



To learn more about our complete flash solutions, call or visit us online.

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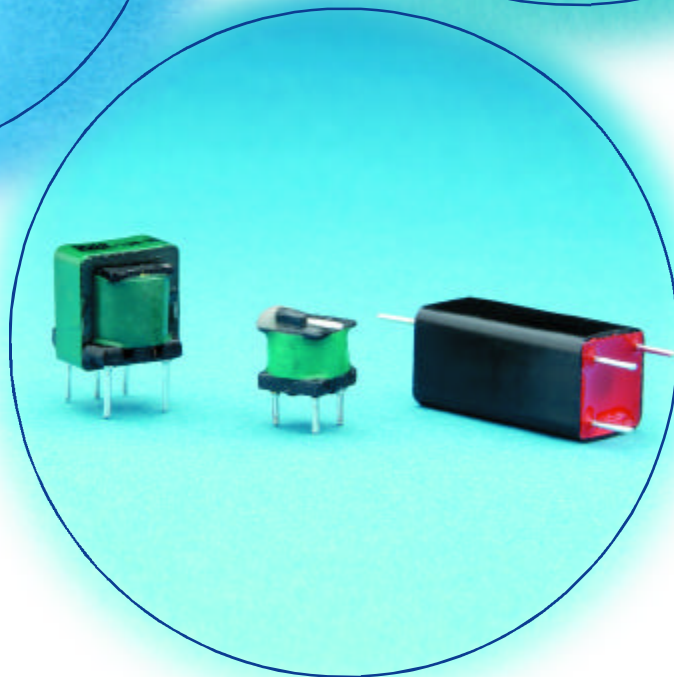
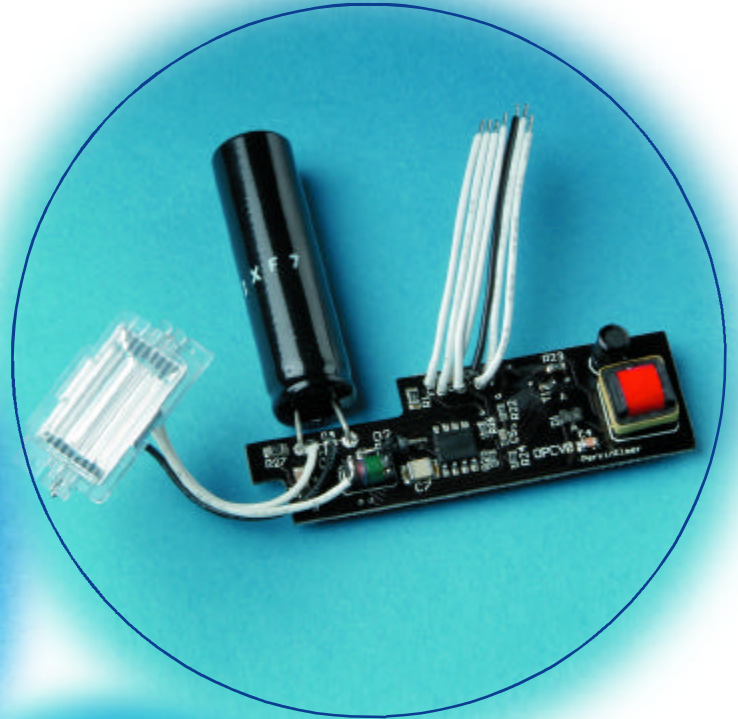
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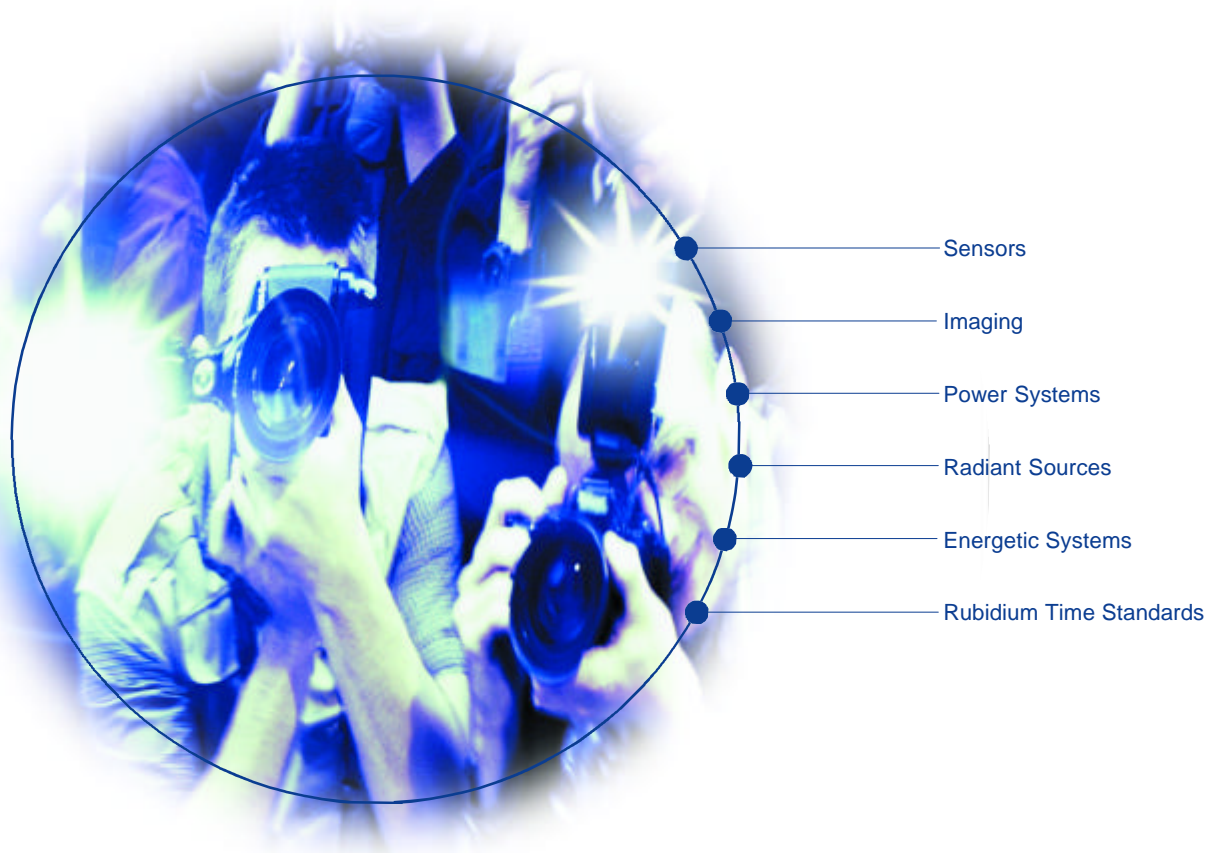
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www.perkinelmer.com/optoelectronics

