

TOTAL CAPABILITY

design for production

The POE design and development teams are fully conversant with all aspects of cost-effective manufacture, and utilise the latest concurrent engineering techniques to create designs with the right features for the right market price.



project management

As a major military system supplier who has successfully delivered a whole range of sophisticated electro-optical sub-systems, such as a series of complete thermal imager packages, POE is able to offer its considerable expertise in project management to any development or production task. This can often extend to the running of a significant supplier base, or just the local management of the in-house design team, depending upon the complexity of the programme. Project management skills, combined with our research, design, modelling, assembly and test disciplines, mean that POE can truly claim to offer a complete service for all optical system requirements.

quality accreditation

POE has gained internationally recognised B5 EN 1509001 :1994 quality approval in its own right. POE's test facilities are calibrated and maintained to UK NPL and NAMA5 standards.

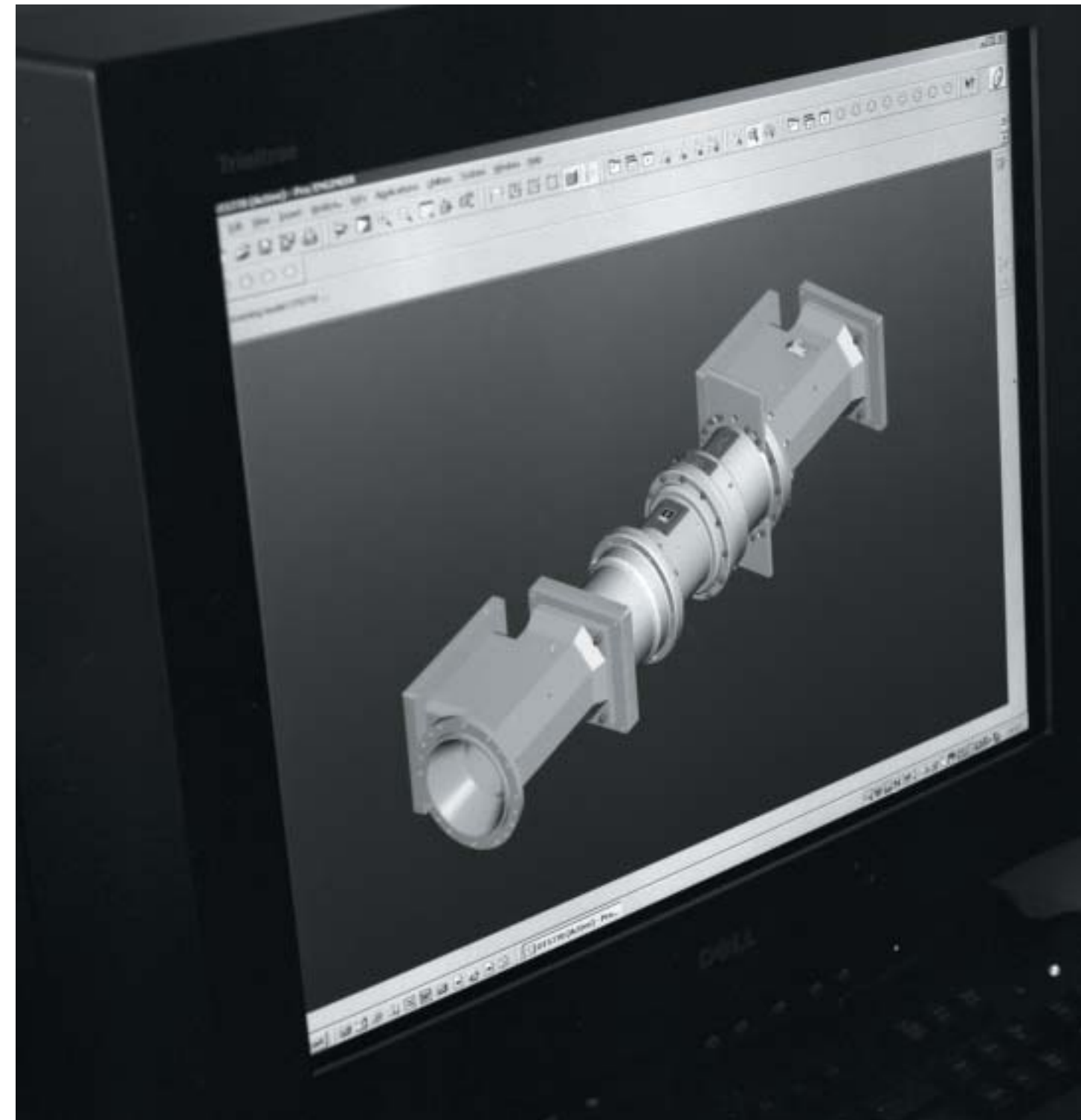
Please contact us and allow us to help solve your Optical System Engineering needs.

