Inheritance to Renaissance

Tempo LED

BVP163 22,000lm/220W
BVP162 11,000lm/110W

Public Segment, PLS, Growth Market
August 20th 2014
Cost performance New outdoor LED Floodlight

• **High Efficency**: More than 50% energy saving compared to conventional HPI-T flood light with approximately 839.5KWH energy saving per year.

• **Perfect replacement**: one to one easy replacement of conventional HPI-T flood.

• **Billboard optimize light distribution**: Uniformity of billboard application could be increased by 36.6%.

• **Modern Product Appearance Design**: The unique color and simple design, Superior quality product.

• **Superior Design**: Design for outdoor application with IP65 degree of protection against water and dust.
# Tempo LED – BVP162/163 Product Spec

**Model**
- **BVP162/163**

**Optic LED module (Nichia mid power)**

**System Efficacy**
- 100 lm/w (NW, CW), 91 lm/W (WW)

**IP level**
- IP65

**Installation**
- U shape bracket, it's billboard recommended installation angle mark (10°, 25°, 35°) on the bracket

**Driver**
- Philips Fixed driver (Fixed current-1.0A)

**Surge protection**
- 6KV

**Input voltage/frequency**
- 220~240V 50/60Hz

**Lifespan (B50L70)**
- 30,000 hours

<table>
<thead>
<tr>
<th>Type</th>
<th>Lumen Output</th>
<th>Power</th>
<th>CCT</th>
<th>Light Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tempo LED BVP163</td>
<td>22,000 lm</td>
<td>220W</td>
<td>NW, 4000K</td>
<td>Multipurpose LED light Distribution</td>
</tr>
<tr>
<td>Tempo LED BVP162</td>
<td>11,000 lm</td>
<td>110W</td>
<td>CW, 5700K</td>
<td>WW, 3000K</td>
</tr>
</tbody>
</table>

*Note: WW’s lumen output will be about 9% lower than NW/CW*
# Tempo LED – BVP162/163 Product Spec

<table>
<thead>
<tr>
<th>Product type</th>
<th>BVP 162/163</th>
<th>Memo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application</td>
<td>Billboard, General outdoor area lighting, Crossroad high pole, parking lot, Outdoor stadium (non-professional),</td>
<td></td>
</tr>
<tr>
<td>LED</td>
<td>WW:3000K, NW:4000K, CW: 5700K</td>
<td></td>
</tr>
<tr>
<td>CRI</td>
<td>Typical 70</td>
<td></td>
</tr>
<tr>
<td>Optics</td>
<td>Lumen Output</td>
<td>11,000lm</td>
</tr>
<tr>
<td>Lense</td>
<td>Billboard optimize + Multipurpose LED Flood light</td>
<td></td>
</tr>
<tr>
<td>Electric</td>
<td>Power</td>
<td>110w</td>
</tr>
<tr>
<td>Electric</td>
<td>Input voltage</td>
<td>220-240V, 50/60hz,</td>
</tr>
<tr>
<td>Electric</td>
<td>PF</td>
<td>Min 0.9</td>
</tr>
<tr>
<td>Efficency</td>
<td>100 lm/w</td>
<td></td>
</tr>
<tr>
<td>Working temperature</td>
<td>- 40°C &lt; Ta&lt; 45°C</td>
<td></td>
</tr>
<tr>
<td>IP level</td>
<td>IP65</td>
<td>Philips test report</td>
</tr>
<tr>
<td>Surge protection</td>
<td>6KV</td>
<td>Philips SPD</td>
</tr>
<tr>
<td>Salty spray</td>
<td>200 hrs</td>
<td></td>
</tr>
<tr>
<td>IK level</td>
<td>IK07</td>
<td>Philips test report</td>
</tr>
<tr>
<td>Wind proof</td>
<td>Can protect under 14 level typhoon</td>
<td>Philips test report</td>
</tr>
<tr>
<td>Vibration proof</td>
<td>Pass Philips internal vibration proof test</td>
<td></td>
</tr>
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</thead>
</table>
| **Size**         | BVP163: 510 x 500 x 53mm  
                 BVP162: 510 x 365 x 53mm |          |
| **Weight**       | BVP163: 7 kg  
                 BVP162: 5 kg |          |
| **Package**      | Colour packaging |          |
| **Lifespan**     | 30,000 hrs @ L70B50, Outdoor Ta=35 | U shape bracket |
| **Installation** | U shape bracket, it’s billboard recommended installation angle mark (10°, 25°, 35°) on the bracket |          |
| **Approbation**  | CQC, CB/EMC, RoHS, CE |          |
| **Luminaire material** | ADC1 |          |
| **Lense**        | Equipped with Anti-Dust flat lens and UV resistant plastic, Design for outdoor application with IP65 degree of protection against water and dust |          |
| **ETO**          | No dimming |          |
| **Production Leadtime** | 35Days (FCST) |          |
| **Supplier**     | Philips Chengdu factory |          |
| **Release time** | August 2014 |          |
PHILIPS

