



Why Cooltron Heat Sinks for High Power LED Lighting?

By Steven Chiang

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Why Cooltron? (1/8) – World Class Supply Chain Partners



Why Cooltron? (2/8) – Cooltron Full Line Heat Sink Assembly Products

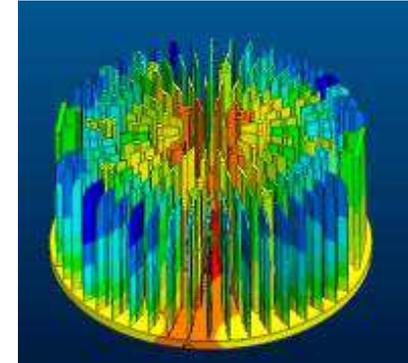
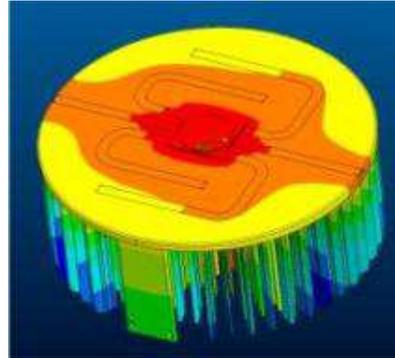
- LED High Bay Lights (20' High+): 70W/100W/150W/200W
- LED Flood Lights: 100W/200W/300W/400W/500W
- LED Grow Lights: 100W/300W/400W/500W/600W
- Modular LED Street/Area Lights: 30W/50W per unit module

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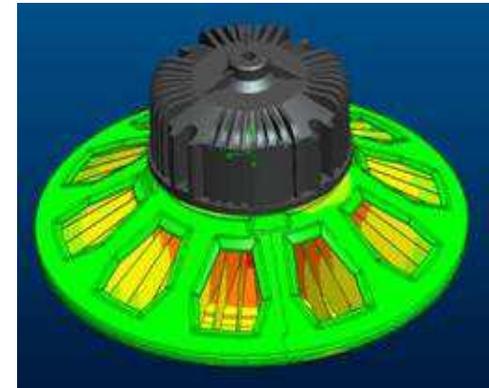
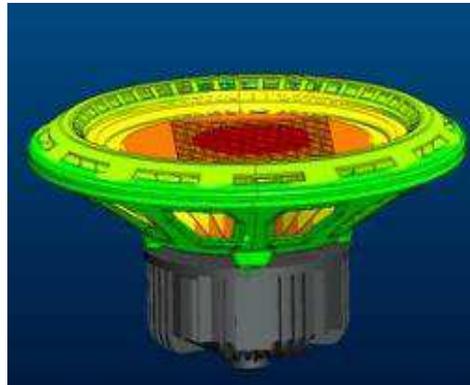


Cooltron Full Line LED Lighting Heat Sink Assembly

Why Cooltron? (3/8) – Design & CFD Simulation Capabilities

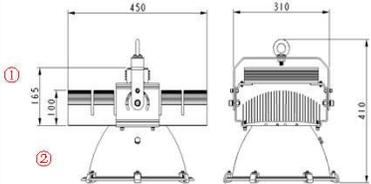
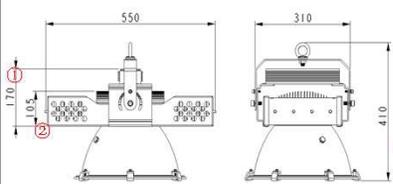
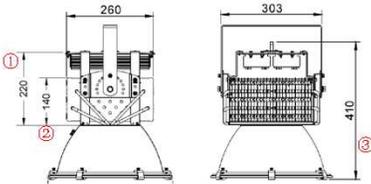
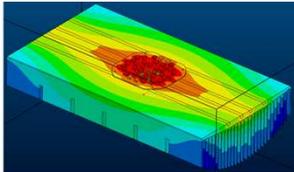
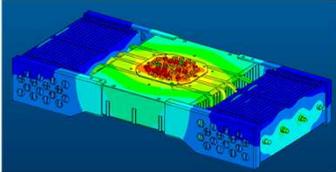
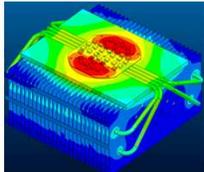


100W COB LED High Bay Light Heat Pipes Module (Cold-Forged Heat Sink + Heat Pipes)



100W/160W/240W SMD LED High Bay Light (Stamped Heat Sink + Die-Casted LED Driver Case)

