



TQ

THE
QUINTESSENCE

of LED Technology

The Knowledge Magazine from EBV Elektronik

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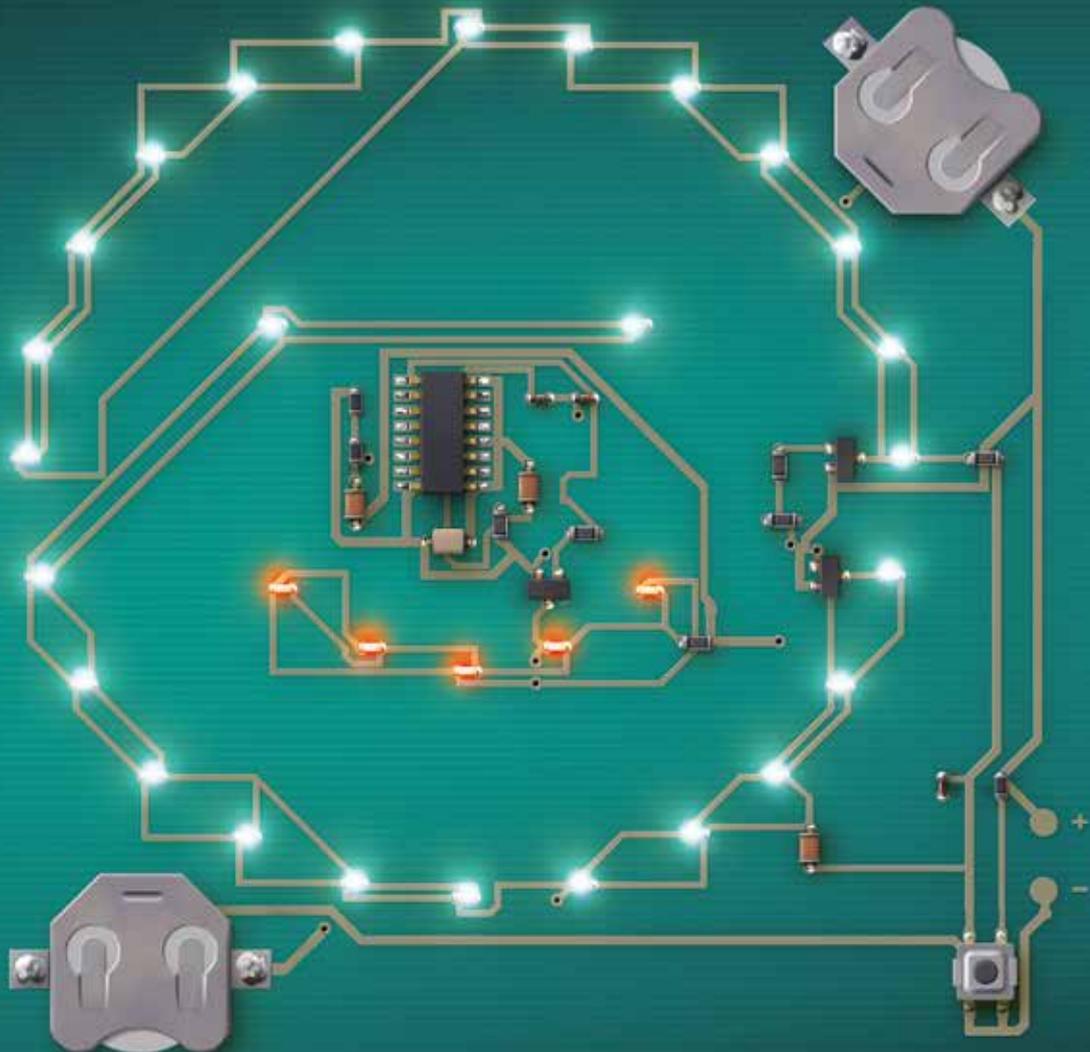
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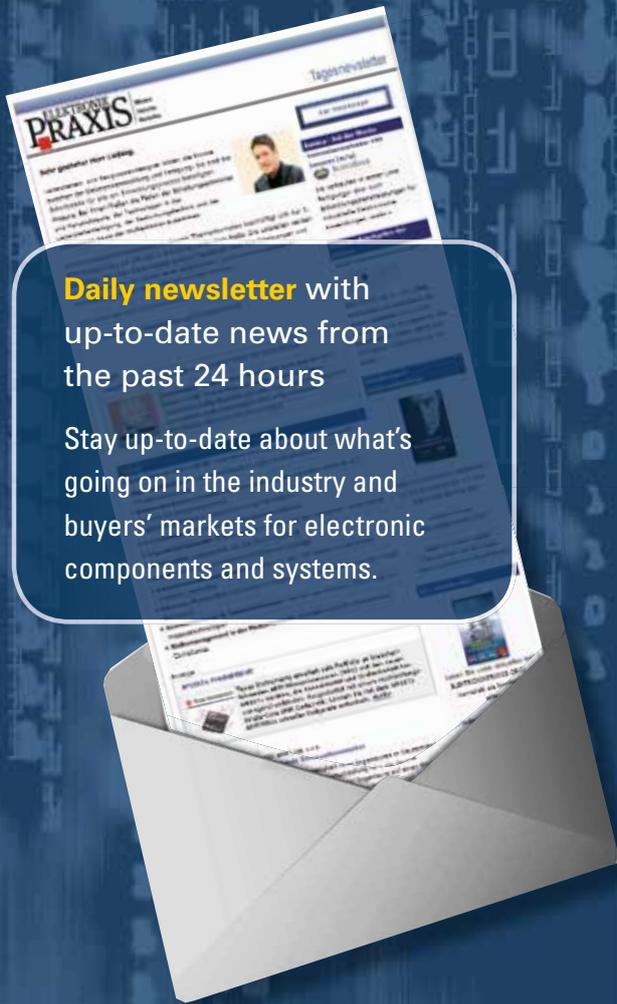
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The digitisation of light is in full swing

