Bergquist Thermal Clad®

Standard Configurations

POWER LED IMS® SUBSTRATES

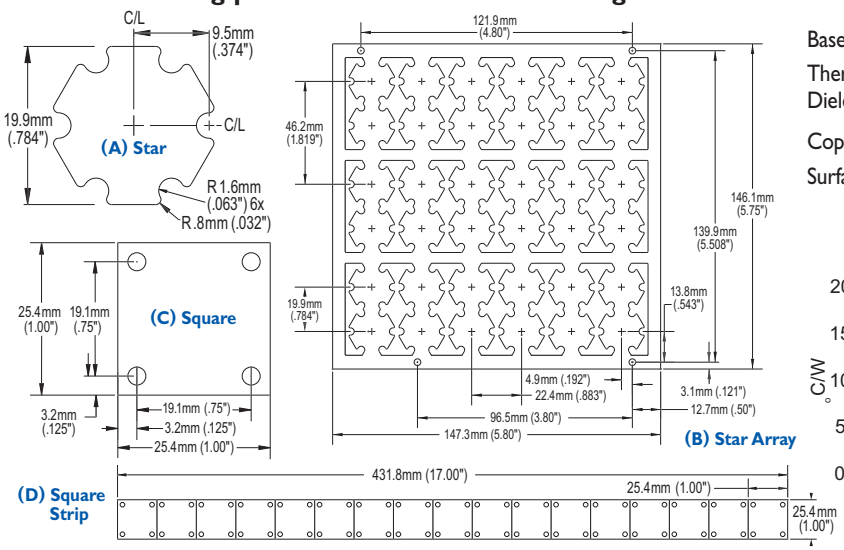
Bergquist shortens the design cycle and speeds up your time to market.

Thermal Clad substrates offer more flexibility in selecting LED components

Bergquist offers a family of standard thermally conductive insulated metal substrate (IMS) circuit boards specifically for LED applications which replace conventional FR-4 PCBs. Better thermal management allows more forward current to be applied to the LED, while still maintaining desired die temperatures, which means more light and possibly reducing the number of LEDs required to achieve the desired light output. With proper thermal management, Power LED lifetimes can be extended considerably.

Now you can get a jump-start on your design with one of these star or square substrates; available in single, strip or array configurations. Choose from 10 different LED footprints to give you the freedom to select the LED component's color, brightness and power that best fits your needs. Optimize the prototyping process with the lowest possible operating temperatures and the brightest light output for your next Power LED application. The most popular LED profiles on the world's most reliable IMS – matched for your design ease.

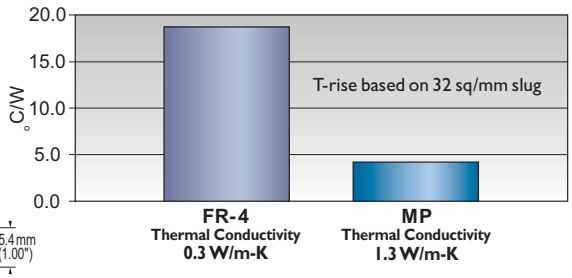
Standard Bergquist Thermal Clad® LED Configurations



Bergquist Thermal Clad® IMS Specs

Base Metal	1.57mm (0.062") Aluminum 5052
Thermally Conductive Dielectric	.076mm (3 mil) MP
Copper Circuit Foil	35µm (1oz.) copper circuit foil
Surface Finish	White solder mask, Pb-free HASL solder pads (RoHS compliant)

