

### Mastering LED Cooling

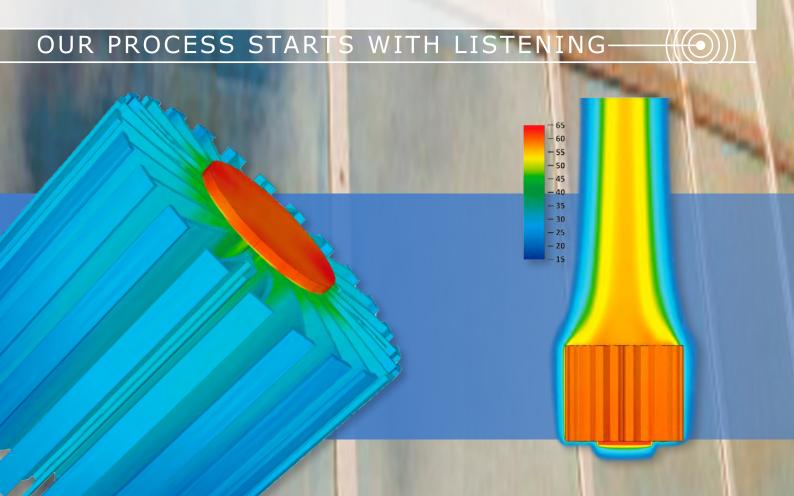
With the evolution of LED lighting over the last years, the demand for professional thermal solutions has grown exponentially. And now that we no longer remain in the realm of low power LED's, thermal management becomes a critical factor within LED fixtures. To that end, MechaTronix has developed several series of pin-fin and star heat sinks, manufactured through die casting, forging or extrusion. This has resulted in a comprehensive range of more than 400 off-the-shelf available LED coolers, for passive or active heat dissipation.

After initial reservations concerning active LED coolers, specialists have found that there really is no better option, when closing in on the 8000 lumen mark. Admittedly, the fan's lifespan becomes somewhat of a focal point in the application of an active LED cooler, but given that the lifespan of the LED engine itself dramatically decreases at high temperatures, the lifespan of the fan looks rather favourable all of a sudden.

MechaTronix' ground breaking ModuLED coolers and its actively cooled sibling IceLED have garnered a lot of attention and positive reviews in the LED market. ModuLED and IceLED are just precursors of a complete range of dedicated and highly effective LED coolers for professional deployment in spotlights, downlights, high bays and a further score of architectural and utility LED applications.

Both ModuLED and IceLED, as well as their upcoming descendants are Zhaga-ready and have a matrix of mounting holes that allows for very easy attachment of a great number of various Bridgelux LED modules. Simply apply a thermal interface of your choice, put the LED engine in place and fasten with self-tapping screws and you are good to go! No drilling, customisation or special mounting brackets are needed.

Thanks to an extremely thorough thermal verification of all heat sink lines, MechaTronix provides total thermal disclosure for each model, coupled with all Bridgelux LED COB's and engines. All thermal data is available in the product specifications, that come with every MechaTronix heat sink. In this way, engineers save time and effort during the design stage of their LED fixture and will significantly shorten their time to market.



Vero®, Vero® SE & Décor series™ 10, 13, 18, 29 V series™ V8, V10, V13, V15, V18 & V series™ HD V4, V6, V9 Vesta® series Tunable White, Dim-To-Warm **BXRA3** series ES Star, ES Rectangle

#### LSB5040-ESS

Bridgelux LED Star cooler with base plate ø50mm - h40mm - Rth 6.5°C/W Cooling performance 750 - 1,500 lm



oirect nount	With holder	Bridgelux LED COB
		BYRA3 FS Star

#### LSB5040-ESR

Bridgelux LED Star cooler with base plate ø50mm - h40mm - Rth 6.5°C/W Cooling performance 750 - 1,500 lm



ount	holder	Bridgelux LED COB
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BXRA3 ES Rectangle

#### LSB7050-ESR

Bridgelux LED Star cooler with base plate ø70mm - h50mm - Rth 5.0°C/W Cooling performance 1,000 - 2,000 lm



Direct Zha mount hold	ga Bridg	gelux LED C	ОВ
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✓