Tempo LED - Anti-Dust flat lens

• Equipped with Anti-Dust flat lens and UV resistant plastic

• Design for outdoor application with IP65 degree of protection against water and dust

• Can resist 14 level typhoon
Billboard optimize photometric-Tempo LED

- Billboard optimize photometric, it can greatly promote the uniformity & visual effects. It almost can promote around 36.6% uniformity. (see below an example – 12 ×6 m billboard single installation)
- Good uniformity, no parasitic light.
- Single photometric can meet billboard and general outdoor application.

Uniformity simulation comparison (12 ×6 m billboard single installation – 6pcs Lumi.)

Conv. 400W HPI-T
Have obvious area between light and shade

Tempo LED BVP163 220W
There is no non uniform area
Billboard installation - Tempo LED

• Best installation angle in the bracket constructors can directly install the luminaire in terms of the recommendation angle to achieve a best uniformity effect. Give an example of 12mx6m billboard:
  • Single installation for 6pcs luminaire, recommend to install in 10° angle (distance between luminaire need to be adjusted accordingly)
  • Bilateral installation for 8pcs luminaire, upside luminaire 35° angle, downside luminaire 25° angle.

**Single Installation**
- Distance between Lumi. And billboard D=1.5m
- Installed in the below 0.75m,
- Distance between Lumi. S,
- $S' = \frac{S}{4}$,
- Luminaire elevation is 10°

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Single Installation Diagram

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Tempo LED Vs conTempo

445W

>50% Saving

220W

More than 50% energy savings compared to conTempo 400W HPI-T, it saves 839.5 KWH / per year, approximately 130 $ electric charge

30,000hrs lifetime, can greatly reduce the maintenance cost of lamp

Efficacy over 100lm/W, One to one replacement of HPI-T

Low weight design, 45% lighter than ConTempo

Note1: Assume 10hrs ignition every day & AVG electric charge is 0.12 $/ KWH
Note2: can save (445-220)*10*365/1000 kwh/ per year
Note3: Assume the PF of conTempo driver is 0.9
Tango G2 LED Vs Tempo LED

**Tempo LED BVP162/163**
- Prof/Trade channel both
- 30,000 hrs lifetime
- One-for all photometric
- DON’T suggest use in harbor/port
- No front chemical tempered glass
- Only 110W & 220W.
- No dimming
- CRI 70
- 7kg & 5kg lighter weight

**Tango G2 BVP281/282/283**
- Project channel only
- 50,000 hrs lifetime
- Many Photometric options
- Harbor/Port (BVP283)
- Chemical tempered glass IK07
- 40W~335W, also can ETO
- Dimming & Dali via ETO
- CRI 85
- 13.2kg/12.8kg/11kg
**Tempo LED Product Proposition**

- **Tango LED:**
  - Model name: BVP361, BVP363
  - Lifetime: 50,000hrs @ L70
  - Efficacy: 100lm/w with High power Ledgine3.0
  - NNSP: $520

- **Tango G2 LED:**
  - Model name: BVP281/2/3
  - Lifetime: 50,000hrs @ L70
  - Efficacy: 100lm/w
  - Mid power (BVP281/2)
  - High power Ledgine3.0 (BVP283)
  - NNSP: $399

- **Tempo LED:**
  - Model name: BVP162/BVP163
  - Lifetime: 30,000hrs @ L70
  - Efficacy: 100lm/w with Mid power

- **ConTempo:**
  - Model name: RVP150/250/350
  - Lifetime: 25,000hrs
  - Efficacy: 50lm/w

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* System: Flood+Lamp+Gear

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August 18, 2014  BG PLS GM  Internal use only
Tempo LED Product Image

BVP163

BVP162