Astra LIGHTING

SAFESTEP LED

INNOVATION

INTEGRITY

PERFORMANCE
SAFESTEP Luminaire

The Astra SAFESTEP luminaire is specifically designed for use in cleanrooms and clean areas such as in the pharmaceutical, food, micro-electronic and healthcare industries.

Aptly named, the SAFESTEP luminaires unique design integrates seamlessly into composite panel ceilings and provides walk-on protection, thus safeguarding personnel working above the ceiling. Innovation, Integrity and Performance – we understand the first principles involved in the design and construction of clean, controlled and sterile environments.

Innovation in design and engineered to perform, the integrity of your cleanroom is guaranteed.

Applications

- Pharmaceutical
- Biotechnology
- Life Sciences
- Semi-conductor
- Nanotechnology
- Laboratories

Specification

- IP65/64 Rated
- Fully welded construction
- Tested to BS 6399-1: 1996 Accidental walk-on protection
- Detachable gear tray
- LED energy saving technology
- TP(a) Rated diffusers
- Anti-bacterial coating options
- Custom made sizes available

Construction

With a ridged, fully welded construction the SAFESTEP luminaire is manufactured from corrosion resistant steel with a durable Ral 9003 epoxy powder coat finish.

The luminaire is tried and tested to BS 6399-1: 1966. Minimum concentrated load of 0.9kN as recommended for accidental walk-on protection.
SAFESTEP Luminaire

Designed to integrate seamlessly into composite panel ceilings, the SAFESTEP luminaire is available to suit panel thicknesses of 50-200mm. This guarantees a flush finish to both sides of the panel ceiling and provides a smooth, easy-to-clean surface which is an essential requirement for sterile environments.

Available with both plug & play and concealed wiring options.

**Anti-bacterial Coating**

Anti-bacterial powder coatings provide an active biocidal system based on silver, which is effective against major strains of bacteria. This provides long term protection against bacterial growth and is shown to exhibit zero growth for fungi and moulds. The coating delivers a constant and controlled release of Silver ions which remain active for periods in excess of 10 years. The active Silver ions penetrate the bacteria cell walls disrupting the cell and inhibiting bacterial growth.

*How Anti-bacterial works*

- **Active ions**
  - Penetrate the bacteria cell walls disrupting the cell and thereby inhibiting bacterial growth.

- **Active ions**
  - Released under the action of moisture and diffuse to the surface.

**Chemical Resistant Coating**

For areas where aggressive cleaning and sterilisation chemicals such as VHP (vaporised hydrogen peroxide) are used, we can provide a specialist highly durable coating which is suitable for such environments.

The SAFESTEP luminaire is also available in 304/316 stainless steel.
SAFESTEP Luminaire

Optical Options

TP(a) fire rated opal diffusers are standard specification including the option for toughened glass for areas that require chemical protection.

UV Protection

The C20 UV safety sleeve provides protection up to 400 nanometers.

The LY5 UV safety sleeve contains a specially coated light yellow ultra violet absorbing filter, safe up to 470 nanometers. Designed for higher UV-sensitive materials and locations but giving utmost brightness.

The G10 UV safety sleeve provides protection up to 520 nanometers and is designed for applications such as plate making and circuit board manufacturing.
SAFESTEP Luminaire

LED Technology

The three key elements to effective LED performance are the LEDs, its driver and optimised thermal management. Our combination of world class LEDs, high light transmission diffusers and enhanced optical reflectors have resulted in a luminaire with exceptional performance, providing substantial energy savings when compared to other light sources.

The benefits of LED SAFESTEP luminaires are:

- Less energy consumed – efficiencies of 142-156 ll/cw (luminaire lumens per circuit watt).
- Less luminaires required – saving both luminaire and installation cost.
- Less CO2 emissions – efficient lighting reduces carbon emissions.
- Less maintenance – LED lifespan is in excess of 60,000 hours.
- Increased savings – LED luminaires meet the criteria for ECA (Enhanced Capital Allowances)
- Instant light – LEDs have no ‘run-up’ period or re-strike delay.
- Durability – LEDs have no fragile tube or filaments.
- Glass & mercury free – the ideal choice for cleanrooms and food safe environments.
- Part L compliant – LED luminaires exceed the requirement of 55 ll/cw.

In addition to these benefits, healthcare and cleanroom environments offer an excellent opportunity to save lighting energy. With many pharmaceutical manufacturing environments and hospitals operating 24/7 the energy consumption is dramatically reduced, providing increased cost savings and reducing the payback period.
Power Supply – Internal Connections

As standard the luminaires are to be hard wired. This is by removing the luminaire lid and inserting the power supply cable through the cable gland entry. Internally there is a terminal block for both power, DALI and emergency options as required.