**BXRA3 ES Rectangle** 

#### **LSB7080-ESR**

Bridgelux LED Star cooler with base plate ø70mm - h80mm - Rth 2.53°C/W Cooling performance 1,900 - 3,800 lm



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r	ridgelux LED CO

✓ **BXRA3 ES Rectangle** 

## LPF3550-ZHC

Bridgelux LED Pin Fin cooler ø35mm - h50mm - Rth 7.41°C/W Cooling performance 700 - 1,300 lm



#### Direct Zhaga mount holder **Bridgelux LED COB**

Vero 10, Décor Vero 10 **√** Vero SE 10

✓

**V** 

V10  $\overline{\mathsf{V}}$ V6 HD

Dim-To-Warm 9mm

### LPF4768-ZHP

Bridgelux LED Pin Fin cooler ø47mm - h68mm - Rth 3.9°C/W Cooling performance 1,300 - 2,500 lm



#### Direct Zhaga mount holder **Bridgelux LED COB**

Vero 13/18, Décor Vero 13/18 Vero SE 10, 13

V8, V10, V13, V18 V4, V6, V9 HD

Tunable White 9mm, 13mm Dim-To-Warm 9mm

#### LPF6050-ZHC

Bridgelux LED Pin Fin cooler ø60mm - h50mm - Rth 4.0°C/W Cooling performance 1,200 - 2,300 lm

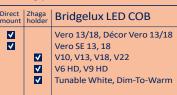


#### Bridgelux LED COB

Vero 13/18, Décor Vero 13/18 Vero SE 13, 18

V8, V13, V18 **✓** V10. V6 HD V4 HD, V9 HD Tunable White 9/13mm Dim-To-Warm 9mm

Bridgelux LED Pin Fin cooler ø67mm - h68mm - Rth 2.1°C/W Cooling performance 2,300 - 4,600 lm



Vero®, Vero® SE & Décor series™ 10, 13, 18, 29 V series™ V8, V10, V13, V15, V18 & V series™ HD V4, V6, V9 Vesta® series Tunable White, Dim-To-Warm BXRA3 series ES Star, ES Rectangle

#### LPF8050-ZHC



Bridgelux LED Pin Fin cooler Ø80mm - h50mm - Rth 2.34°C/W Cooling performance 2,000 - 4,000 lm

Direct mount	Zhaga holder	Bridgelux LED COB
<b>✓</b>		Vero 13/18, Décor Vero 13/18
✓		Vero SE 13, 18
	✓	V8,V10, V18, V22
✓	✓	V13, V9 HD
	✓	Tunable White 9/13mm
	✓	Dim-To-Warm 9/13mm

#### LPF8668-ZHC



Bridgelux LED Pin Fin cooler ø86mm - h68mm - Rth 1.46°C/W Cooling performance 3,300 - 6,500 lm

Direct mount	Zhaga holder	Bridgelux LED COB
✓ ✓	> > > >	Vero 13/18, Décor Vero 13/18 Vero SE 13, 18 V13, V22, V9 HD V18 Tunable White 13mm Dim-To-Warm 15mm

#### **LPF11180-ZHE**



Bridgelux LED Pin Fin cooler Ø111mm - h80mm - Rth 1.07°C/W Cooling performance 4.800 - 9.600 lm

	Cooling performance 4,000 3,000 iiii	
Direct mount	Zhaga holder	Bridgelux LED COB
<b>▼</b>	<b>☑</b>	Vero 18, Décor Vero 18 Vero SE 18 V18, V22

#### CoolStar® White 4740



Bridgelux Designer LED Star cooler Ø47mm - h40mm - Rth 5°C/W Cooling performance 1,000 - 2,000 lm

Direct mount	Zhaga holder	Bridgelux LED COB
<b>✓</b>		Vero 13, Décor Vero 13
✓		Vero SE 13
	✓	V8, V13, V4 HD, V9 HD
✓	✓	V10, V6 HD
	✓	Tunable White 9/13mm
	✓	Dim-To-Warm 9mm

### CoolStar® White 4760



Bridgelux Designer LED Star cooler Ø47mm - h60mm - Rth 4.17°C/W Cooling performance 1,200 - 2,400 lm

