

Seaborough fills the void left by Philips Lighting

Seaborough's Martijn Dekker (left) and Marcel Verhoeven.

Job Woudt
Amsterdam

Last week, Philips Lighting scrapped a third of its research jobs in Eindhoven. Conversely, in the Amsterdam district of Zeeburg, investment in light technology is being intensified: fourteen researchers and an army of freelancers are currently hard at work creating the next generation of cutting-edge light technology.

The four-year-old tech company Seaborough – a reference to the Amsterdam district 'Zeeburg' – has developed LED TL lighting suitable for use in all conceivable systems. These LED TL tubes are supplied to our customers via Chinese manufacturers. "At the big lighting companies such as Philips, Osram, and GE, research budgets are being slashed," says Marcel Verhoeven. "This kind of work is increasingly being outsourced to their suppliers."



Verhoeven is the Chief Commercial Officer of Seaborough and the Asset Manager at its parent company Momentum Capital, which guarantees the company's venture capital. He runs Seaborough together with CEO Martijn Dekker. The two are both veterans of Philips, where they worked in the lighting division. Dekker then moved to Carus, a lighting supplier for IKEA, while Verhoeven went on to work for the lighting manufacturers Osram and Zumtobel.

By contrast, the innovation firm Seaborough is about as far away as you can get from such large-scale in-house manufacturing. They earn their money with patents, particularly in the field of electronics and phosphors: the powders used to make colored lighting. Although chip technology for LED lighting is already in the public domain, Dekker and Verhoeven are convinced this field still holds a wealth of other secrets that are just waiting to be discovered.

For example, phosphor research can help give LED lights a warmer color for no extra cost. The blue-white variety is the cheapest and most widely used, although it produces poor quality light. Red tints offer greater quality, but consume more electricity. According to Verhoeven, the trick is to use the right kind of red phosphor to get the LED to produce warm light more efficiently.

Seaborough is also researching a new type of light therapy for skin diseases like psoriasis. With a grant from the research organization NWO and in collaboration with Utrecht University and the University of Groningen, the company is researching nanomaterials to serve as an alternative to contemporary light therapy, which puts patients at risk of excessive UV exposure.

From a business perspective, Seaborough expects a great deal from its technology, which aims to get ahead of the curve by replacing existing fluorescent-tube lights with LED tubes. This strategy will especially pay off if Brussels decides to ban fluorescent-tube lighting in spring. If this happens, then 400 million fluorescent tubes will have to be replaced every year.

All the big lighting manufacturers have their own LED TL tubes, but they can't be used in every system. In many, LED TL tubes either flicker annoyingly or don't work at all. Seaborough has developed technology – named oneTLed – which makes these LED tubes universally compatible. It was a long time in development, not only because of the patents, but also to test the technology in all existing lighting systems.

Two years ago, the Chinese lighting manufacturer Opplé Lighting became the first company to introduce LED TL tubes to the market featuring this new Dutch technology. Last year, a deal was also agreed with a second Chinese lighting manufacturer: Sengled. "We contacted them for the first time in February last year," says Dekker. "By April, the contract had been signed, and by June, a prototype was presented at the trade show in Guangzhou. Mass production began for the first time in December." Currently, Sengled only manufactures these LED tubes for its own brand, although manufacturing for other brands may also be a possibility in the future. Verhoeven and Dekker are looking to catch the eye of their contacts in the lighting industry. "We hope that major manufacturers will switch to Sengled," says the naturally optimistic Dekker. They are hoping that oneTLed will eventually catch on like Intel Inside: the chips used in countless PCs and laptops. "We want to be the standard in 25% of all tubes," says Dekker. The company will then earn its money via royalty payments.

Seaborough seeks to earn money with patents, particularly in the field of electronics and phosphors.

LED in the right direction

Philips Lighting is scaling down its traditional activities, i.e. manufacturing of light bulbs. The transition to LED lighting is creating new and exciting opportunities. The company is focusing on "smart lighting," which seeks to connect LED lights to the digital superhighway: at home, at the office, in the street, in huge stadiums, and elsewhere. On January 9, it was announced that 118 of the 350 employees at the research department in Eindhoven would lose their jobs. Any jobs unrelated to digital applications have been cut, although the company did recently hire 80 new employees to work on these digital applications.