

Mastering LED Cooling

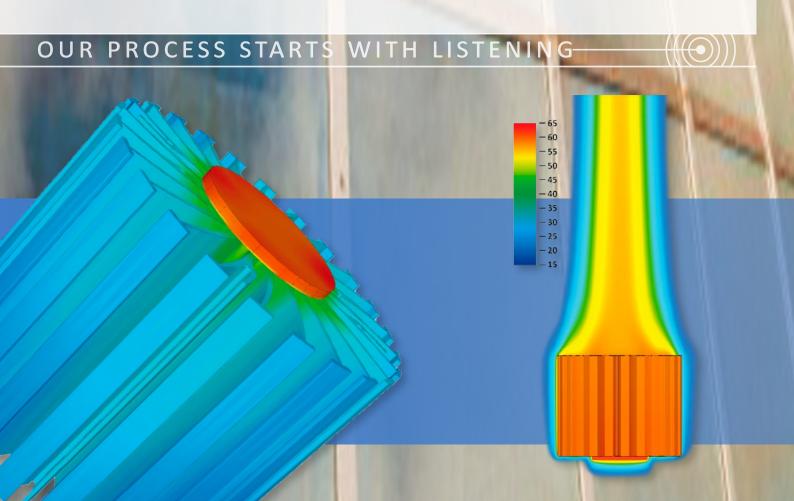
With the evolution of LED lighting over the last years, the demand for professional thermal solutions has grown exponentially. And now that we no longer remain in the realm of low power LED's, thermal management becomes a critical factor within LED fixtures. To that end, MechaTronix has developed several 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 Xicato 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 Xicato LED 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.



For Xicato XIM, XTM, XSM and XLM LED modules - Off the shelf

Passive and active LED cooling

(Thermal class based on 40°C ambient and 60deg tilt)





Xicato LED Pin Fin cooler Ø47mm - h68mm - Rth 3.9°C/W Cooling performance 1,300 - 2,500 lm

Direct mount	Zhaga holder	Xicato LED modules
✓		XSM

(side cable hole) XSA-217



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

Direct mount	Zhaga holder	Xicato LED modules
V V		XSM XIM
V		XTM

XSA-60



Xicato LED Pin Fin cooler Ø50mm - h30mm - Rth 6.9°C/W Cooling performance 700 - 1,400 lm

Direct mount	Zhaga holder	Xicato LED modules
✓		XSM XIM
V		XTM

XSA-61



Xicato LED Pin Fin cooler Ø50mm - h50mm - Rth 5.1°C/W Cooling performance 900 - 1,800 lm

Direct mount	Zhaga holder	Xicato LED modules
▽		XSM XIM
✓		XTM

XSA-62



Xicato LED Pin Fin cooler Ø60mm - h50mm - Rth 4.0°C/W Cooling performance 1,200 - 2,300 lm

Direct mount	Zhaga holder	Xicato LED modules
▽		XSM XIM
V		XTM

XSA-63



Xicato LED Pin Fin cooler Ø70mm - h30mm - Rth 4.1°C/W Cooling performance 1,200 - 2,300 lm

Direct mount	Zhaga holder	Xicato LED modules
✓		XSM XIM
✓		ХТМ

XSA-64



Xicato LED Pin Fin cooler Ø70mm - h50mm - Rth 3.0°C/W Cooling performance 1,700 - 3,300 lm

Direct mount	Zhaga holder	Xicato LED modules
✓		XSM
✓		XIM
✓		XTM

XSA-65



Xicato LED Pin Fin cooler Ø70mm - h60mm - Rth 2.5°C/W Cooling performance 1,900 - 3,800 lm

Direct ZI mount h	haga older X	(icato LED modules
✓		SM
✓	1	IM TM

XSA-66



Xicato LED Pin Fin cooler Ø80mm - h30mm - Rth 3.3°C/W Cooling performance 1,500 - 2,900 lm

Direct mount	Zhaga holder	Xicato LED modules
V		XSM
✓		XIM
✓		XTM

XSA-67



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

Direct mount	Zhaga holder	Xicato LED modules
V		XSM
✓		XIM
✓		XTM

For Xicato XIM, XTM, XSM and XLM LED modules - Off the shelf

Passive and active LED cooling (Thermal class based on 40°C ambient and 60deg tilt)



XSA-219

Xicato LED Pin Fin cooler Ø86mm - h68mm - Rth 1.46°C/W Cooling performance 3,300 - 6,500 lm

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Direct mount	Zhaga holder	Xicato LED modules
✓ ✓ ✓		XSM XIM XTM



XSA-96

Xicato LED Pin Fin cooler ø111mm - h80mm - Rth 1.07°C/W Cooling performance 4,800 - 9,600 lm

Direct mount	Zhaga holder	Xicato LED modules
✓		XSM XIM
✓		XTM



XSA-37

Xicato LED Star cooler ø49mm - h35mm - Rth 6.9°C/W Cooling performance 700 - 1,400 lm

Direct mount	Zhaga holder	Xicato LED modules
✓		XSM XIM
✓		XTM



XSA-39

Xicato LED Star cooler Ø70mm - h40mm - Rth 3.11°C/W Cooling performance 1,600 - 3,100 lm

Direct mount	Zhaga holder	Xicato LED modules
✓		XSM
✓		XTM



XSA-38

Xicato LED Star cooler Ø70mm - h70mm - Rth 2.47°C/W Cooling performance 2,000 - 4,000 lm

