

# Research Scientist Power Electronics for Solid State Lighting

Job ID: 71572  
City, Country: Eindhoven, Netherlands

## Organization:

Philips Research is the source of many advanced developments in Healthcare, Lifestyle and Lighting. Building on 90 years' experience in industrial research and our world-leading patent position, we're dedicated to meaningful innovations. In the healthcare domain, we are enhancing imaging and monitoring systems, as well as exploring innovative personal healthcare. In lifestyle, we're helping people see, hear, remember and share content, anywhere and anytime. Our vision focuses on simplicity, making technology an integral – but invisible – part of everyday life.

## Department Description:

Philips is the world leader in Lighting. The department Solid State Lighting (SSL) addresses primarily technologies for LED-lighting systems. It is also the home of the capability cluster of energy conversion technologies of Philips Research. We carry out fundamental and applied research on system concepts and power conversion modules for a wide range of applications. Our focus is on solid state lighting and medical high-power converters, and we are working on renewable energies and building power systems as well.

## Your Responsibilities:

As a research scientist you create innovative electronic circuits that unleash the full potential of Solid State Lighting both in already existing, but more and more also in completely new applications. Supported by your colleagues as well as your internal customers from product development and pre-development, you will contribute to the challenging task of inventing and designing advanced, but also cost-efficient electronic systems suitable for mass production.

You will work on efficient driving of medium to high power LEDs directly from mains voltage, as well as on integration of different sensor technologies. Ideally, you know how to use digital electronics e.g. in the form of micro controllers or DSPs for controlling and interfacing your system to the outside world.

In your frequent contacts with the SSL predevelopment organization you will constantly benchmark the existing LED driver circuit portfolio with upcoming new (internal or external) circuit concepts or LED technologies to identify new opportunities as they emerge. The scouting of LED, circuit and sensor technologies, e.g. by visiting trade shows or attending leading SSL conferences, is an important part of your work.

## Your Profile:

- Solid background in electronics, covering at least two of the following fields:
  - Power electronics
  - Analog circuits
  - Magnetic design
- Hands-on practical experience in realizing and measuring circuits in the lab
- Experience in circuit simulation (e.g. Pspice or LTSpice, Matlab Simulink/PLECS)
- Highly welcome are skills in
  - $\mu\text{C}$  / DSP programming and digital electronics (FPGA)
  - Designing for circuit approbation (fulfilling norms and standards dealing with electrical safety, power quality and EMI)
- Motivation to work inter-disciplinary and application-oriented
- High communication skills, good team-player in a customer-focused project team

Information: [www.philips.com/careers](http://www.philips.com/careers)

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