David Morgan selects his top ten discoveries among the products on show at this year's Light + Building.

10 OF THE BEST

7792 BOLLARD
BEGA

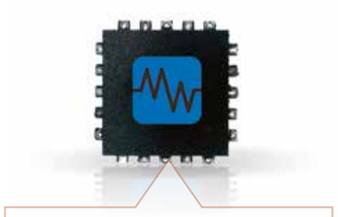
As usual Bega were showing their extensive range of well-designed exterior lighting.
Over the many years that I have been designing luminaires and commenting on luminaire designs Bega is an outstanding example of a company sticking to a simple pure geometric design theme to create a harmonious brand identity.
The new 7792 27 Watt LED bollard caught my eye at the show as the Bega design team have stretched their design envelope slightly and have incorporated a conical base and soft profile head. The LEDs are mounted on the top casting with a textured contoured reflector providing a glare free distribution. With excellent attention to detail combined with very high quality castings and glass, this new bollard fits well into the Bega range while projecting its own quiet personality.
www.bega.com

FLEXIBLE OLED
LG

LG Chem was showing a number of OLED developments including the largest OLED panel I have seen so far at 320 mm x 320 mm and the production version of their bendable OLED glass panels. A variety of prototype luminaire designs were on display incorporating these bendable OLED panels illustrating potential uses in different decorative applications.
LG launched their bendable panels as standard products although production capacity seems to be limited. With 60 lumens per watt efficiency and an expected life of 20,000 hours to L70 these panels can now be considered for use in live projects not only prototype demonstrations.
Apparently there isn't a launch date for the LED flexible plastic OLED panels so perhaps LG are facing similar technical problems producing plastic OLED panels that have prevented a number of other companies from actually launching them.
www.lgoledlight.com

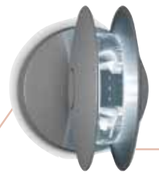
XIM CONSTANT VOLTAGE MODULE WITH INBUILT DIMMING
XICATO

Xicato launched their new XIM module which incorporates a 48 volt input DC to DC driver, a DALI dimming interface, thermal sensors as well as their remote phosphor LED light engine. The form factor is slightly different from previous Xicato XLM modules and the efficiency for these new modules is claimed to be over 100 lumens per watt which brings them into line with rest of the industry. Costs for some of the Xicato modules are understood to be lower than previous generations. Integrating a dimmable LV driver into the Xicato module will make the development of new luminaires easier and faster and potentially expand their market. www.xicato.com



LINE VOLTAGE INPUT LED LIGHT ENGINES
MACKWELL

Mackwell has licensed and developed a very small ASIC driver design with no electrolytic components that will enable 230 VAC input single board light engines to be produced. By integrating the miniature ic driver with the LED board, much smaller form factor luminaires can be developed. The technology sounds similar to the Seoul Semiconductor Acrich 2 system. Mackwell is planning to introduce a series of standard driver incorporated light engines and showed a few possible configurations at the show, including a 2D replacement board. Mackwell will also supply custom light engines based on this technology depending on minimum quantities. LED flicker can be a problem with this driver approach when the LEDs are arranged in a linear configuration so initially I would expect that they will be used for exterior applications where flicker is not so much of an issue and if the LEDs are mounted closely together for down lights and spotlights. www.mackwell.com



TRICK
IGUZZINI

The Trick range designed by Dean Skira seems to be one of the most mentioned new luminaire ranges at Light + Building 2014.
This comprehensive range of IP-rated LED, button-shaped luminaires is available in three sizes ranging from 45mm diameter up to 160mm diameter and can produce a wide variety of optical distributions including wall washing, blades of light and radial surface washing. The patented optical design developed for the blade of light version produces a very clean output with an almost 360 degree distribution from the LED source. Apparently the lens also acts as part of the heat sink.
www.iguzzini.com

