the composition of trade shifted towards high-end products, a theme that emerges even more clearly when the heading is broken down into its sub-components.

The rise of high-end lasers and the decline of bulk optics

CN 9013 comprises four product categories: lasers (9013 20), “other” optical appliances (9013 80), parts and accessories (9013 90), and telescopic sights / periscopes (9013 10). The evolution of their shares reveals a profound upgrading of the EU’s trade portfolio.

Lasers cemented their dominant role, while the “other optical appliances” category collapsed on the import side.

Sub-heading	Exports 2015 (EUR mn)	Exports 2025 (EUR mn)	Imports 2015 (EUR mn)	Imports 2025 (EUR mn)
9013 20 – Lasers	1 092.6	1 807.4	647.9	1 258.6
9013 80 – Other optical appliances	214.9	370.7	1 919.1	353.7
9013 90 – Parts & accessories	352.9	496.4	157.6	291.8
9013 10 – Telescopic sights, periscopes, etc.	197.9	334.0	86.7	169.4

Product segment breakdown

- **Imports of “other optical appliances” imploded from €1 919 million to €354 million (–81.6 %).** Their quantity shrank from 26 267 tonnes to 2 350 tonnes, while the unit price rose from €73 055 to €150 438 per tonne. This alone explains most of the aggregate import volume collapse.
- **Laser imports, in contrast, almost doubled in value (+94.3 %) –** from €648 million to €1 259 million – on a quantity that grew from 1 167 tonnes to 2 867 tonnes. Their unit price remained high but dipped slightly from €555 115 to €438 673 per tonne, pointing to a different product mix within the laser segment.

- On the export side, lasers contributed €1 807 million in 2025, representing 60 % of all CN 9013 exports, up from 59 % in 2015. The average export price of lasers rose from €292 739 to €513 345 per tonne, confirming a quality upgrade.

Domestic production surged, turning the EU into a more self-reliant manufacturer.

EU reported production of CN 9013 goods climbed from 492 865 units (2015) to 1 040 000 units (2024), while production value jumped from €1 184 million to €5 345 million – a 351 % increase. EU production volumes

- The export propensity (exports/production) fell from 108.9 % in 2015 to 43.9 % in 2024.
Export propensity
- Net import reliance (imports minus exports relative to apparent consumption) moved from –88.4 % in 2015 to –8.3 % in 2024, indicating that the surplus shrank in relative terms as the vast expansion of production was largely absorbed domestically. Net import reliance

Manufacturing is highly concentrated in a few Member States. In 2025 Germany alone accounted for 45.4 % of EU exports of CN 9013, with a revealed symmetric comparative advantage (RSCA) of 0.36. Other specialised exporters included Greece (RSCA 0.92, although with a small total share), Lithuania (RSCA 0.72) and Sweden (RSCA 0.32). Specialisation map

Shifting partners, price shocks and supply-chain turbulence

The landscape of EU trade partners for CN 9013 was reshaped profoundly, with the United States displacing traditional Asian sources and several dramatic price shocks disrupting supply relationships.

The United States became the EU's top import source, while imports from the Republic of Korea all but vanished.

Import partner	2015 (EUR mn)	2025 (EUR mn)	Change
Korea, Republic of	889.7	43.4	–95.1 %
China	575.3	309.6	–46.2 %
United States	527.7	972.5	+84.3 %
Taiwan	157.0	44.3	–71.8 %
Japan	229.8	134.5	–41.5 %
United Kingdom	103.3	205.8	+99.2 %

Top partners

- Korea's collapse (–95 %) is the most spectacular: from nearly €890 million in 2015, imports fell to €43 million in 2025, almost certainly linked to the restructuring of some large-scale optical display or component supply chains.
- US imports grew by 84 %, reaching €973 million and capturing 47 % of EU external purchases of CN 9013 by 2025.
- The import concentration Herfindahl-Hirschman Index (HHI) rose from 1 911 in 2015 to 2 635 in 2025, confirming a tighter supplier base. Import concentration

On the export side, China and the United States alone absorbed half of EU shipments by 2025.

EU exports to China more than doubled, from €324 million (2015) to €701 million (2025), while exports to the United States rose from €355 million to €778 million. Exports to Switzerland and Japan stagnated or declined slightly, and shipments to Türkiye halved. The export HHI increased from 1 041 to 1 426, remaining moderate but showing a trend towards greater reliance on a few large destinations.

Several partner-specific price shocks jolted the market and underscored supply-side fragilities.

- The most severe import shock occurred with **Korea** in 2020: the unit price jumped 364 % above its 2018-2019 baseline while the quantity plummeted from about 5 000 tonnes to 70 tonnes, signalling a near-complete break in the previous supply pattern.
- A second major shock hit **US imports** in 2022, when the unit price soared 200 % and volumes halved; the price remained elevated through 2024, pointing to a structural shift towards more expensive American-made goods, possibly advanced laser systems.
- On the export side, a notable price shock was detected in **UK-bound sales** in 2021 (+35 % price jump, with quantities stable), and in **Korea-bound exports** in 2019 (+39 % price spike).

Price shocks Volatility

These shocks are reflected in the high volatility of import quantities from Korea (coefficient of variation 1.46), Taiwan (1.37) and Japan (1.10), while EU exports generally display much lower volatility (e.g., United States 0.19, China 0.24).

Conclusion

Over 2015–2025 the EU's external trade in lasers and optics (CN 9013) experienced a structural upgrade. The bloc moved from a large deficit to a solid surplus, powered by a collapse in low-value “other optical appliances” imports and a simultaneous rise in high-value laser trade. Domestic production expanded spectacularly, reducing reliance on foreign suppliers and tilting the sector towards the internal market. The partner landscape was reordained: the US became the dominant import source, Korea and China lost ground, and a series of price shocks highlighted lingering supply-side risks. The overall picture is one of a high-tech industrial sector that has strengthened its global competitiveness while becoming more concentrated – in terms of both product mix and partner geography.

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If you need advice on European trade policy, or representation for your interests in Brussels, feel free to contact me at support@tradedashboard.eu. You can find my CV at [this address](#).