According to the market researchers from Strategies Unlimited, in 2011 the market for high-performance LEDs was worth 12.5 billion dollar. Compared with 2010 this is a rise of almost 10 percent, with this increase being mainly driven by applications for TV screens. Such growth will however slow down somewhat in coming years – above all due to falling demand for television sets. Sales are forecast to peak at 16.2 billion dollar in 2014 before slipping back to 15.3 billion in 2015. But the fall-off in growth is not set to last – from 2015 home and street lighting will become the driving force behind the LED sector.

In particular, international debate about energy efficiency is pushing the use of LEDs for both indoor and outdoor lighting. Political framework conditions such as the EU's Ecodesign directive EU 2009/125/EC create a favourable environment for further growth. The market research institute IMS Research expects LED sales for lighting applications to grow by more than 300 percent in the period between 2011 and 2016 and forecasts that the number of units sold in this period will increase by as much as 1,500 percent. According to Pike Research, by 2021 LEDs are set to account for over 52 percent of the global market for lighting in commercial property. The digitisation of light is thus in full swing.

However, at the same time prices for LEDs have fallen by 20-40 percent in the last few years. So benefiting the consumer – but lower prices present manufacturers of LEDs and LED components with a major challenge: Strategies Unlimited expects that producers or firms in a weaker (financial) position who are new to the market and so without much experience here might well back out again. With mass-produced LEDs it is probably only solvent companies who will be able to cope with this development – incidentally the same sort of situation that the suppliers of DRAM chips found themselves in. An obvious comparison as LEDs are after all nothing more than semiconductor devices. As such they too are governed by the laws of this industry: This means that manufacturers not only have to cope with falling prices but with extremely short innovation and development cycles as well.

EBV has 43 years experience within the semiconductor industry and will as usual apply this experience to ensure our customers are offered the best manufacturers and solutions in the market.



Slobodan Puljarevic
President & CEO, EBV Elektronik



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knowledge magazine
is now also available
as an iPad app!

 **TQ by EBV**

DEAR READER,

We couldn't help ourselves – it was simply too appealing an idea, to complement our reports on the flexible application options for LED technology in this latest issue of TQ with a practical demonstration: One edition of the magazine features LEDs illuminating the smiley-face on the cover.

The fun application of LED technology on the magazine cover impressively demonstrates two of the benefits of LEDs: they are small, and so can be integrated wonderfully discreetly into a wide variety of objects – even a magazine cover just a few millimetres thick. And thanks to their energy efficiency, tiny battery cells are sufficient to power them on thousands of times.

The four major benefits of LEDs – energy efficiency, versatility, low heat and long life – are reflected in the individual sections of the magazine. Various application reports demonstrate the great benefits of LED technology, as well as profiling some of the ways in which LEDs are already being used today.

The second edition of the magazine – with no LEDs, but featuring a lenticular film instead – presents yet another aspect: By tilting the front cover, you will discover the technology behind the LED feature. That, too, has a wider purpose, because on reading this issue you will discover that creating a successful LED lighting solution takes much more

than just a simple diode. That fact is also highlighted by the LED specialists we invited to attend our regular round-table discussion.

With all their technical and commercial benefits, LEDs enable lighting applications to be realised which would have been inconceivable just a few years ago. "LED technology is a highly rewarding creative medium," as lighting designer Moritz Waldemeyer states in our interview with him.

I very much hope you enjoy reading this latest issue of TQ. Who knows – it may also provide you with some ideas for creative LED applications of your own! By the way, TQ is now also available as an interactive iPad app in the app-store under TQ by EBV. As ever, I look forward to receiving your feedback.

You can contact me at bernd.schlemmer@ebv.com.

Best regards

Bernd Schlemmer,
Director Communications, EBV Elektronik



Many thanks to OSRAM Opto Semiconductors, who made the LEDs for the integration in 2,000 copies of this edition of TQ available for free! We also thank our customer Pfeifer & Seibel for helping us to design the smiley-face and for producing it in such a short space of time.

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