Why Cooltron? (4/8) – Custom Design and Build Capabilities

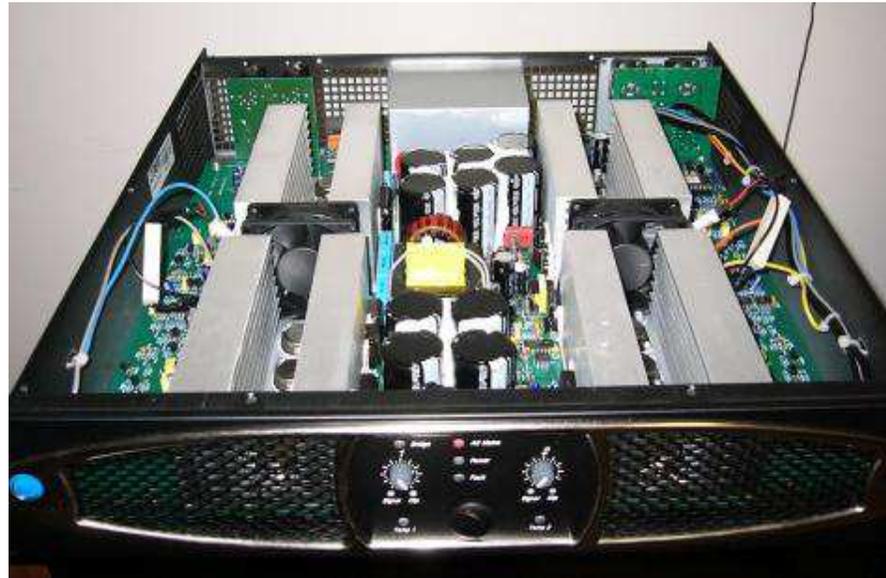
ITEM	Cooltron - HE1450 (300W) [Design A]	Cooltron - HE2450 (600W) [Design B]	P Brand 300W
Reference Picture			
Product Finishing Technology	Extrusion + Heat Pipe Assemblies	Extrusion + Heat Pipe Assemblies + Compact Fin	Compact Fin + Heat Pipe Assemblies
Product Drawing			
Height (PCB bottom to LED Driver Top Plate)	165mm (6.5")	170mm (6.7")	220mm (8.66")
Heatsink Mainbody Dimension	450 x 250 x 100mm (Lx W x H)	550 x 280 x 105mm (Lx W x H)	303 x 260 x 140mm (Lx W x H)
Heatsink Mainbody Approx. Weight	6.0kg	5.5kg	7.0kg
Thermal Simulation Graph			
Temperature (Simulation)	Power=300W: Ta=25 Tpcb=70 ΔT=45	Power=600W: Ta=25 Tpcb<60 ΔT=35	Power=300W: Ta=25 Tpcb=75 ΔT=50

Cooltron's 600W Grow Light PCB Temperature 15° C Lower Than Other Brand's 300W

- **Telecom: Cellular Phone Tower Power Amplifier Chassis & Thermal Solution**



- **Audio Power Amplifier Chassis & Thermal Solution**

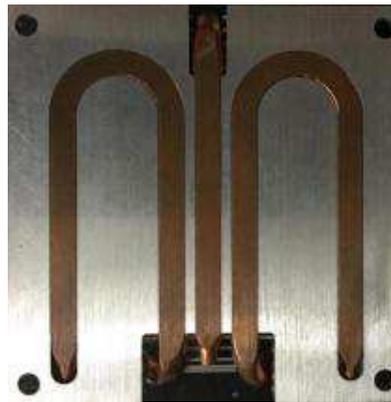


Why Cooltron? (6/8) – Industry-leading Heat Sink Technologies

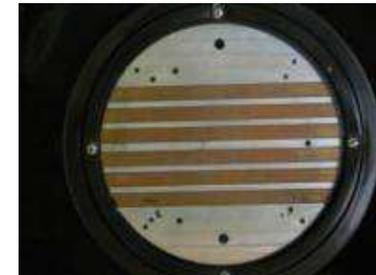
- Over **150 Heat Pipes Patents** registered in USA, Germany, Japan, and China
- Patented **Flat & Tight Heat Pipes Embedding, Riveting, Engaging** Technologies Reduce Thermal Resistance to Minimum for Best Heat Dissipation Effects



Telecom VGA Graphic



COB LED Light



LED Grow Light

Patented Flat & Tight Heat Pipes Embedding Technologies

Why Cooltron? (7/8) – Industry's Most Complete Heat Sink Manufacturing Facilities (a)



Extrusion



Progressive Stamping



Forging Machines (300 tons ~ 5000 tons)



Skiving Machines

Why Cooltron? (7/8) – Industry’s Most Complete Heat Sink Manufacturing Facilities (b)



CNC Machines



Bonding Machine



Surface Treatment



Thermal Resistance Tester

Why Cooltron? (8/8) – Custom Solutions & Total Solutions Provider



- **Custom Solutions & Total Solutions Provider**
 - Cooltron is one of very few providers in industry able to provide customization and total heat sink solutions, starting from market & product positioning, custom designs, simulation, till manufacturing
- **Industry-Leading Tomorrow Technologies**
 - Cooltron's patented technologies, such as phase-change super-heat-conductor, and cold-forging, heat pipes embedding, and etc., help customers stay ahead of market competition
- **World Class Customers OEM/ODM Manufacturing Experiences**
 - Cooltron assures the products quality for its many years of OEM/ODM manufacturing experiences with World Class customers in industry and EMS/CM channel as well

Cooltron Focused LED Lighting Heat Sink Markets

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#1 Commercial LED Lighting



#3 Agricultural LED Grow Light



#2 High Power LED Lighting



Cooltron Other Heat Sink Application Markets

COOLTRON[®]
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Networking



Medical Device



Telecom



Solar Power Inverter



Power Supply

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+ You = ***Success***



Let's achieve win-win!