Direct mount	Zhaga holder	Xicato LED modules
✓		XSM
✓		XIM
✓		XTM



XSA-31

Xicato LED Star cooler Ø99.4mm - h40mm - Rth 1.55°C/W Cooling performance 3,100 - 6,200 lm

Direct mount	Zhaga holder	Xicato LED modules
✓		XSM
✓		XIM XTM
		Allw



XSA-27

Xicato LED Star cooler Ø99.4mm - h70mm - Rth 1.2°C/W Cooling performance 4,000 - 8,000 lm

Direct mount	Zhaga holder	Xicato LED modules
✓		XSM
✓		XIM
✓		XTM



XSA-54

Xicato LED Star cooler ø120mm - h87mm - Rth 1.0°C/W Cooling performance 4,800 - 9,600 lm

Direct mount	Zhaga holder	Xicato LED modules
V		XSM
✓		XIM
✓		XTM



XSA-28

Xicato LED Star cooler ø134.6mm - h40mm - Rth 0.99°C/W Cooling performance 4,800 - 9,600 lm

Direct mount	Zhaga holder	Xicato LED modules
✓		XSM XIM
V		XTM



XSA-550

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

Direct mount	Zhaga holder	Xicato LED modules
✓		XIM XTM

For Xicato XIM, XTM, XSM and XLM LED modules - Off the shelf Passive and active LED cooling

(Thermal class based on 40°C ambient and 60deg tilt)





Xicato Designer LED Star cooler ø47mm - h60mm - Rth 4.17°C/W Cooling performance 1,200 - 2,400 lm

Direct mount	Zhaga holder	Xicato LED modules
✓		XIM XTM

XSA-552



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

Direct mount	Zhaga holder	Xicato LED modules
▽		XIM XTM

XSA-553



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

Direct mount	Zhaga holder	Xicato LED modules
✓		XIM XTM



Xicato Designer LED Star cooler ø86mm - h30mm - Rth 2.08°C/W Cooling performance 2,300 - 4,600 lm

Direct mount	Zhaga holder	Xicato LED modules
✓		XIM
✓		XTM



Xicato Designer LED Star cooler ø86mm - h60mm - Rth 1.56°C/W Cooling performance 3,100 - 6,100 lm

mount	holder	Xicato LED modules
✓		XIM
✓		XTM



Xicato LED extruded cooler 101mm(W) x 140mm(L) x 35mm(H) Cooling performance 2,000 - 3,500 lm

mount	holder	Xicato LED modules
✓		XLM

XLA-15



Xicato LED extruded cooler 101mm(W) x 140mm(L) x 50mm(H) Cooling performance 2,500 - 4,500 lm

mount	holder	Xicato LED modules
✓		XLM

XSA-298



Xicato Modular LED Star cooler ø47mm - h30mm - Rth 7.04°C/W Cooling performance 650 - 1,300 lm

Direct mount	Zhaga holder	Xicato LED modules
V V		XSM XIM XTM

XSA-215



Xicato Modular LED Star cooler ø47mm - h50mm - Rth 5.3°C/W Cooling performance 900 - 1,800 lm

Direct mount	Zhaga holder	Xicato LED modules
▽		XSM XIM
V		XTM

XSA-216



Xicato Modular LED Star cooler ø47mm - h80mm - Rth 4.2°C/W Cooling performance1,200 - 2,400 lm

Direct nount	Zhaga holder	Xicato LED modules
V V		XSM XIM XTM

For Xicato XIM, XTM, XSM and XLM LED modules - Off the shelf Passive and active LED cooling

(Thermal class based on 40°C ambient and 60deg tilt)



XSA-299

Xicato Modular LED Star cooler ø70mm - h30mm - Rth 3.07°C/W Cooling performance 1,600 - 3,100 lm

Direct mount	Zhaga holder	Xicato LED modules
✓		XSM XIM
V		XTM



XSA-212

Xicato Modular LED Star cooler ø70mm - h50mm - Rth 2.2°C/W Cooling performance 2,200 - 4,300 lm

Direct mount	Zhaga holder	Xicato LED modules
V		XSM
✓		XIM
✓		XTM



Xicato Modular LED Star cooler ø70mm - h80mm - Rth 1.8°C/W Cooling performance 2,700 - 5,300 lm

Direct mount	Zhaga holder	Xicato LED modules
✓ ✓ ✓		XSM XIM XTM



XSA-300

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

Direct	Zhaga t holder	Xicato LED modules
✓		XSM
✓		XIM
✓		XTM



Xicato Modular LED Star cooler ø86mm - h50mm - Rth 1.5°C/W Cooling performance 3,200 - 6,400 lm

Direct mount	Zhaga holder	Xicato LED modules
∀		XSM XIM
V		XTM



XSA-302

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

Direct mount	Zhaga holder	Xicato LED modules
V		XSM XIM
V		XTM



XSA-97

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

Direct mount	Zhaga holder	Xicato LED modules
✓		XSM
✓		XIM
✓		XTM



XSA-98

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

Direct mount	Zhaga holder	Xicato LED modules
✓		XSM
✓		XIM
✓		XTM



XSA-305

Xicato Modular LED Star cooler ø111mm - h80mm - Rth 1.0°C/W Cooling performance 4,900 - 9,800 lm

Direct mount	Zhaga holder	Xicato LED modules
✓		XSM XIM
✓		XTM



XSA-303

Xicato Modular LED Star cooler ø134mm - h30mm - Rth 1.2°C/W Cooling performance 3,900 - 7,800 lm

Direct mount	Zhaga holder	Xicato LED modules
V V		XSM XIM XTM

