New Silux2 family of LED signal heads

siemens.com/mobility
When our first LED signal heads were launched on the market, municipal authorities were delighted with this opportunity to save up to 90% in electricity costs compared to conventional signal heads. Our latest family of LED signal heads – Silux2 – is now equipped with the second generation of LED light sources, which clearly outperform their predecessors.

**SILUX2 VLP – 1Watt technology, SIL3-certified**
The innovative Silux2 Very Low Power (VLP) is the world’s first signal head to have a power consumption of only 1 to 2 Watts while offering full and reliable signal monitoring functionality. That’s a further reduction by up to 80% over the previous 230-V LED signal head generation. In addition, two integrated microprocessors allow the collection of large volumes of data from various sources, enabling a range of future applications, for instance prediction of LED failure. Silux2 VLP is the first ever signal head with certified SIL3 safety level, thanks to the combination of a unique function for optical monitoring of the VLP signal head with traditional electronic monitoring.

**Dimmable versions allow additional power savings and prevent glare effects at night**
The Silux2.230LPD and Silux2.230D signal heads can be dimmed for night-time operation. Besides further increasing energy savings, this has an added advantage: The reduced light intensity prevents blooming effects on the symbols as well as glare effects that would affect the drivers’ vision. The use of dimmable Silux signal head versions requires the controllers to be equipped with specially designed LED dimming modules. The dimmable Silux signal heads are ideal for use all over the world, except where the requirements of the VDE 0832 series apply. All non-dimmable Silux2 versions are TÜV certified in accordance with the VDE0832 series of standards.

**Brilliant optical performance – even at high ambient light levels**
The new Silux2 signal heads boast truly brilliant optical properties. The luminous intensity distribution is even better than with the predecessor models, and we have also succeeded in further enhancing luminaire uniformity. This makes the signal head easier to recognize – for more safety at the intersection. Like their predecessors, the new signal heads totally eliminate the dangerous phantom light effect and are perfectly perceptible even against the low sun. Almost all Silux2 signal head versions achieve the highest phantom class rating of 5.

**Reliability and durability are key**
The new Siemens family of signal heads is equipped with especially reliable and efficient driver boards. Durable and robust components, exceptionally reliable and stable operation of the LED technology as well as improved heat management ensure high operational availability and an extended service life.

**Easy exchange of symbol inserts**
All Silux2 LED signal heads can be equipped with various removable symbol inserts, which are designed as masks and can be easily fitted on the inside of the detachable front lens. Upon request, non-standard symbols are available at short notice. Exchanging or rotating the symbol inserts can be done on site and requires little time, especially as now also the 300-mm variants are available with the integrated door, whose easy-to-open bayonet lock is a real time-saver.

**Electronic monitoring function for maximum safety**
Every Silux2 LED light source is equipped with an electronic monitoring circuit designed for optimum interaction with Siemens controller technology. This circuit permanently monitors and checks the power and voltage values of the LEDs. In case a measured value exceeds respectively falls below the applicable threshold, the input current is cut immediately to switch off the signal head safely and communicate the malfunction to the controller’s monitoring module.
### Optical properties in conformity with DIN EN 12368

<table>
<thead>
<tr>
<th>Light intensity distribution</th>
<th>Silux2.40 200 mm</th>
<th>300 mm</th>
<th>Silux2.230LPD 200 mm</th>
<th>300 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative intensity in dimmed mode (typical value)</td>
<td>&gt; 200 cd</td>
<td>&gt; 400 cd</td>
<td>&gt; 200 cd</td>
<td>&gt; 400 cd</td>
</tr>
<tr>
<td>Radiation characteristics</td>
<td>W</td>
<td>N</td>
<td>W</td>
<td>N</td>
</tr>
<tr>
<td>Uniformity of luminance</td>
<td>&gt; 1:10</td>
<td>&gt; 1:15</td>
<td>&gt; 1:10</td>
<td>&gt; 1:15</td>
</tr>
<tr>
<td>Symbol class</td>
<td>S1</td>
<td>S1</td>
<td>S1</td>
<td>S1</td>
</tr>
</tbody>
</table>

