

CoolerMaster Lösungskonzepte für LED-Applikationen



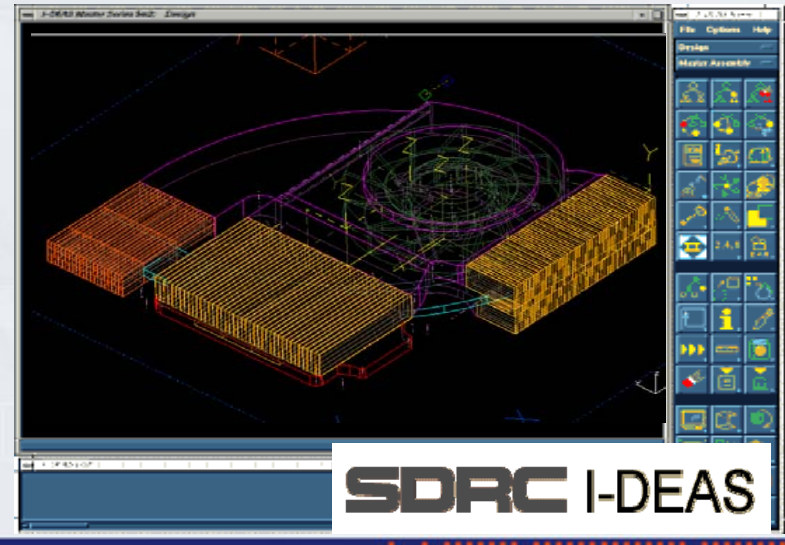
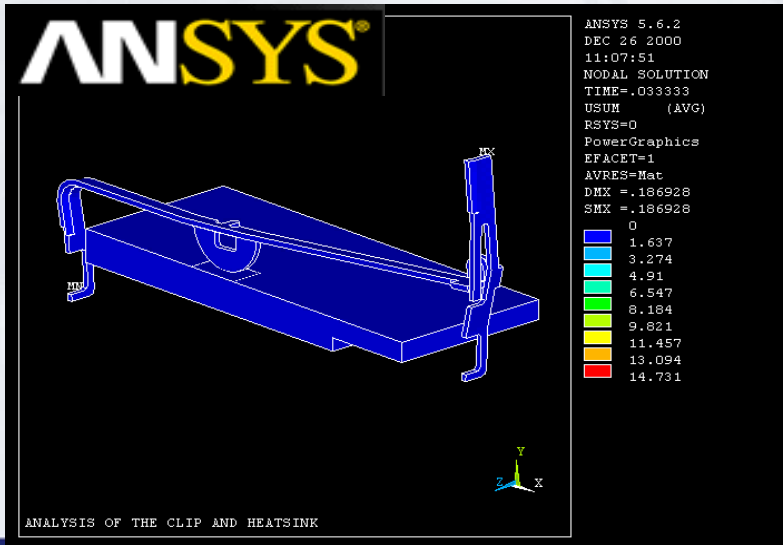
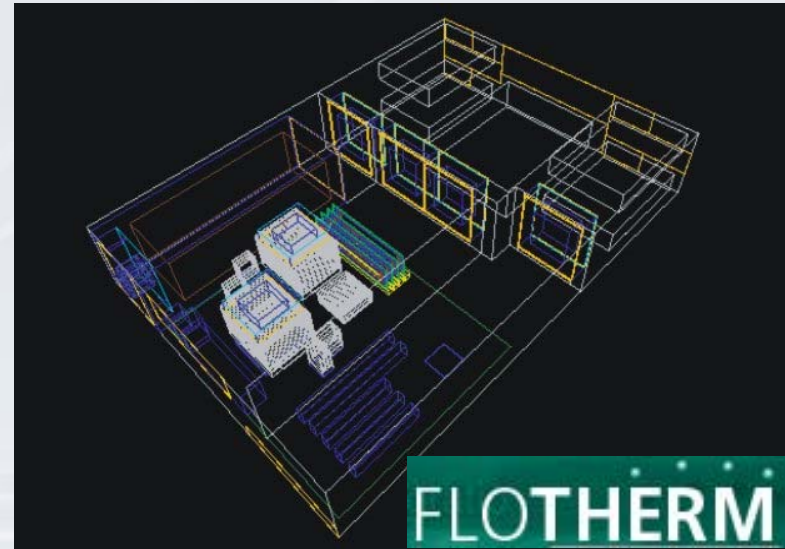
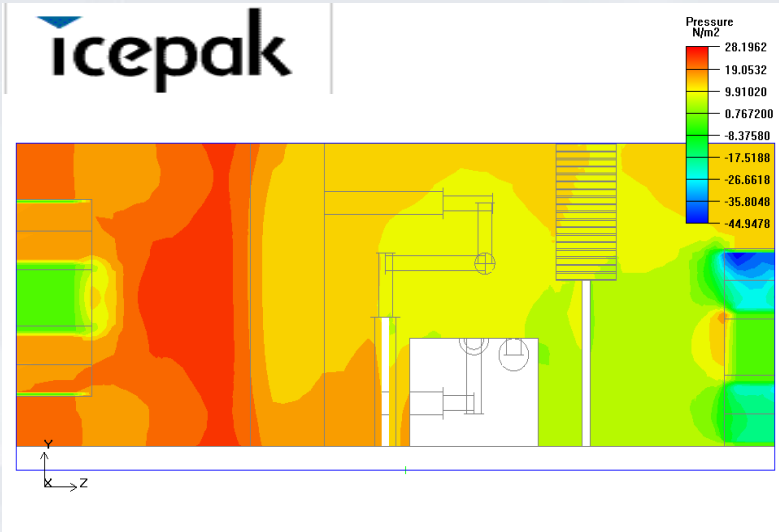
Cooler Master
LED German-Team