optical test capabilities

All development and production systems will undergo stringent quality performance assessment using POE's large range of optical test equipment which includes visible and infrared interferometers (the commercially available INTERFIRE range), full polychromatic MTF, FTIR spectrophotometry, and many other associated test configurations. This comprehensive test capability enables POE to offer an electro-optical system test service seldom found elsewhere in Europe.

production facilities

A highly skilled and multi-disciplined production team operates within B55295 Class K cleanroom conditions, working with a comprehensive range of optical assembly equipment. This enables POE to undertake large scale precision manufacture of either "build-to-print" or "in-house-designed" optical subassemblies and systems. Additional laboratories provide the facilities for assessment and testing of prototype or pre-production systems and investigation of associated experimental test techniques.



PRECISION-OPTICAL ENGINEERING

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**PRECISION-OPTICAL
ENGINEERING**

Precision-Optical Engineering is an autonomous business centre of MBDA UK Ltd and is recognised as a centre of excellence for the design, development and production of visible and infrared waveband optical systems. POE has many years experience in this field and employs specialist teams to produce optics to meet the most demanding performance requirements. Combined with other key in-house technologies which include diamond machining, laser optics and interferometry, POE is uniquely qualified to offer a full range of optical services.



a complete service

POE has an established pedigree in the definition and specification of optical systems. Typically this will include initial concept and feasibility studies and derivation of the parameters necessary for the

generation of design specifications. POE is able to undertake all elements of detailed optical and opto-mechanical design, and can build and test hardware through prototype to full-scale production standards, all within its integrated factory facilities at Hitchin.

design strengths

The POE design team utilises a large suite of optical system design and performance modelling software, much of which has been developed in-house, to undertake all types of design and analysis activity, from the definition of simpler visible and IR lenses through to more complex zoom designs, utilising diffractive and aspheric surfaces. The team's lens design capability is underpinned by the extensive use of the internationally renowned CODE V, but in-house packages and Zemax are also used. POE's opto-mechanical design engineers are fully conversant with all aspects of the most up-to-date CAD/CAM techniques and are able to call upon the latest AUTOCAD software in their activities.



research and development



A specialist team of optical physicists undertake a wide range of research and development investigations into the design of optical systems and their related technologies. Typical activities include the development and assembly of lens configurations using non-spherical surfaces, research into new optical and IR materials, the integrity of external windows and domes, exploitation of novel optical coatings and the effects of stringent environmental conditions on optical systems.

These investigations lead to a thorough understanding of, for example, optics for high definition video cameras, optics for military environments and industrial optical instrumentation.

partnerships

POE has established a reputation for close partnerships with areas of industry, universities and other research institutes, who may require a centre for the industrialisation or production of their optical concepts. This may lead to a POE-manufactured sub-assembly for the OEM partner, or indeed a new product opportunity to be marketed jointly or by POE alone. As a centre of optical expertise, POE is always willing to form new partnership arrangements.