Direct mount	Zhaga holder	Bridgelux LED COB
<b>✓</b>		Vero 13/18, Décor Vero 13/18
✓		Vero SE 13, 18
	✓	V8, V13, V18, V4 HD, V9 HD
✓	✓	V10, V6 HD
	✓	Tunable White 9/13mm
	✓	Dim-To-Warm 9mm

### CoolStar® White 6730



Bridgelux Designer LED Star cooler ø67mm - h30mm - Rth 3.13°C/W Cooling performance 1,600 - 3,100 lm

Direct mount	Zhaga holder	Bridgelux LED COB
	V	Vero 13/18, Décor Vero 13/18 Vero SE 13, 18 V6 HD V10, V13, V9 HD
	✓ ✓ ✓	V8, V18 Tunable White 9/13mm Dim-To-Warm 9/13mm

### CoolStar® White 6760



Bridgelux Designer LED Star cooler ø67mm - h60mm - Rth 2.27°C/W Cooling performance 2,100 - 4,200 lm

Direct mount	Zhaga holder	Bridgelux LED COB
<b>✓</b>		Vero 13/18, Décor Vero 13/18
✓		Vero SE 13, 18
✓		V6 HD
✓	✓	V10, V13, V9 HD
	✓	V8, V18, V22
	✓	Tunable White 9/13mm
	✓	Dim-To-Warm 9/13mm

## CoolStar® White 8630



Bridgelux Designer LED Star cooler Ø86mm - h30mm - Rth 2.08°C/W Cooling performance 2,300 - 4,600 lm

Direct mount	Zhaga holder	Bridgelux LED COB
<b>✓</b>		Vero 13/18, Décor Vero 13/18
✓		Vero SE 13, 18
✓	✓	V10, V13, V9 HD
	✓	V18, V22
✓		V6 HD
	✓	Tunable White, Dim-To-Warm

Vero®, Vero® SE & Décor series™ 10, 13, 18, 29 V series™ V8, V10, V13, V15, V18 & V series™ HD V4, V6, V9 Vesta® series Tunable White, Dim-To-Warm BXRA3 series ES Star, ES Rectangle

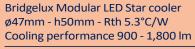
# CoolStar® White 8660



Bridgelux Designer LED Star cooler Ø86mm - h60mm - Rth 1.56°C/W Cooling performance 3,100 - 6,100 lm

Direct mount	Zhaga holder	Bridgelux LED COB
<b>V</b>	V V V	Vero 13/18, Décor Vero 13/18 Vero SE 13, 18 V13, V9 HD V18, V22 Tunable White 9/13mm Dim-To-Warm 13/15mm

#### **ModuLED Pico 4750**



Direct mount	Zhaga holder	Bridgelux LED COB
<b>√</b>		Vero 10/13, Décor Vero 10/13
✓		Vero SE 10, 13
✓	✓	V10, V13, V6 HD, V9 HD
	✓	V8, V4 HD
	✓	Tunable White 9/13mm Dim-To-Warm 9mm
	✓	Dim-To-Warm 9mm

#### **ModuLED Pico 4780**



Bridgelux Modular LED Star cooler Ø47mm - h80mm - Rth 4.2°C/W Cooling performance 1,200 - 2,300 lm

Direct mount	Zhaga holder	Bridgelux LED COB
V V	7 7 7	Vero 10/13/18, Décor Vero 10/13/18 Vero SE 10, 13, 18 V10, V13, V6 HD, V9 HD V8, V18, V4 HD Tunable White 9/13mm Dim-To-Warm 9mm

#### **ModuLED Nano 7050**



Bridgelux Modular LED Star cooler Ø70mm - h50mm - Rth 2.2°C/W Cooling performance 2,200 - 4,300 lm

Direct mount	Zhaga holder	Bridgelux LED COB
▼ ▼	V V V	Vero 10/13/18, Décor Vero 10/13/18 Vero SE 10, 13, 18 V10, V13, V6 HD, V9 HD V8, V18, V22 Tunable White, Dim-To-Warm

#### **ModuLED Nano 7080**



Bridgelux Modular LED Star cooler Ø70mm - h80mm - Rth 1.8°C/W Cooling performance 2,700 - 5,300 lm