MICRO DMX CONTROLLED FIBRE OPTIC MUSEUM LIGHTING SYSTEM
LUXAM

The US based fibre optic lighting museum specialists Luxam was showing their Hybrid 24 channel DMX controlled LED illuminator on their German distributor's stand. This system has been developed for use in museum display cabinets and each of the 24 LEDs can be individually dimmed under DMX control to create dynamic scenes. The illuminator is designed to work with the Luxam range of fibre and miniature lensed luminaires. The high power LEDs incorporated in the illuminator are mounted on a removable board so that, as higher efficiency LEDs become available, the illuminator can be easily upgraded.
www.luxam.com

AFTER 8
MOLTOLUCE

Moltoluce always seem to come up with miniature well detailed luminaires and lighting systems and this year was no exception.
The After 8 LED pendant - an elegant, minimal, ultra-thin up and down suspended pendant - is a good example of their in-house design capability
The After 8 is just 5mm thin with tight spacing of miniature medium power LEDs which, combined with a linear lens, gave a line of light without visible LED dots combining 30% uplight and 70% downlight in one slim housing,
The pendant is 1.22mtrs long and gives 1,590 lumens while consuming 28 watts.
www.moltoluce.com

SIMILED PENDANT
LUXUNI

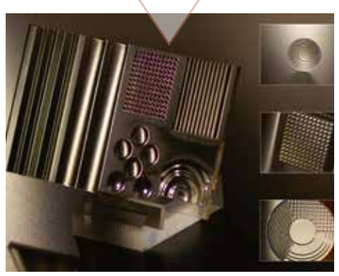
Luxuni is a fairly new German lighting company that has developed a series of ultra slim luminaires.
The outstanding products were the SimiLED pendant and the SimiLED Art pendant. These disk pendants are only 7.8 mm thick with a diameter of 600mm. The LEDs are located around the edge of the pendant and a light guide system transfers light evenly across the diffuser surface. In the Art version of the product the light guide dots are arranged in various patterns that become visible when the LEDs are turned off.
The light output of the SimiLED pendant is approximately 3,000 lumens with 45 Watts power consumption.
www.luxuni.com

AR 111
SORAA

Soraa introduced a new range of AR 111 and PAR 30 retrofit LED lamps incorporating their GaN on GaN™ LED technology. These larger lamps supplement their existing MR 16 and GU10 based retrofit lamps. With a very high CRI and narrow beam optics these are the closest LED retrofit lamps that I have seen to mimic halogen. The range of beam angle for the new larger lamps includes 8°, 25°, 36°, and 60° 95-CRI, and 95-R9. The full-visible-spectrum 8° AR111 LED lamp, with CRI of 95 and R9 of 95 has a peak luminous intensity of 27,500 Cd and light output of 980 lumens.
My company Radiant Architectural Lighting presented a new Micro track spotlight developed to work with the Soraa Snap MR 16 retrofit LED lamp which had a very good reaction from lighting designers.
It is understood that the Snap system will also be applied to the AR 111 lamps.
Dimming Soraa lamps smoothly does need the right combination of LV power supply and dimmer however.
www.soraa.com

CAD-TO-OPTIC 3D PRINTING
LUXEXCEL

The Dutch venture capital backed optical component company which has pioneered the use of 3D printed optics announced the construction of a new 1,000 sq mtr 3D printing production facility to produce lenses and other refractors. Their idea is that lighting manufacturers will be able to incorporate custom made optical elements into their luminaires without incurring high tooling costs, long lead times and high minimum production quantities normally associated with injection moulded optics.
The Luxexcel CAD-to-Optic 3D printing process produces optical components that are printed optically smooth and do not require post processing.
Although the vast number of existing off the shelf lenses suitable for most lighting applications is likely to limit the use of 3D printed optics to niche areas it will certainly be very useful to be able to produce usable optics direct from 3D CAD data for prototypes and short runs.
www.luxexcel.com



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