Thermal Impedance of FR4 compared to MP



Bergquist Thermal Clad® - Standard Power LED IMS Selection Guide

	LED Footprint Type	Star Board (1-up) (A) Part No.	Star Array (36-up) (B) Part No.	Square Board (1-up) (C) Part No.	Square Strip (17-up) (D) Part No.
1	Osram Golden Dragon®	803128	803268	803118	803288
2	Lite-On® LOPL	803123	803263	803113	803283
3	Lumex SML-LX	803124	803264	803114	803284
4	Lumileds™ Luxeon® I, III and V	803125	803265	803115	803285
5	Lumileds™ Luxeon® K2	803126	803266	803116	803286
6	Lumileds™ Luxeon® Rebel	803127	803267	803117	803287
7	Cree® XLamp®	803122	803262	803112	803282
8	Seoul Semiconductor Z-Power	803129	803269	803119	803289
9	Nichia Power LED 3.5 x 3.5	803291	803292	803290	803293
10	Avago Moonstone™ Emitter	803121	803261	803111	803281

These products are available through your local distributor, please call or check our website for contact information.

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WHP_TClad_LED_71508_v8

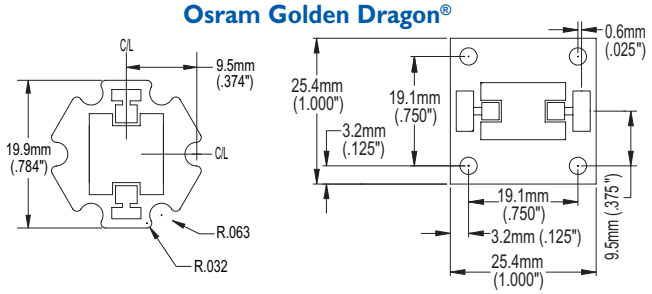
Bergquist

Thermal Clad®

Standard Board Layout

POWER LED IMS® SUBSTRATES

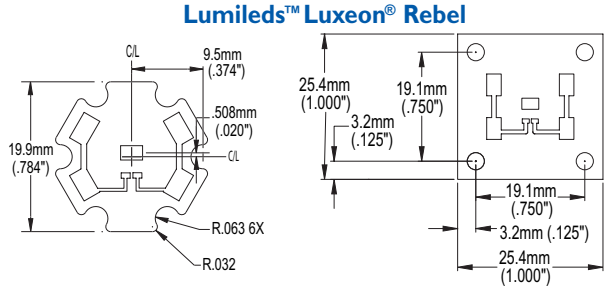
Osram Golden Dragon®



803128 (1-up) **803268** (36-up)

803118 (1-up) **803288** (17-up)

Lumileds™ Luxeon® Rebel



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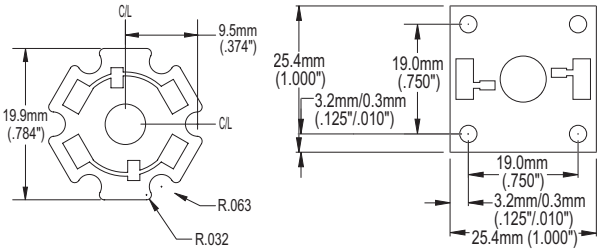
803117 (1-up) **803287** (17-up)

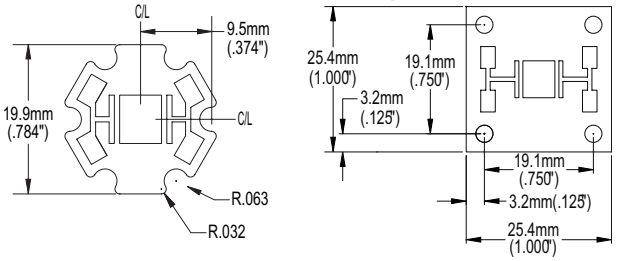
Lite-On® LOPL



803123 (1-up) **803263** (36-up)

803113 (1-up) **803283** (17-up)

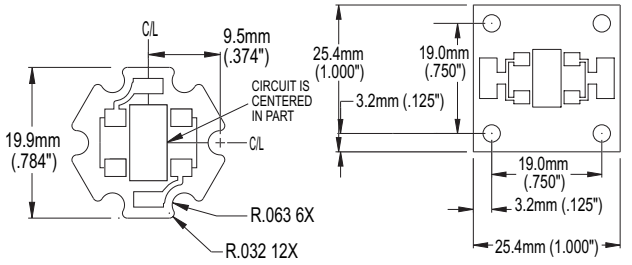
Cree® XLamp®



803122 (1-up) **803262** (36-up)