Inhalt

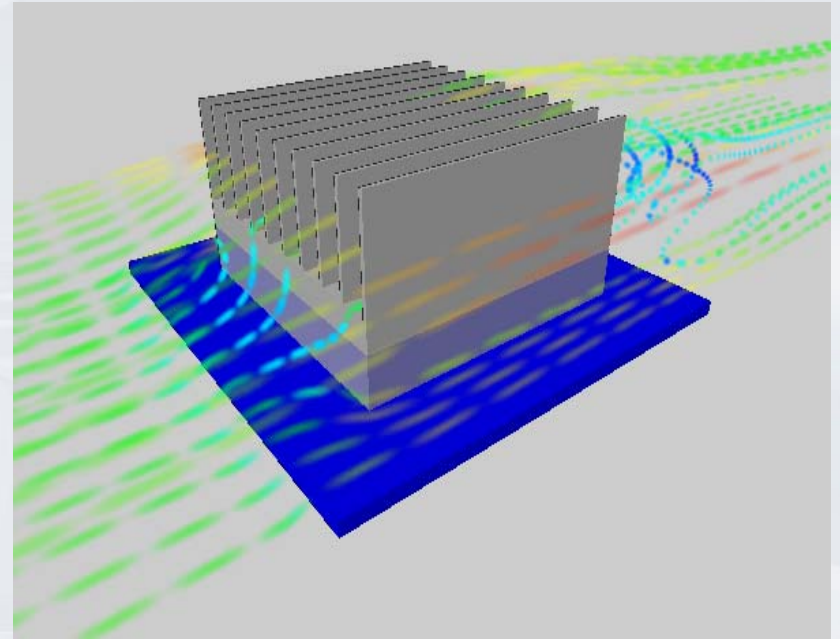
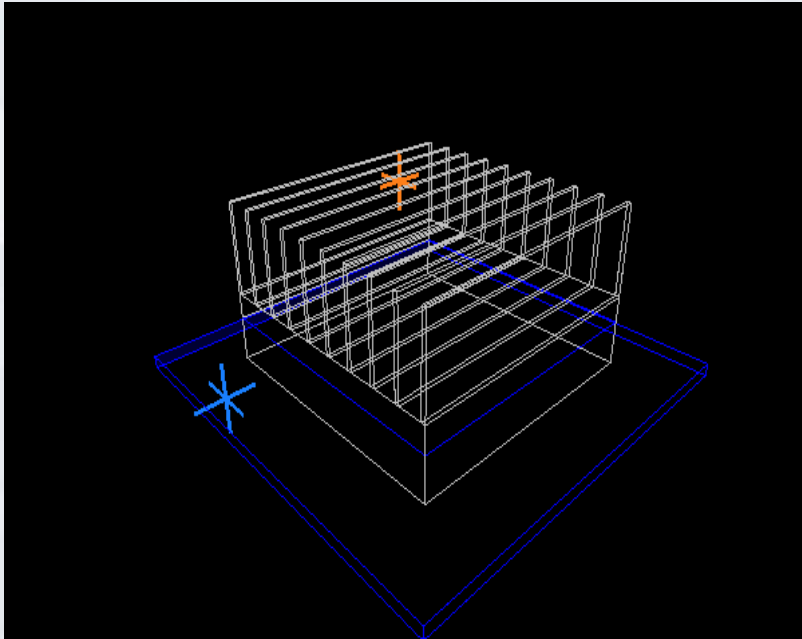
I Technische Stärke

