Lighting Solutions for Mining Environments

2019
2002: We entered into a partnership with the Belgian company Schréder, a multinational lighting company that is present in about 35 countries.

2013: We became a wholly owned Schréder company, allowing us to embrace the latest technologies, such as optimising light control technologies, for which Schréder are well renowned.

By combining the best of LED technology with a wide range of control systems, our solutions can offer huge energy savings of up to 85% and radically reduce the payback time of a new installation.
Case Study

Industrial Plant

<table>
<thead>
<tr>
<th></th>
<th>LEDnova 70W</th>
<th>100W MHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of fittings</td>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td>Energy used (kW)</td>
<td>21</td>
<td>34,8</td>
</tr>
<tr>
<td>Energy saved (kW)</td>
<td>13,8</td>
<td></td>
</tr>
<tr>
<td>ROI period (years)</td>
<td>2,9</td>
<td></td>
</tr>
<tr>
<td>TCO over 10 years (R)</td>
<td>1 975 536</td>
<td>2 766 959</td>
</tr>
<tr>
<td>Savings over 10 years (R)</td>
<td>791 423</td>
<td></td>
</tr>
</tbody>
</table>

Waste Water Plant

<table>
<thead>
<tr>
<th></th>
<th>LEDflood-maxi 276W</th>
<th>400W HPS/T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of fittings</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>Energy used (kW)</td>
<td>22,08</td>
<td>34,56</td>
</tr>
<tr>
<td>Energy saved (kW)</td>
<td>12,48</td>
<td></td>
</tr>
<tr>
<td>ROI period (years)</td>
<td>4,5</td>
<td></td>
</tr>
<tr>
<td>TCO over 10 years (R)</td>
<td>1 076 563</td>
<td>3 068 361</td>
</tr>
<tr>
<td>Savings over 10 years (R)</td>
<td>1 991 798</td>
<td></td>
</tr>
</tbody>
</table>

Please note: Above calculations are for demonstration purposes, please contact us for detailed energy saving and return of investment calculations.
Product Selection

1. OPTIWAY
   Industrial LED bulkhead
   - Power consumption: 8 - 13W
   - Lumen: 1 220 - 1 630lm
   - Efficacy: ≥126 lm/W
   - CRI: ≥80
   - Colour temperature: 4 000K
   - Operating hours: 50 000 hours (L80)
   - Input Voltage: 90-305V 50Hz (10 & 13W only)

2. OPTILINK with OPTIWAY Connect
   Optional plug-in system for underground mining applications
   - Total cable length: 102m | 107m | 102m
   - Distance between connection boxes: 5m | 7.5m | 10m
   - Number of connection boxes: 21 | 15 | 11

3. LEDnova-mini
   Industrial LED bulkhead
   - Power consumption: 20 - 55W
   - Lumen: 2 631 - 7 676lm
   - Efficacy: ≥121 lm/W
   - CRI: ≥70
   - Colour temperature: 4 000K / 3 000K (optional)
   - Operating hours: 100 000 hours (L90)
   - Input Voltage: 198-264V 50Hz

4. LEDnova-midi
   Industrial LED bulkhead
   - Power consumption: 70 - 81W
   - Lumen: 10 235 - 10 493lm
   - Efficacy: ≥130 lm/W
   - CRI: ≥70
   - Colour temperature: 4 000K / 3 000K (optional)
   - Operating hours: 90 000 hours (L90)
   - Input Voltage: 198-264V 50Hz

5. LEDlume range
   High-power LED street light
   - Power consumption: 10 - 276W
   - Lumen: 1 416 - 40 078lm
   - Efficacy: ≥121 lm/W
   - CRI: ≥70
   - Colour temperature: 4 000K / 3 000K & 5 700K (optional)
   - Operating hours: 100 000 hours (L90)
   - Input Voltage: 198-264V 50Hz

6. LEDbay
   Multi-purpose LED lowbay and highbay
   - Power consumption: 132 - 177W
   - Lumen: 19 720 - 29 000lm
   - Efficacy: ≥149 lm/W
   - CRI: ≥70
   - Colour temperature: 4 000K
   - Operating hours: 100 000 hours (L70)
   - Input Voltage: 198-264V 50Hz
Product Selection

**BEKA SOLAR**
LED solar solution

- **Power consumption:** 36 - 80W
- **Lumen:** 5 400 - 12 240lm
- **Efficacy:** ≥150 lm/W
- **CRI:** ≥70
- **Colour temperature:** 4 000K
- **Operating hours:** 50 000 hours (L70)

**BEKABULK LED**
LED bulkhead luminaire

- **Power consumption:** 18W
- **Lumen:** 2 400lm
- **Efficacy:** ≥133 lm/W
- **CRI:** ≥70
- **Colour temperature:** 4 000K
- **Operating hours:** 60 000 hours (L80)
- **Input Voltage:** 230V

**ROUGHGUARD LED**
Vandal-proof LED luminaire

- **Power consumption:** 6 - 52W
- **Lumen:** 1 060 - 8 200lm
- **Efficacy:** ≥158 lm/W
- **CRI:** ≥70
- **Colour temperature:** 4 000K
- **Operating hours:** 50 000 hours (L70)
- **Input Voltage:** 198-277V 50Hz

**BEKA VAPOURLINE**
Industrial LED luminaire

- **Power consumption:** 30 - 46W
- **Lumen:** 4 880 - 7 760lm
- **Efficacy:** ≥163 lm/W
- **CRI:** ≥80
- **Colour temperature:** 4 000K
- **Operating hours:** 60 000 hours (L70)
- **Input Voltage:** 230V

**OMNiblast-E**
Modular LED floodlighting solution

- **Power consumption:** 455 - 1 422W
- **Lumen:** 59 000 - 183 000lm
- **Efficacy:** ≥129 lm/W
- **CRI:** ≥70
- **Colour temperature:** 5 700K / 4 000K (optional)
- **Operating hours:** 100 000 hours (L70)
- **Input Voltage:** 198-264V 50Hz

**OMNistar**
High-power LED floodlight

- **Power consumption:** 108 - 451W
- **Lumen:** 13 990 - 68 760lm
- **Efficacy:** ≥118 lm/W
- **CRI:** ≥70
- **Colour temperature:** 4 000K
- **Operating hours:** 100 000 hours (L70)
- **Input Voltage:** 198 - 264V 50Hz
Zone Descriptions

Gases and Vapours

Zone 1
Flammable atmosphere possible but unlikely to be present for long periods.

Zone 2
Flammable atmosphere unlikely to be present except for short periods of time—typically as a result of a process fault condition.

Dusts

Zone 21
Explosive dust cloud occasionally present in normal operation.

Zone 22
Explosive dust cloud unlikely to occur in normal operation, but if it does, it will only exist for a short period.