803112 (1-up) **803282** (17-up)

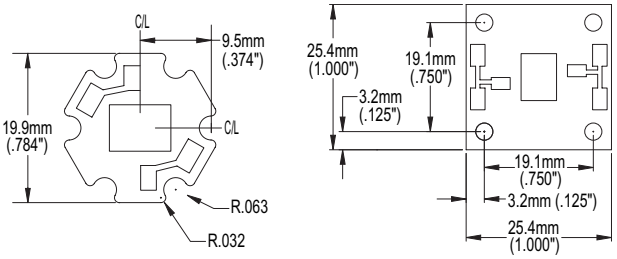
Lumex SML-LX



803124 (1-up) **803264** (36-up)

803114 (1-up) **803284** (17-up)

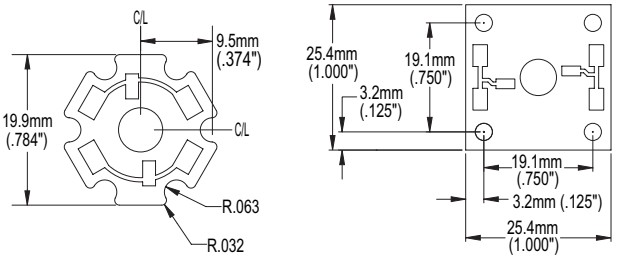
Seoul Semiconductor Z-Power



803129 (1-up) **803269** (36-up)

803119 (1-up) **803289** (17-up)

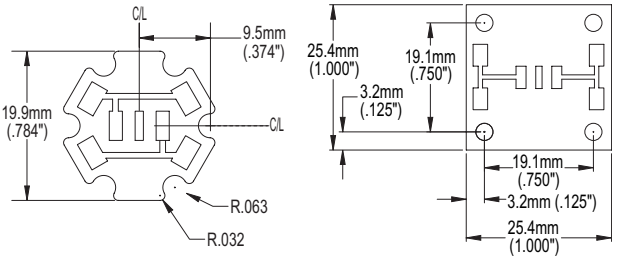
Lumileds™ Luxeon® I, III and V



803125 (1-up) **803265** (36-up)

803115 (1-up) **803285** (17-up)

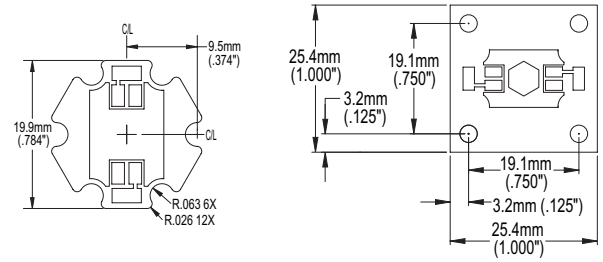
Nichia Power LED 3.5 x 3.5



803291 (1-up) **803292** (36-up)

803290 (1-up) **803293** (17-up)

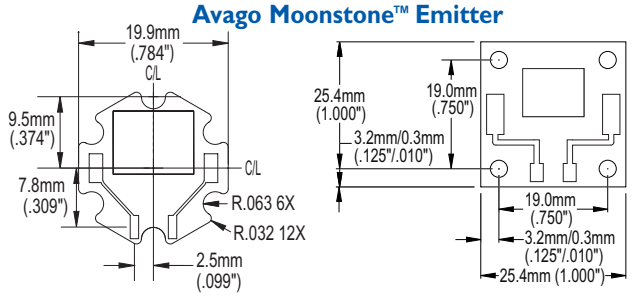
Lumileds™ Luxeon® K2



803126 (1-up) **803266** (36-up)

803116 (1-up) **803286** (17-up)

Avago Moonstone™ Emitter



803121 (1-up) **803261** (36-up)

803111 (1-up) **803281** (17-up)

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804092 804155 804450 804511 805245