II LED - Thermische Lösung

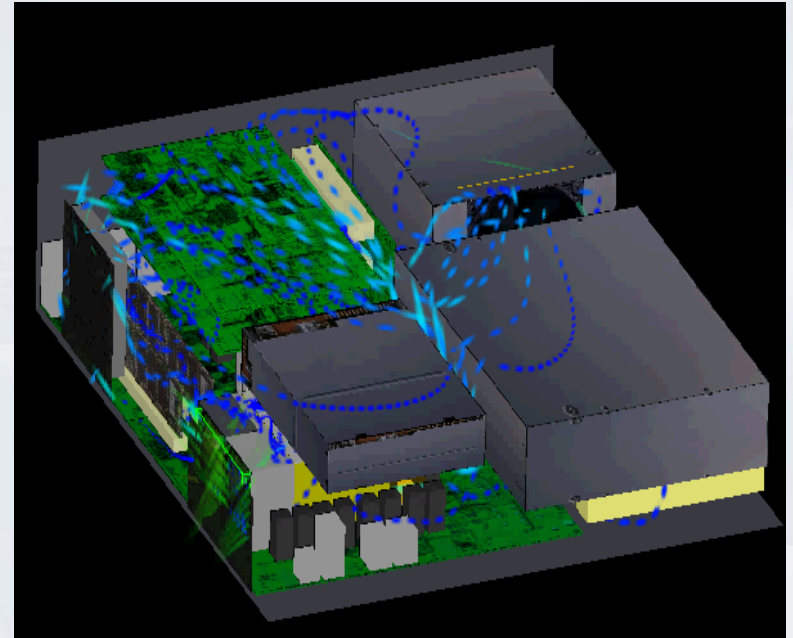
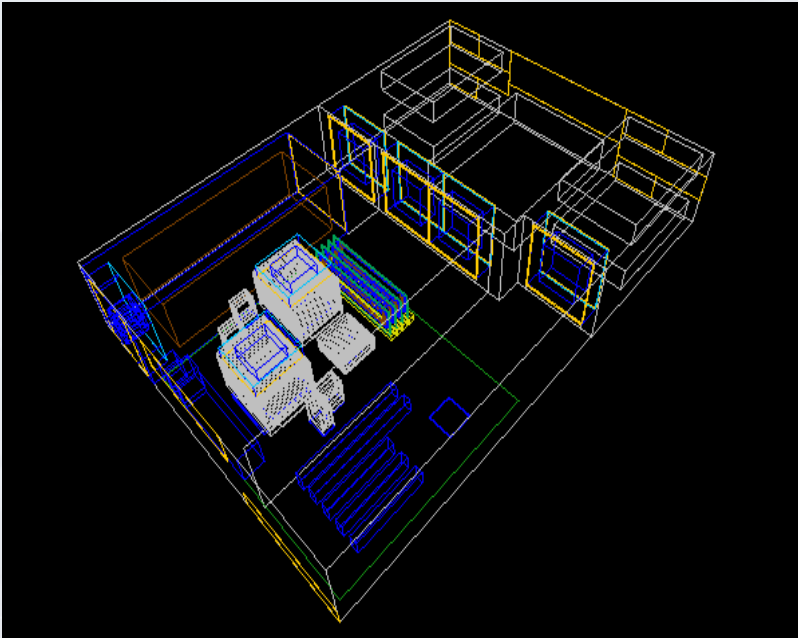
Engineer Fähigkeiten