Direct mount	Zhaga holder	Bridgelux LED COB
V V	V V V	Vero 10/13/18, Décor Vero 10/13/18 Vero SE 10, 13, 18 V10, V13, V9 HD V18, V22 Tunable White 9/13mm Dim-To-Warm 13/15mm

#### **ModuLED Micro 8630**



Bridgelux Modular LED Star cooler ø86mm - h30mm - Rth 1.8°C/W Cooling performance 2,700 - 5,300 lm

Direct mount	Zhaga holder	Bridgelux LED COB
▼ ▼ ▼	7 7 7	Vero 10/13/18, Décor Vero 10/13/18 Vero SE 10/13/18 V10, V13, V9HD V18, V22 Tunable White 9/13mm Dim-To-Warm 13/15mm

#### **ModuLED Micro 8650**



Bridgelux Modular LED Star cooler Ø86mm - h50mm - Rth 1.5°C/W Cooling performance 3,200 - 6,400 lm

Direct mount	Zhaga holder	Bridgelux LED COB
7	7 7	Vero 13/18, Décor Vero 13/18 Vero SE 13, 18 V13, V9 HD V18, V22 Tunable White 9/13mm Dim-To-Warm 15mm

#### **ModuLED Micro 8680**



Bridgelux Modular LED Star cooler ø86mm - h80mm - Rth 1.2°C/W Cooling performance 4,000 - 8,000 lm

Direct mount	Zhaga holder	Bridgelux LED COB
V V	V	Vero 13/18, Décor Vero 13/18 Vero SE 13/18 V13 V18, V22

Vero<sup>®</sup>, Vero<sup>®</sup> SE & Décor series<sup>™</sup> 10, 13, 18, 29 V series<sup>™</sup> V8, V10, V13, V15, V18 & V series<sup>™</sup> HD V4, V6, V9 Vesta<sup>®</sup> series Tunable White, Dim-To-Warm BXRA3 series ES Star, ES Rectangle

#### ModuLED 9950

Bridgelux Modular LED Star cooler Ø99mm - h50mm - Rth 1.34°C/W Cooling performance 3,600 - 7,200 lm



Direct mount	Zhaga holder	Bridgelux LED COB
<b>▽</b>	<b>V</b>	Vero 13/18, Décor Vero 13/18 V13, V22, V9 HD V18 Dim-To-Warm 15mm

#### ModuLED 9980

Bridgelux Modular LED Star cooler ø99mm - h80mm - Rth 1.02°C/W Cooling performance 4,700 - 9,400 lm



unt	holder	Bridgelux LED COB
7		Vero 18, Décor Vero 18 Vero SE 18
7	<b>▽</b>	V18 V22

#### **ModuLED Xtra 9950**

Bridgelux Modular LED Star cooler ø99mm - h50mm - Rth 1.34°C/W Cooling performance 3,600 - 7,200 lm



Direct mount	Zhaga holder	Bridgelux LED COB
<b>▽</b>	<b>▽</b>	Vero 13/18/29, Décor Vero 13/18/29 Vero SE 13, 18, 29 V13, V18, V22, V9 HD Dim-To-Warm 15mm

#### **ModuLED Xtra 9980**

Bridgelux Modular LED Star cooler ø99mm - h80mm - Rth 1.02°C/W Cooling performance 4,700 - 9,400 lm



Direct mount	Zhaga holder	Bridgelux LED COB
<b>▽</b>	✓	Vero 18/29, Décor Vero 18/29 Vero SE 18, 29 V18, V22

### **ModuLED Mega 13420**

Bridgelux Modular LED Star cooler ø134mm - h20mm - Rth 1.32°C/W Cooling performance 3,700 - 7,300 lm



Direct mount	Zhaga holder	Bridgelux LED COB	
V		Vero 13/18/29, Décor Vero 13/18/29	
✓		Vero SE 13, 18, 29	
✓	✓	V13, V22, V9 HD	
	✓	V18	
	✓	Dim-To-Warm 15mm	

#### **ModuLED Mega 13450-HBG**

Bridgelux High Bay LED cooler with direct mounting holes for Mean Well HBG series driver





Direct mount	Zhaga holder	Bridgelux LED COB
<b>▽</b>		Vero 18/29, Décor Vero 18/29
✓		Vero SE 18, 29
	<b>✓</b>	V18
✓	✓	V22