Alternatively the luminaire can be supplied with a flying lead already pre-wired to the luminaire and with a prepared end or plug connected to the opposite end of the lead.

Power Supply – External Connections

The luminaire is prewired with a walk-on PCB (power connection box) on the back of the lid. The PCB houses a panel mount connector for plug and play connections and is available in 3, 4, 5 & 6 pole to accommodate DALI and emergency versions.

Pre-wired leads to the length of your choice can be supplied to create a complete plug & plug wiring system.

Reducing time on site and the possibility of wiring errors, the plug & play system is quick to install and provides a cost effective wiring solutions.
SAFESTEP LED Composite Panel

IP65/64 Non-Modular recessed luminaire for composite panel ceilings

### LED Options

<table>
<thead>
<tr>
<th>Order Codes</th>
<th>Dimensions</th>
<th>L1</th>
<th>L2</th>
<th>L3</th>
<th>L4</th>
<th>L5</th>
<th>L6</th>
<th>L7</th>
<th>L8</th>
<th>L9</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSCPRA6060</td>
<td>600 x 600</td>
<td>19.62w</td>
<td>21.58w</td>
<td>25.51w</td>
<td>29.43w</td>
<td>35.32w</td>
<td>47.09w</td>
<td>59.52w</td>
<td>73.26w</td>
<td>82.41w</td>
</tr>
<tr>
<td></td>
<td>3065lm</td>
<td>3355lm</td>
<td>3926lm</td>
<td>4485lm</td>
<td>5302lm</td>
<td>6854lm</td>
<td>8572lm</td>
<td>10439</td>
<td>11744lm</td>
<td></td>
</tr>
<tr>
<td>LL/CW</td>
<td>156.20</td>
<td>155.44</td>
<td>153.92</td>
<td>152.39</td>
<td>150.11</td>
<td>145.54</td>
<td>144.02</td>
<td>142.50</td>
<td>142.50</td>
<td></td>
</tr>
<tr>
<td>SSCPRA1230</td>
<td>1200 x 300</td>
<td>23.55w</td>
<td>35.32w</td>
<td>47.09w</td>
<td>54.94w</td>
<td>3642lm</td>
<td>5302lm</td>
<td>6854lm</td>
<td>7829lm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>154.68</td>
<td>150.11</td>
<td>145.54</td>
<td>142.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Choose LED lumen output from table above and select suffix L1 - L9 as required

### Optics Options

- Opal Diffuser: No suffix required
- T/Glass & Opal: TGO

### HFD Options

- HF Dimmable DSI: DSI
- HF Dimmable DALI: DALI

### UV-Safety Options

- C20 400nm Protection: C20
- LYS 470nm Protection: LYS
- G10 520nm Protection: G10

### Wiring Options

- Internal connections: No suffix required
- 3 pole walk-on connection box: 3PWCB
- 4 pole walk-on connection box: 4PWCB
- 5 pole walk-on connection box: 5PWCB
- 6 pole walk-on connection box: 6PWCB

### To specify state:

IP65/64 Non-Modular recessed luminaire for seamless integration into composite panel ceilings. Tested to BS 6399-1: 1996. minimum concentrated load of 0.9kN as recommended for accidental wall-on protection. Sealed inverted TP(a) prismatic diffuser, Sealed opal diffuser optics with option for 4mm toughened glass. Smooth front for easy cleaning, fully welded construction from corrosion resistant steel with durable Anti-bacterial or chemical resistant epoxy powder coat finish. High efficiency LEDs and drivers mounted on a removable gear tray for ease of maintenance. – as Astra Lighting SAFESTEP [R], Rear Access Composite Panel.
SAFESTEP Product Range

Luminaire tested to BS 6399-1:1996. Minimum concentrated load of 0.9kN as recommended for accidental walk-on protection.

SAFESTEP LED Composite Panel

LED Dimensions (mm)

<table>
<thead>
<tr>
<th>Code</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>Cut-Out</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSCPRA6060</td>
<td>644</td>
<td>644</td>
<td>50*</td>
<td>671</td>
<td>671</td>
<td>605 x 605</td>
</tr>
<tr>
<td>SSCPRA1230</td>
<td>373</td>
<td>1054</td>
<td>50*</td>
<td>400</td>
<td>1081</td>
<td>333 x 1015</td>
</tr>
</tbody>
</table>

* Luminaires available from 50 - 200mm to suit panel ceiling.

