

MechaTronix in LED

MechaTronix launches 2x2MX LED cooler platform

While standardizations have been mainly focusing on retail and indoor lighting application, also the field of industrial lighting is undergoing a same move. Availability of standard building bricks lead to a shorter time to market, crucial in the hectic lighting world of today.

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One of the newest and most popular platforms used for outdoor lighting applications is dubbed the 2x2MX platform. 4 high power LEDs (typical 10W), 4 groups of mid power LEDs, or 4 COBs are placed in a square to generate 4000 up to 6000 lumen, and that in a size as compact as 96x96 millimeter. The complete LED engine is IP67 waterproof after assembly, what makes it utmost suitable for outdoor applications like high mast luminaires, industrial flood lights or street lights.

2x2MX LED engines with lenses

Lumileds Luxeon XR-M, Osram Soleriq P10 2x2MX, ADURA SinkPAD 2x2MX



Citizen LED COB with Bender+Wirth 2x2MX holder

(4x) Citizen
CLU028-0604C4
LED COB

CITIZEN
Microelectronics



BENDER
+WIRTH

Cree LED Array with Bender+Wirth 2x2MX holder

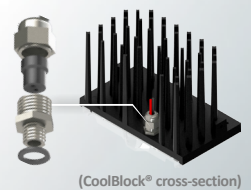
(4x) Cree XLamp
CXA15xx / CXB15xx
LED Array

CREE



BENDER
+WIRTH

CoolConnect® Gland Cable feed-through



▲ CoolBlock® SQ-01 2x2MX can be mounted with different brands COB as above.

Standard led engines for the 2x2MX platform can be found from Lumileds (Luxeon XR-M), Osram (P10 2x2MX), Adura Sinkpad (wide variety of boards with Cree, Lumileds,...) and a further score of tier 1 suppliers. For the lenses a wide range of 2x2MX formats have been developed by Ledil, dubbed the Strada 2x2MX, with models made out of PMMA and made out of silicone in various beam patterns. Also COBs can be used on the platform instead of high power LEDs. With the CoolConnect® holder 2x2MX codeveloped with Bender+Wirth in combination with the Cree CXB1512 or Citizen CLU028 4 COBs are mounted directly on the LED cooler. Extra advantage of this is that you lose the thermal resistance of the PCB board, what makes that you can go even up to 6000 lumen in this very dense platform!

The cooling for the platform was developed by MechaTronix and named the CoolBlock® SQ-01 2x2MX. This is a patented advanced pin fin cooler made by die casting, foreseen from an electro plating specifically suitable for outdoor use.

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Easy combination of multiple engines into a luminaire lead to endless lumen applications. The building block on itself is a proven concept, both from lighting as from a thermal point of view. Here below an example of a 48.000 lumen stadium light containing 12 pieces of 2x2MX blocks.



▲ CoolBeam SQ Triple Mount Brackets

ABOUT MECHATRONIX

MechaTronix was founded as a creative designer & manufacturer of high end mechanical plastic & metal parts. With its Asia-based headquarters in Kaohsiung Taiwan, MechaTronix became a powerhouse at designing and manufacturing heat sinks and thermal solutions for OEM and LED lighting applications. Strategic partnerships with major LED manufacturers and sharing our thermal knowledge with their luminaire designers are our core missions. Simple passive cooling, advanced heat pipe technology or active cooling solutions? MechaTronix offers of the shelf and tailored solutions to its worldwide professional customer base. For more information about the company, please visit : www.mechatronix-asia.com

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