Velocity Simulation

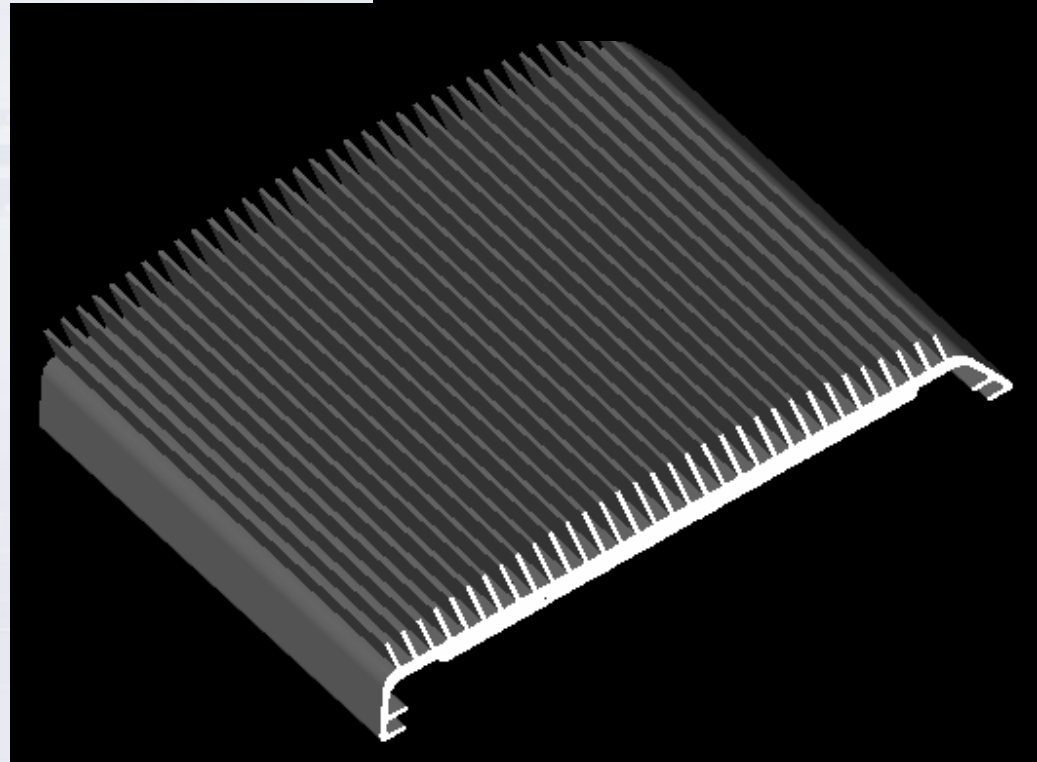
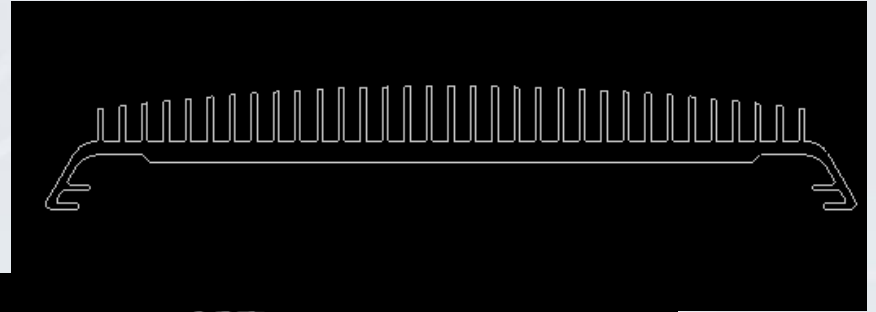


