

Photonics grew to a £14.5 billion UK industry in 2020

The value of photonics, light-based, technology to the UK is shown in the latest Photonics Leadership Group 2021 industry size update.

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UK photonics has grown into a £14.5bn industry, increasing output by over £1 billion over the past 2 years. The industry now employs in excess of 76,700 people, **adding over 7,700 jobs** in the last 2 years in over 1,200 firms. With a total gross value added to the economy of £6.5 billion and £85,000 per employee. UK photonics is now the **5th most productive manufacturing sector in the UK**.

Covering the 2 years to 2020 the latest analysis includes the initial impact of Covid-19. Excluding that impact, the underlying like-for-like **growth rate of the UK photonics industry was 12%** over this period, (5.8% CAGR). The pandemic has reduced growth by only ~£0.5bn, due to the rapid adaptation of the industry- the PLG's Autumn 2020 survey showing 92% of photonics manufacturers operating at >75% capacity.

Eight UK regions produce over £1 billion worth of photonics, based on over 1,500 operational locations across the UK. Two thirds of photonics jobs in those facilities are outside London and the South East. Additional analysis shows that an average of 33 new photonics companies have been founded every year for the last 20 years.

UK photonics now employs twice the number of people employed in pharmaceutical manufacturing and the value of domestic photonics output is already 50% of UK aircraft manufacturing and 5 times the value of UK electronic component production.

With continuing adaptation and increased demand across applications from food, health, communications, defence and manufacturing and the initial adoption of quantum 2.0 products, the PLG forecast UK photonics will **grow to over a £16bn industry by 2022**.

“Photonics has shown incredible resilience through the Covid-19 pandemic and as a globally focused sector, with 2 out of 3 companies exporting throughout the world, remains robust to the impact of Brexit” said **PLG Chief Executive Dr John Lincoln**. *Photonics innovation enables transformative new products and services in almost every conceivable vertical market with increasing demand from expanding and existing applications continuing to drive growth”*

The 2021 update to the size of the UK photonics industry, follows detailed analysis by the Photonics Leadership Group (PLG). Data refers to the size of the industry in 2020. Comparison to other sectors is based on UK Office of National statistics data for UK manufacturing sectors defined by 2 level SIC codes.

The PLG acknowledges the support of all PLG participants and Harlin Ltd in the data analysis.

About the Photonics Leadership Group (PLG) and methodology

The Photonics Leadership Group takes voluntary input from over 90 industry and academic leaders in the UK photonics sector, providing a voice and interface for UK photonics to foster strategic dialogue between industry, academia, support agencies, and government in order to strengthen and grow the industry and the applications of photonics. Contributions and input from all are welcome.

www.photonicsuk.org

Financial data used in assessing the UK Photonics industry output is based on data publicly reported to Companies House and amalgamated by Dun and Bradstreet. Reported data lags by up to 18 months represents the output of the industry to median of mid-2020. The full list of organisations included in the analysis is available at www.photonicsuk.org and recommendations for additions and corrections are always welcome.

The methodology– pioneered in photonics – accurately combines the output of the many SMEs operating in the industry with a fraction of the output of the large and highly diversified companies that produce photonics products as part of their product portfolios. The same methodology has been applied to sizing the UK acoustics and UK fluid dynamics industries, Photonics in Australia and New Zealand, by Harlin Ltd and is the basis of estimates for the global and European photonics industry by SPIE and Photonics21 / Tematys.

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Images: The UK photonics industry- key statistics