#### ModuLED Mega 134100-HBG



Bridgelux High Bay LED cooler with direct mounting holes for Mean Well HBG series driver ø134mm - h100mm - Rth 0.67°C/W Cooling performance 7,200 - 14,300 lm

Direct mount	Zhaga holder	Bridgelux LED COB
V		Vero 29, Décor Vero 29
✓		Vero SE 18, 29
	✓	V18
✓	✓	V22

## **ModuLED Giga 15220**

Bridgelux Modular LED Star cooler Ø152mm - h20mm - Rth 1.13°C/W Cooling performance 4,300 - 8,500 lm

Direct mount	Zhaga holder	Bridgelux LED COB	
<b>V</b>		Vero 13/18/29, Décor Vero 13/18/29	
✓		Vero SE 13, 18, 29	
	✓	V13, V18	
✓	✓	V22	

Vero<sup>®</sup>, Vero<sup>®</sup> SE & Décor series<sup>™</sup> 10, 13, 18, 29 V series<sup>™</sup> V8, V10, V13, V15, V18 & V series<sup>™</sup> HD V4, V6, V9 Vesta<sup>®</sup> series Tunable White, Dim-To-Warm BXRA3 series ES Star, ES Rectangle



### **ModuLED Giga 15250**

Bridgelux Modular LED Star cooler Ø152mm - h50mm - Rth 0.7°C/W Cooling performance 6,800 - 13,500 lm

Direct mount	t   Zhaga   Bridgelux LED COB	
V		Vero 18/29, Décor Vero 18/29 Vero SE 18, 29
✓	V	Vero SE 18, 29 V18
✓	✓	V22



#### **ModuLED Giga 152100-HBG**

Bridgelux High Bay LED cooler with direct mounting holes for Mean Well HBG series driver ø152mm - h100mm - Rth 0.52°C/W Cooling performance 9,000 - 18,000 lm

Direct mount	Zhaga holder	Bridgelux LED COB	
✓ ✓	✓	Vero 29, Décor Vero 29 Vero SE 29 V22	



#### ModuLED Giga 152150-HBG

Bridgelux High Bay LED cooler with direct mounting holes for Mean Well HBG series driver

ø152mm - h150mm - Rth 0.46°C/W Cooling performance 10,500 - 21,000 lm

	01	<u> </u>
Direct mount	Zhaga holder	Bridgelux LED COB
✓ ✓	V	Vero 29, Décor Vero 29 Vero SE 29 V22



## CoolBay® Giga-B

Bridgelux High Bay LED cooler with CoolTube® heat tube and direct mounting holes for Mean Well HBG series driver ø152mm - h200mm - Rth 0.34°C/W Cooling performance 14,500 - 29,000 lm

Direct mount	Zhaga holder	Bridgelux LED COB	
<b>▽</b>		Vero 29, Décor Vero 29 Vero SE 29	



## CoolBay® Tera-B

Bridgelux High Bay LED cooler with CoolTube® heat tube and direct mounting holes for Mean Well HBG series driver ø192mm - h250mm - Rth 0.22°C/W Cooling performance 22,000 - 44,000 lm

	<u> </u>	<u> </u>
Direct mount	Zhaga holder	Bridgelux LED COB
<b>✓</b>		Vero 29, Décor Vero 29 Vero SE 29



#### IceLED 550

Bridgelux Modular Active LED cooler ø99mm - h55mm - Rth 0.46°C/W Cooling performance 10,500 - 21,000 lm

Direct   Zhaga holder   Bridgelux LED COB			
	✓	V22	



#### IceLED Xtra 550

Bridgelux Modular Active LED cooler ø99mm - h55mm - Rth 0.46°C/W Cooling performance 10,500 - 21,000 lm

Cool	Cooling performance 10,500 - 21,000 lm		
Direct mount			
<b>V</b>	ゼ	Vero 29, Décor Vero 29 Vero SE 29 V22	



#### **IceLED Xtra Ultra**

Bridgelux Modular Active LED cooler ø99mm - h75mm - Rth 0.25°C/W Cooling performance 19,000 - 38,000 lm

Direct mount	Zhaga holder	Bridgelux LED COB
<b>✓</b>		Vero 29, Décor Vero 29 Vero SE 29