### Electrical and mechanical properties

<table>
<thead>
<tr>
<th>Operational voltage</th>
<th>40 V/50 Hz</th>
<th>230 V/50 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power consumption</td>
<td>red 7 W</td>
<td>not dimmed 5 W</td>
</tr>
<tr>
<td></td>
<td>amber 7 W</td>
<td>dimmed 3.5 W</td>
</tr>
<tr>
<td></td>
<td>green &gt; 0.9</td>
<td>&gt; 0.9</td>
</tr>
<tr>
<td>Power factor</td>
<td>S1</td>
<td>S1</td>
</tr>
<tr>
<td>EMC</td>
<td>acc. to EN 50293</td>
<td>acc. to EN 50293</td>
</tr>
<tr>
<td>Lenses</td>
<td>system-specific colored</td>
<td>system-specific colored</td>
</tr>
<tr>
<td>Standard symbols</td>
<td>symbol masks</td>
<td>symbol masks</td>
</tr>
<tr>
<td>Protection class of the LED module</td>
<td>IP65</td>
<td>IP65</td>
</tr>
<tr>
<td>Resistance to mechanical impact</td>
<td>IR3</td>
<td>IR3</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>–40 °C to +60 °C</td>
<td>–40 °C to +60 °C</td>
</tr>
<tr>
<td>Relative humidity</td>
<td>20 % – 95 %</td>
<td>20 % – 95 %</td>
</tr>
<tr>
<td>Housing colors</td>
<td>black RAL 9005,</td>
<td>black RAL 9005,</td>
</tr>
<tr>
<td></td>
<td>fir green RAL 6009,</td>
<td>fir green RAL 6009,</td>
</tr>
<tr>
<td></td>
<td>pebble grey RAL 7032</td>
<td>pebble grey RAL 7032</td>
</tr>
</tbody>
</table>

### Compatibility with controllers

- Siltraffic C840V/VP, C940V/VP, C940ES, sX-L
- Siltraffic sX-H with LED dimming kit
<table>
<thead>
<tr>
<th>Silux2.230LP</th>
<th>Silux2.230</th>
<th>Silux2.230D</th>
<th>Silux2 VLP</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 mm</td>
<td>300 mm</td>
<td>200 mm</td>
<td>300 mm</td>
</tr>
<tr>
<td>&gt; 200 cd</td>
<td>&gt; 400 cd</td>
<td>&gt; 200 cd</td>
<td>&gt; 400 cd</td>
</tr>
<tr>
<td>W</td>
<td>N</td>
<td>W</td>
<td>N</td>
</tr>
<tr>
<td>&gt; 1:10</td>
<td>&gt; 1:15</td>
<td>&gt; 1:10</td>
<td>&gt; 1:15</td>
</tr>
<tr>
<td>613–631 nm</td>
<td>613–631 nm</td>
<td>613–631 nm</td>
<td>613–631 nm</td>
</tr>
<tr>
<td>489–508 nm</td>
<td>489–508 nm</td>
<td>489–508 nm</td>
<td>489–508 nm</td>
</tr>
<tr>
<td>S1</td>
<td>S1</td>
<td>S1</td>
<td>S1</td>
</tr>
</tbody>
</table>

- **230 V/50 Hz**, 5 W
- acc. to EN 50293
- system-specific colored or neutral lenses
- symbol masks
- IP65
- IR3
- –40 °C to +60 °C
- 20 % – 95 %
- black RAL 9005,
- fir green RAL 6009,
- pebble grey RAL 7032

- **230 V/50 Hz**, 14 W
- not dimmed 17 W, dimmed 12 W
- acc. to EN 50293
- system-specific colored or neutral lenses
- symbol masks
- IP65
- IR3
- –40 °C to +60 °C
- 20 % – 95 %
- black RAL 9005,
- fir green RAL 6009,
- pebble grey RAL 7032

- **230 V/50 Hz**, not dimmed 14 W, dimmed 11 W
- acc. to EN 50293
- system-specific colored or neutral lenses
- symbol masks
- IP65
- IR3
- –40 °C to +60 °C
- 20 % – 95 %
- black RAL 9005,
- fir green RAL 6009,
- pebble grey RAL 7032

- **230 V/50 Hz**, not dimmed 14 W, dimmed 11 W
- acc. to EN 50293
- system-specific colored or neutral lenses
- symbol masks
- IP65
- IR3
- –40 °C to +60 °C
- 20 % – 95 %
- black RAL 9005,
- fir green RAL 6009,
- pebble grey RAL 7032

- **24 V DC**, 1–2 W
- not dimmed 14 W, dimmed 11 W
- acc. to EN 50293
- system-specific colored or neutral lenses
- symbol masks
- IP65
- IR3
- –40 °C to +60 °C
- 20 % – 95 %
- black RAL 9005,
- fir green RAL 6009,
- pebble grey RAL 7032

