Features & Benefits

- Constant current design
- Patented “sandwich” design uses customer-supplied heatsink and integral mechanical and electrical interfaces to eliminate wiring harness
- Patented intelligent thermal design uses metal core board (MCPCB)
- Includes mounting holes for mechanical attachment
- Easily configured into existing and new luminaires
- Available in a variety of color temperatures
- Can be used to meet the requirements of CA Title 24 and other green initiatives

Ratings and Performance Specifications

Nominal AC Power Consumption @ Nominal Input Voltage ..........-DIM-1 = 6.4W, -90240 = 4.2W, -LV = 4.7W
Nominal Input Voltage ........................................................................ 12-15VAC/DC, 120VAC, 90-240VAC
Maximum Operating Range Ambient Temperature (Ta)...........................-20 to +50 °C
Maximum Solder Pad Temperature (Ts)..........................................................+105 °C
Maximum Screw Installation Torque...............................................................7.5 inch-ounces
Estimated Lumen Depreciation (LM80 standard).............................70% of initial lumens (L70) at 40,000 hours
Safety/Compliance:

LED module:
- UL Recognized Component E321468
- RoHs Compliant

LED Driver:
- UL Recognized Component E256806
- RoHs Compliant
- Output operating frequency ≥ 120Hz
- Meets FCC requirements for consumer use
- Class A sound rating
- Complies with IEEE C.62.41-1991 Class A operation

Application Notes

1. The use of any washer (lock, flat, etc.) will void the warranty due to possible damage and/or shorting to the circuit board.
2. This “sandwich style” LED light engine makes electrical and mechanical connection with 4-40 x 3/8” truss head screws and isolation bushings. A truss head screw must be used in order to seat properly on the module and not damage the contacts. Brillia recommends the use of an aluminum or equivalent heatsink “sandwiched” between the LED module and driver with a nominal thickness of 0.080”. For thicker heatsinks, longer screws can be used, however caution must be used not to bottom-out and damage the internal PC board of the driver. The isolation bushings must be McMaster Carr P/N 91145A129 or Brillia P/N PC61-0002 or equivalent dimensions and material.
3. The proper LED Solder Pad Temperature (Ts) is critical to ensure long life. Careful design consideration required for factors such as ambient conditions (for example weather and surrounding atmosphere inside exterior luminaires) and proximity to other heat sources such as other LED modules and heat generating LED drivers.
4. Abnormal operating conditions such as elevated operating temperatures can be expected to negatively impact lumen output, product lifetime, or product performance.
### Physical Dimensions

![LED Light Engine Diagram](image)

### Part Number Specifications

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Nominal Input Voltage</th>
<th>Nichia NS3x183 LED Package Bin</th>
<th>Sample Values</th>
<th>Sample Values</th>
<th>Sample Values</th>
<th>Nominal Beam Angle (Degrees)</th>
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<tbody>
<tr>
<td>BEPO3BF___27-001</td>
<td>See ordering code below</td>
<td>SW27</td>
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<td>See ordering code below</td>
<td>SW50</td>
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</table>

1. Higher CRI available by special order
2. Sample value when used with compatible Brillia LED driver (A11250-DIM-1, Eff = 65%) and sample heatsink

### Ordering Code for Input Voltage Options

Insert option into part number above. Example: BEPO3BF024MNB27-001

<table>
<thead>
<tr>
<th>Code</th>
<th>Driver</th>
<th>Nominal Input Voltage</th>
<th>Nominal Input Voltage Dimmable[2]</th>
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<tbody>
<tr>
<td>024MNB</td>
<td>AI1250-LV</td>
<td>12-15VAC/DC</td>
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<tr>
<td>120FDB</td>
<td>AI1250-DIM-1</td>
<td>120VAC</td>
<td>Yes</td>
</tr>
<tr>
<td>240MNB</td>
<td>AI1250-90240</td>
<td>90-240VAC</td>
<td>No</td>
</tr>
</tbody>
</table>

1. Utilizing most standard 3-wire electronic dimmers, see www.BrilliaLED.com for a listing of compatible dimmers

### Options: sales@permlight.com

Other LED colors or LED manufacturers. Please email sales@permlight.com

### Packaging

Brillia LED Light Engines are packed in individual containers with ESD bags as applicable and are marked with relevant SKU information and lot traceability.

### Warranty

3-Year limited warranty in accordance with Brillia published warranty at www.brilliaLED.com. Product must be used with compatible Brillia components (modules, drivers, engines and/or accessories) and no maximum ratings (such as Ts) shall be exceeded during any expected operating conditions of the system.

### Additional Information

Standard integral DIP switch with variable settings and smart polarity quick release connector. (12-15VAC/DC model only).

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