System Simulation

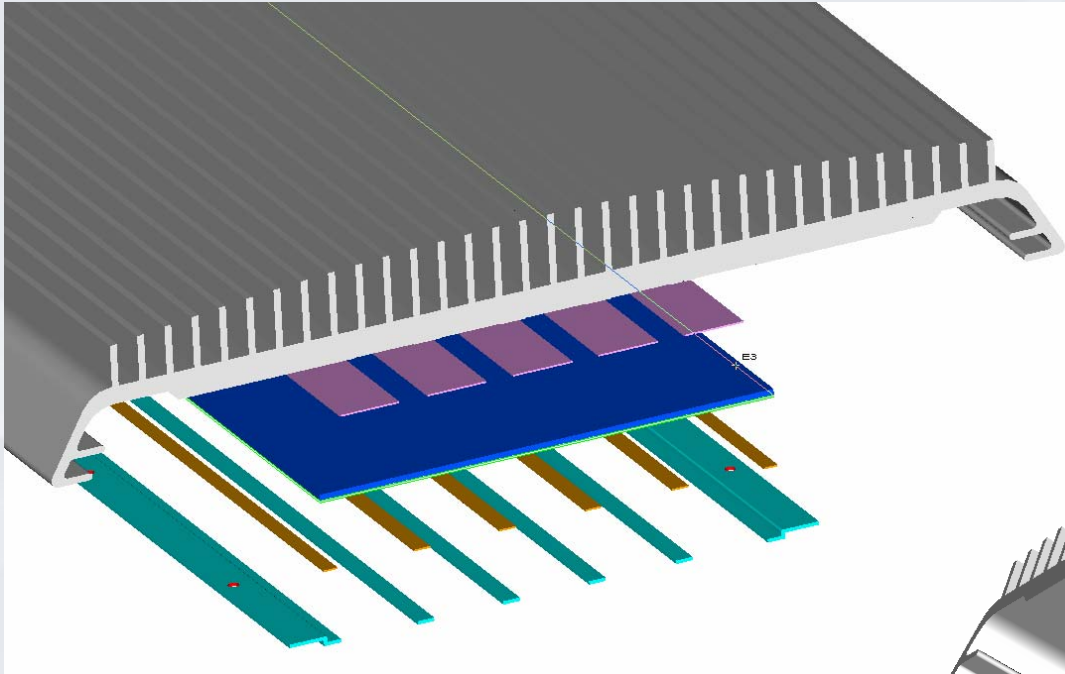


Thermisches Design

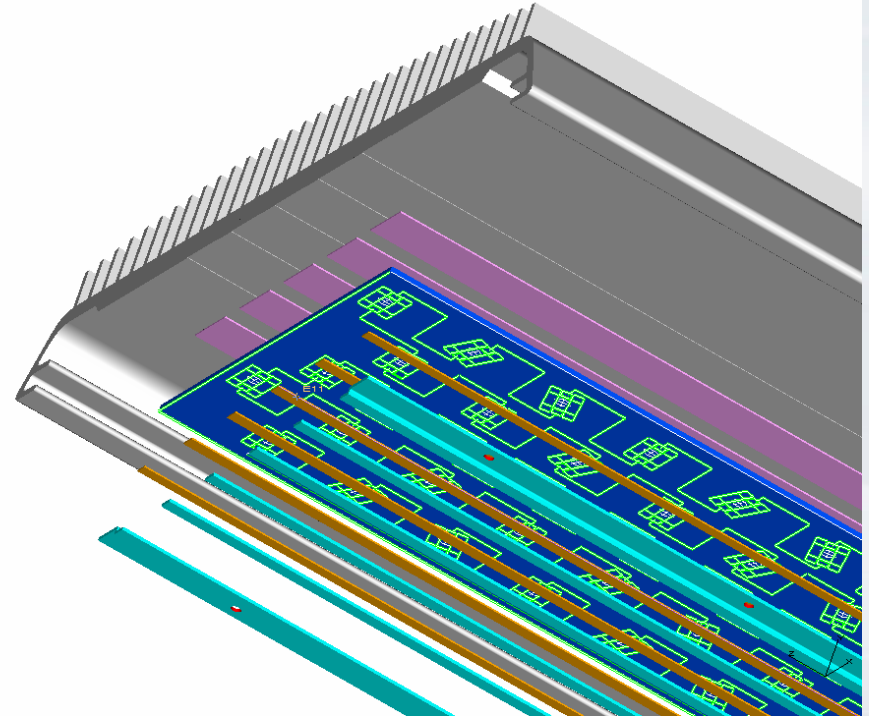
- Aluminum Strangkühlkörper
- Hitzekonvektionsbereich
- Luftströmung