Luminaire weights - 600 X 600mm Kg

<table>
<thead>
<tr>
<th></th>
<th>Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSCPRA6060 - 50mm depth</td>
<td>15.2</td>
</tr>
<tr>
<td>SSCPRA6060 - 100mm depth</td>
<td>16.8</td>
</tr>
<tr>
<td>Additional weight for WCB</td>
<td>0.26</td>
</tr>
<tr>
<td>Additional weight for TGO</td>
<td>3.5</td>
</tr>
</tbody>
</table>

Luminaire weights - 1200 X 300mm Kg

<table>
<thead>
<tr>
<th></th>
<th>Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSCPRA1230 - 50mm depth</td>
<td>16.1</td>
</tr>
<tr>
<td>SSCPRA1230 - 100mm depth</td>
<td>17.6</td>
</tr>
<tr>
<td>Additional weight for WCB</td>
<td>0.26</td>
</tr>
<tr>
<td>Additional weight for TGO</td>
<td>3.3</td>
</tr>
</tbody>
</table>
SAFESTEP LED T56 Grid

IP65/64 Modular recessed luminaire for T56 grid ceilings

**Order Codes** | **Dimensions** | **LED Power & L/ lumens**
---|---|---
SSTGRA6060 | 600 x 600 | 19.62w L1, 21.58w L2, 25.51w L3, 29.43w L4, 35.32w L5, 47.09w L6, 59.52w L7, 73.26 L8, 82.41w L9
3065lm L1, 3355lm L2, 3926lm L3, 4485lm L4, 5302lm L5, 6854lm L6, 8572lm L7, 10439 L8, 11744lm L9
LL/CW 156.20 L1, 155.44 L2, 153.92 L3, 152.39 L4, 150.11 L5, 145.54 L6, 144.02 L7, 142.50 L8, 142.50 L9
SSTGRA1230 | 1200 x 300 | 23.55w L1, 35.32w L2, 47.09w L3, 54.94w L4
3642lm L1, 5302lm L2, 6854lm L3, 7829lm L4
LL/CW 154.68 L1, 150.11 L2, 145.54 L3, 142.50

**LED Options**

Choose LED lumen output from table above and select suffix L1 - L9 as required

**Suffix**

Add suffix as required i.e. SSTGRA6060/LED3065-L1

**Optics Options**

- **Opal Diffuser**
  - No suffix required
- **T/Glass & Opal**
  - TGO

Add suffix as required i.e. SSTGRA6060/LED3065-L1/TGO

**HFD Options**

- **HF Dimmable DSI**
  - DSI
- **HF Dimmable DALI**
  - DALI

Add suffix as required i.e. SSTGRA6060/LED3065-L1/TGO/DSI/DALI

**UV-Safety Options**

- **C20 400nm Protection**
  - C20
- **LY5 470nm Protection**
  - LY5
- **G10 520nm Protection**
  - G10

Add suffix as required i.e. SSTGRA6060/LED3065-L1/TGO/DSI/EM3/C20

**Wiring Options**

- **Internal connections**
  - No suffix required
- **3 pole walk-on connection box**
  - 3PWCB
- **4 pole walk-on connection box**
  - 4PWCB
- **5 pole walk-on connection box**
  - 5PWCB
- **6 pole walk-on connection box**
  - 6PWCB

Add suffix as required i.e. SSTGRA6060/LED3065-L1/TGO/DSI/EM3/C20/3PWCB

To specify state:

IP65/64 Modular recessed luminaire for seamless integration into T56 grid ceilings. Tested to BS 6399-1:1996. minimum concentrated load of 0.9kN as recommended for accidental wall-on protection. Sealed inverted TP(a) prismatic diffuser, Sealed opal Diffuser optics with option for 4mm toughened glass. Smooth front for easy cleaning, fully welded construction from corrosion resistant steel with Anti-bacterial or chemical resistant epoxy powder coat finish. High efficiency LEDs and drivers mounted on a removable gear tray for ease of maintenance. – as Astra Lighting SAFESTEP LED T56 Grid.

**Key Performance Indicators:**

- L1/cw - >142, Power per m²/100 lux - 1.12w
Luminaire tested to BS 6399-1:1996. Minimum concentrated load of 0.9kN as recommended for accidental walk-on protection.

Luminaire dimensions are to suit Astra T56 Grid and grid centres as shown below.

<table>
<thead>
<tr>
<th>Code</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>Grid Center</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSTGRA6060</td>
<td>595</td>
<td>595</td>
<td>70</td>
<td>620 x 620</td>
</tr>
<tr>
<td>SSTGRA1230</td>
<td>295</td>
<td>1195</td>
<td>70</td>
<td>320 x 1220</td>
</tr>
</tbody>
</table>