

LED UPDATE

LEDs are disruptive technology. What that means to lighting people is that LEDs are in the process of displacing the incumbent technologies, what the “chip heads” call “gas and glass” light sources. LEDs are by nature point sources, which means they will probably not meet every application. It also means that they pose a design challenge for fixtures that are expected to produce useful ambient light. There are opportunities to use LEDs in existing fixtures and we have done that where appropriate. Not every fixture is a candidate for LEDs. Our downlight exterior wall mounted fixtures adapt very well to LEDs. For other fixture types it is best to create “purpose-built” fixtures which best utilize LEDs and, because of that, will not accept other light sources. These fixtures utilize the point source aspect but provide task/ambient light as well. See below.



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While it is true that LEDs do not radiate heat forward like an incandescent lamp does, they produce heat out the back. Managing thermal performance is the key to longevity with LED failures. Our purpose-built fixtures have heat sinks that achieve operating temperatures of 65C, or lower, well below the 85C test temperature for LM-80. Heat sinks are a design element in the “light engines” of several of our fixtures — see photos above.

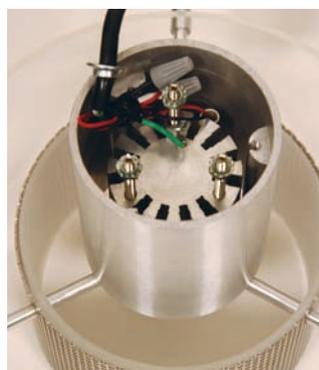


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Borden Lighting fixtures utilize Bridgelux High Brightness LEDs (HBLED) arrays. We are in the process of making the conversion from the second generation of HBLEDs to the third generation. The rated efficacies of the Gen3 arrays are 85-95 lumens per watt. Our light engines have been designed with an array holder and leads (see photo), such that the array can be changed for maintenance. Drivers are integral or canopy mounted and are rated longer than the 50,000 hour LED rating. If your fixture operates an average of 10 hours per day — on all night in the case of an exterior wall mount — it will last 13 years.



359 Heat Sink



LED “Holder”



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