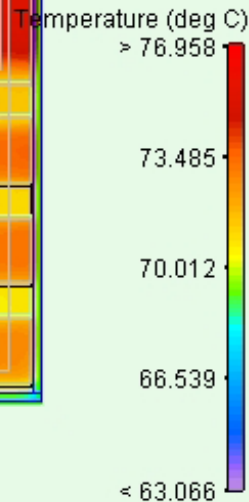
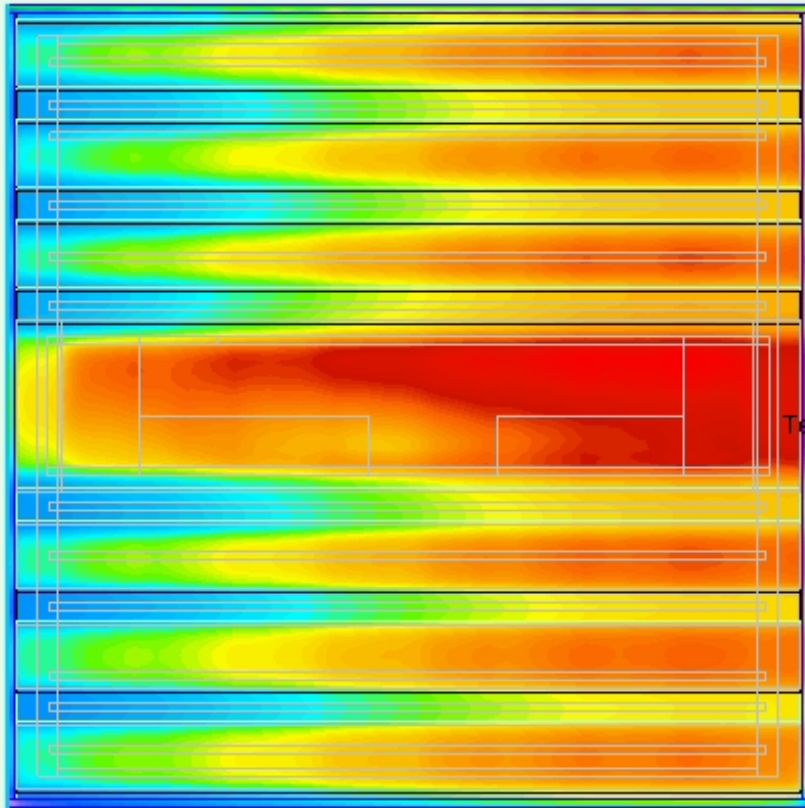
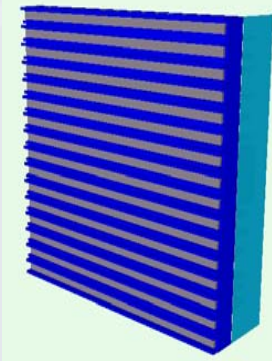
Darstellung des thermischen Designs



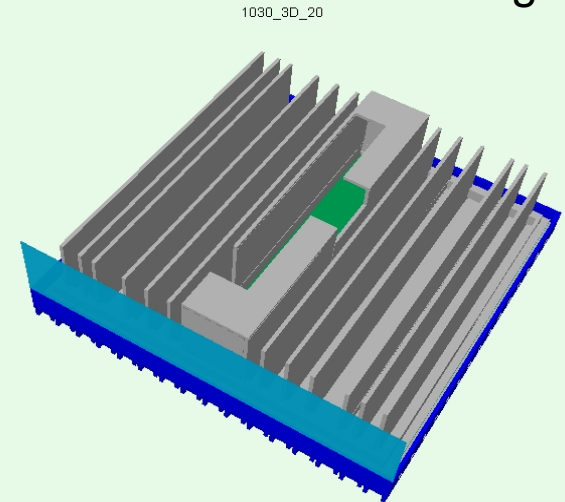
- Kühlkörper (grau)
- TIM (pink)
- Elektronisches Isolationsmaterial (orange)
- Metal PCB (blau)
- Stahlplatte (grün)



