







Left: Dr Paul Eisler, the inventor of the PCB, with Rex Rozario, OBE Chairman Graphic Group (circa 1990). Right: The worlds first PCB (patented 1942)

The rich history of Graphic stems from the origins of Printed Circuit Boards

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Rex Rozario O.B.E. the founder of Graphic was a protégé of Dr Paul Eisler working with him at Technograph-Telegraph, the UK's first PCB Manufacturer in the 1950's and subsequently branching out on his own in 1968 to launch Graphic in Devon. Graphic is now one of the oldest surviving PCB manufacturers with over 45 years of experience in the PCB industry. Graphic is seen as one of the world's most technically competent manufacturers of high-technology printed circuit boards. Graphic focuses on leading edge technology released to the most demanding international guality standards. Constantly looking at innovative solutions to customer requirements, the company is an expert at prototyping and developing new "first to market" products. With facilities in the UK, USA and Asia, the Graphic Group is able to offer a complete service in PCB manufacture.

At the Forefront of Technology and Innovation

- Over 45 Years Manufacturing Experience in PCB's
- All Major International Approvals
- Purpose Built HDI Sites located in UK, USA and China
- Over 700 Highly Skilled Employees
- Environmentally Friendly Sites
- HDI in Rigid and Flex-Rigid
- Application Engineering / Design Support on-site
- From Prototype to Volume
- Graphic Express Delivery
- World Class Customer Service
- Business / Manufacturing Excellence
- Advanced Quality Planning
- Visual Management under 5S









Approvals

System:

- BS EN 9100 : 2009 (AS 9100 Rev C)
- ISO/TS16949 Third Edition
- NADCAP AC 7119 including /1, /2 and /3
- ISO 9001: 2008
- ISO 14001
- OHSAS 18001
- ITAR Registered

Product:

DLA

MIL-PRF-31032 (Types 1-3, GF and GI)
 MIL-PRF-55110 (Types 1-3, GF and GI)

IECQ - CECC

- BS EN 123100 / 200 / 300 / 400 / 500 / 600
- IPC 6012 and IPC 6013

Underwriters Laboratories:

UL796

Members:

- Intellect
- IPC
- WECC
- EIPC
- WEAF
- CBI
- The Air League
- Associate Parliamentary Aerospace Group
- ICT

Technology

PCB Products:

- Rigid, Flexible and Flex-Rigid with HDI Technology
- Stacked and Staggered Sequential Micro-Vias
- Copper and Resin Filled Vias
- CTE Restricted Structures Using C-I-C / Carbon Core
- Multi Resin System Structures
- High-Speed Materials
- Thermal Management
- Buried Resistance / Capacitance
- Embedded Technologies including RFID
- 3 Dimensional Structures
- Controlled Impedance
- RF / Microwave

Reliability and Product testing:

- Interconnect Stress Test (IST)
- Scanning Electron Microscope (SEM)
- Hi-Pot
- Thermal Imaging



GRAPHIC UK

- Based in Crediton, Devon, England
- Established in 1968
- 180 Employees
- Leading Military and Aerospace supplier
- Award winning performance
- Graphic Express 24 hour operation
- Embedded components (including RFID)
- Continued investment programme
- Fully Equipped Test Facility:
- Scanning Electron Microscope (SEM) Interconnect Stress Tester (IST)
- Sequential build boards in Rigid or Flex-Rigid
- Resin and Copper Filled Vias

Aerospace and the Defence Market

Graphic UK has been supporting the Aerospace and Defence markets for 45 years and has built a solid customer base that is dependent on high quality and high reliability products supplied by Graphic.

Graphic's versatility ensures that whether making product for top military applications, top of the range outside broadcast units, satellite technology or indeed implantable medical devices, Graphic is always one step ahead of the competition with quality and innovation.

www.graphic.plc.uk





GRAPHIC USA

- Based in Santa Fe Springs, California, United States
- Established in 1980
- 35 Employees
- Flex Circuit, Rigid Flex and Flex Heater Product Line
- Specialised Flex Circuit Assembly
- Specialisation in Military Aerospace and Medical markets
- ITAR and ISO 9001-2008. Certification
- Top Supplier Awards from ITT/Exel Zero Defects Award
- Flex Heater Speciality Division
- Quick Turn Prototype through Production

Military, Aerospace and Medical Market

Graphic USA is one of the few American PCB companies that specialise in Flexible Circuits from Respirators in the Medical Industry to Night Vision Devices supporting the Armed Forces around the world. Graphic USA manufactures Flex Circuits, Rigid Flex and Flex Heaters of the highest quality. The Graphic USA facility is an ITAR registered manufacturing unit and maintains a strict operations and quality system by maintaining the ISO 9001/2008 certification.

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GRAPHIC CHINA

- Based in Dongguan China
- Established in 2007
- 1.5 hours from Hong Kong
- 480 employees
- Exceptionally well equipped purpose built facility
- Medical/Aerospace/Automotive approved
- All HDI products in Rigid or Flex-Rigid available
- Sequential build up boards
- Speciality high layer count and heavy copper (6 to 12 oz)
- Buried Resistance and Capacitance available
- Special materials
- Strict Environmental control

Commercial Aviation and Medical Market

Graphic China (DSG) based in Dongguan, South China is a purpose built 66,000 sq metre facility (completed early 2007) and is one of the highest technology facilities in China. Designed to manufacture technically demanding PCBs in medium to high volume and currently employing over 480 staff.

Quality

Quality is based on innovating advanced technology and continued improvement. We always pursue excellence and create value for the customer. This is DSG's Quality policy. DSG has professional employees, advanced equipment, strict quality control system, advanced test and inspection instruments to ensure the quality and reliability of PCB's. Certified to: Nadcap, ISO 9001, ISO 14001, AS9100C, UL, TS16949



Graphic USA California USA Graphic UK Crediton Devon UK

> DSG, Dongguan, China

> > SGHK Asia Ltd, Hong Kong

Graphic World of HDI PCB's

USA, UK and Asia



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