- **24 V DC**, 1–2 W
- not dimmed 14 W, dimmed 11 W
- acc. to EN 50293
- system-specific colored or neutral lenses
- symbol masks
- IP65
- IR3
- –40 °C to +60 °C
- 20 % – 95 %
- black RAL 9005,
- fir green RAL 6009,
- pebble grey RAL 7032

- **24 V DC**, 1–2 W
- not dimmed 14 W, dimmed 11 W
- acc. to EN 50293
- system-specific colored or neutral lenses
- symbol masks
- IP65
- IR3
- –40 °C to +60 °C
- 20 % – 95 %
- black RAL 9005,
- fir green RAL 6009,
- pebble grey RAL 7032

- **24 V DC**, 1–2 W
- not dimmed 14 W, dimmed 11 W
- acc. to EN 50293
- system-specific colored or neutral lenses
- symbol masks
- IP65
- IR3
- –40 °C to +60 °C
- 20 % – 95 %
- black RAL 9005,
- fir green RAL 6009,
- pebble grey RAL 7032

- **24 V DC**, 1–2 W
- not dimmed 14 W, dimmed 11 W
- acc. to EN 50293
- system-specific colored or neutral lenses
- symbol masks
- IP65
- IR3
- –40 °C to +60 °C
- 20 % – 95 %
- black RAL 9005,
- fir green RAL 6009,
- pebble grey RAL 7032
Perfect compatibility with our Sitraffic family of controllers
Silux2 LED signal heads are designed for optimum compatibility with the Sitraffic® family of controllers from Siemens. The table on the inside of this fold-out page lists the controllers that work best with each signal head.

High-quality housings to match the optical system
The new Silux2 signal heads are available as retrofit kits or as complete signal heads in Ecolight and Classic housings. For installation in a Siemens housing, the signal heads are equipped with a Siemens-type door, ensuring compatibility with all Siemens signal head housings and enabling easy and cost-effective upgrading of existing signal head installations. For retrofitting third party housings, we offer an LED signal head unit with OCIT dimensions.

Sitraffic Ecolight is an especially slim, highly functional and environmentally friendly type of signal head housing. Ecolight housings have been designed specifically to accommodate the innovative LED optical systems used as standard in the new Silux2 signal heads. But it goes without saying that Sitraffic Ecolight housings are also a perfect fit for all other Siemens LED signal head units. This helps keep the number of versions low and simplifies spare parts management.

Clever features make installing and servicing the housings easy and cost-effective and simplify repair in the case of accidental damage. What is more, the especially robust and vibration- and impact-tested materials and design features keep the price of the housings pleasantly low while ensuring a particularly long service life.
### The six versions of the new signal head family

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silux2.40</td>
<td>LED signal head for 40-V systems</td>
</tr>
<tr>
<td>Silux2.230LPD</td>
<td>LED signal head for 230-V systems with dimming function and a low power consumption of only 3.5 to 5 Watts; for connection to the new Siemens Sitraffic sX-H controllers</td>
</tr>
<tr>
<td>Silux2.230LP</td>
<td>LED signal head for 230-V systems with a low power consumption of only 5 Watts; for connection to the new Siemens Sitraffic sX controllers</td>
</tr>
<tr>
<td>Silux2.230</td>
<td>LED signal head for 230-V systems; for connection to all Siemens controllers of the Sitraffic Cx00 controller families</td>
</tr>
<tr>
<td>Silux2.230D</td>
<td>LED signal head for 230-V systems, with dimming function</td>
</tr>
<tr>
<td>Silux2 VLP</td>
<td>LED signal head with a very low power consumption of only 1–2 Watt per signal head aspect, compatible with Sitraffic C920ES and Sitraffic sX-V controllers</td>
</tr>
</tbody>
</table>

© Siemens AG 2016
All rights reserved

Printed in Germany
160/79227 SB 03163.0
Dispo No. 22300
Order No. MOMM-B10106-00-7600

Siemens AG
Mobility Division
Intelligent Traffic Systems
Otto-Hahn-Ring 6
81739 Munich
Germany

Siemens is a registered trademark of Siemens AG.

Subject to changes and errors. The information given in this document only contains general descriptions and/or performance features which may not always specifically reflect those described, or which may undergo modification in the course of further development of the products. The requested performance features are binding only when they are expressly agreed upon in the concluded contract.