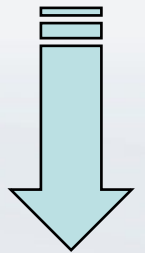
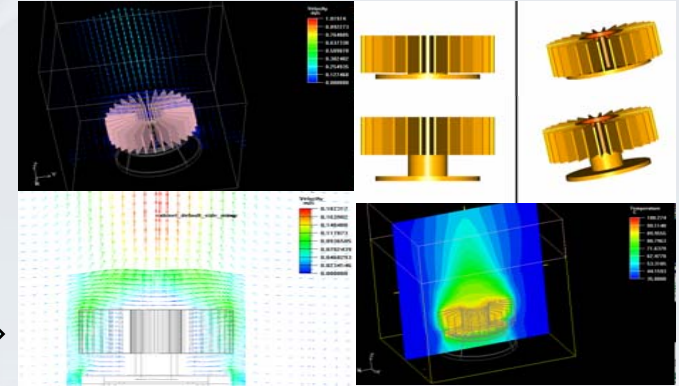
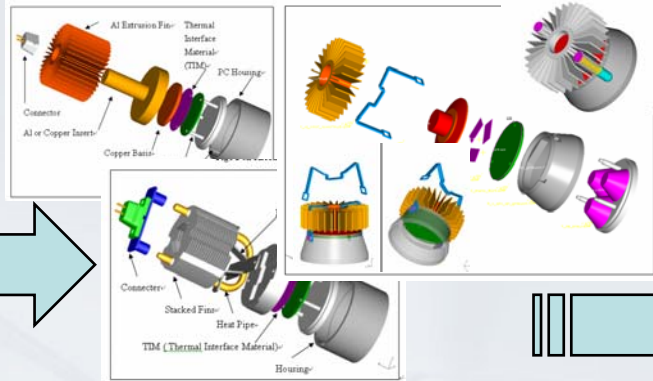
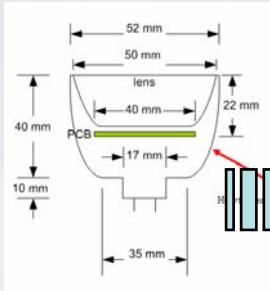
Thermisches Model für LED-Untermodule



- Durchflussmenge: 5CFM
- Raumtemperatur: **30 °C**
- Material: Aluminium
- LED Wärmebelastung: **40W**
- Driver IC Wärmebelastung: 10W

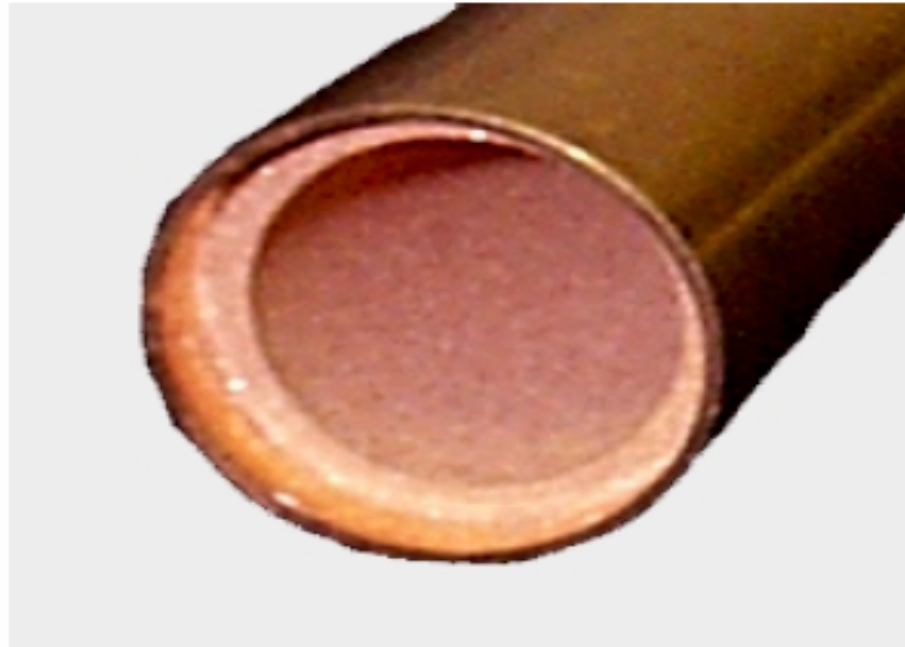


Thermisches Design-Prozess (Ein Beispiel)



Heat Pipe

Sintered Powder Wick



ECB-00396-01-GP

Heat sink	Al. extrusion + heat pipe
Dimension	35(Diameter)x 105(H)mm
LED-power max.	10W
T_a °C	$T_a = 28$
T_b °C	$T_b = 85$
R_{th} °C/W	$R_{th,ba} = 5.5$
Fastener:	3xM2 screw / clip
Finish	Painting color
Compatibility	for start type MCPCB





Globales Engineering, Local Service



Welcome to
Cooler Master Globe