One-stop Flash Module Solutions



Fueling the digital revolution with photoflash technology.



PerkinElmer Optoelectronics is fueling the digital revolution with its photoflash technology. From custom design solutions to high volume production, PerkinElmer consistently delivers high performance, high-reliability flash systems for photographic applications. PerkinElmer provides a one-stop solution for flash modules from concept to mass production, including the design and manufacturing of flashtubes, strobe PCBs, reflector assemblies, trigger coils, transformers and phototransistors. With more than 50 years of advanced flash lamp, components, and circuit design experience, PerkinElmer Optoelectronics has the product depth,

design engineering expertise, and manufacturing capabilities to deliver the optimal flash solution.

A world leader in flash lamps, PerkinElmer's flash solutions are used in the global camera market including mobile phone digital cameras, single-use cameras, compact cameras, and CCD/CMOS digital cameras. The company's innovative designs drive higher light output efficiency to meet customer requirements for long life. The entire flash solutions product family is backed by ISO9000:2000 certification.

Reflector and Reflector Shields/Panel Technology

Available with standard or customized reflectors and shields, PerkinElmer Optoelectronics flash modules use state-of-the-art optical design software that employs stray light analysis and non-sequential ray tracing techniques. The flashtubes are designed to produce optimal light output and distribution performance. To reduce delivery time, these designs can be verified using illumination analysis packages prior to the prototype build.

Transformers and Trigger Coils Capabilities

Essential to optimal flash module performance, PerkinElmer Optoelectronics designs and manufactures trigger coils and transformers for a wide range of specifications based on strobe applications. Please refer to our transformer and trigger coil catalog for the various designs.

Standard or Customized Flash Module PCB

A world leader in the flashtube industry, PerkinElmer Optoelectronics offers complete standard and customized flash module designs. These advanced flash lamps and modules, designed for optimal light output and life performance, are used in all types of cameras, including single use cameras, instant film cameras, PC cameras, CCD/CMOS cameras, compact cameras and SLR cameras. By developing and customizing these flash circuits, PerkinElmer Optoelectronics can provide diverse flash module designs specific to the individual requirements of any camera application.

PerkinElmer Optoelectronics also offers customized strobe designs for special flash applications.

Mobile Phone Capabilities:

The majority of digital cameras embedded in mobile phones currently use an LED for photograph lighting. PerkinElmer's miniaturized flashtubes provide dramatic improvements over LED in terms of increased light output, improved color temperature, decreased battery consumption and lower cost, making flash the ideal light source for digital cameras embedded in mobile phones.

Miniaturization continues to drive demand for embedded flash units in mobile phone digital cameras. PerkinElmer currently supports this market with a wide variety of capillary lamps combined with extended expertise in the design of reflector assemblies.

High Volume, High Quality, Low Cost Production Capabilities

PerkinElmer Optoelectronics leverages its global engineering and manufacturing Centers of Excellence (COEs) to provide both custom and high volume flash products. Six Sigma and Lean Manufacturing methodologies enable PerkinElmer Optoelectronics to leverage low cost manufacturing capabilities while providing key features and performance functionalities to meet stringent consumer requirements. High volume production adds a cost leadership advantage to the company's sourcing capabilities. With worldwide resources, including manufacturing sites in Malaysia, China, and Batam, as well as technical support in Singapore, the PerkinElmer Optoelectronics continuously seeks new and alternative products to enhance groundbreaking miniaturization design initiatives.



Standard Flash Modules:

PerkinElmer Optoelectronics provides flash module solutions with various charging and discharging characteristics. The standard module features are:

Charging

Characteristics

- various input voltages
- voltage regulation
- current limiting circuits

Discharging

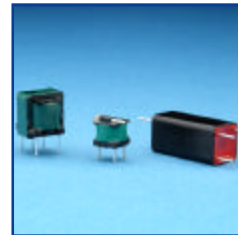
Characteristics

- light output control
- feedback for light output control
- pre-flash characteristics

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Standard Flash Module PCBs



Capillary Flash Lamps and Trigger Coils