

## SubstiTUBE Basic

### Tubular LED lamps



#### Areas of application

- Cooling and storage rooms
- Corridors, stairways, parking garages
- Ideal for simple lighting tasks

#### Product benefits

- Quick, simple and safe replacement without rewiring
- Low maintenance costs thanks to long lifetime
- Energy savings of up to 65 % (compared to T8 fluorescent lamp on CCG)
- Instant-on light, therefore ideally suitable in combination with sensor technology
- Maximum resistance to switching loads
- Correct operation even at low temperatures

#### Product features

- LED alternative to classic T8 fluorescent lamps in CCG luminaires
- Uniform illumination
- Wide beam angle: 160° x 120°
- Integrated ECG with high power factor
- Mercury-free and RoHS compliant
- Type of protection: IP20



# Product family datasheet

## Technical data

| Product description                  | Electrical data     |                 |                 |                 |                 | Photometrical data        |                   |                       |                          | Light technical data |
|--------------------------------------|---------------------|-----------------|-----------------|-----------------|-----------------|---------------------------|-------------------|-----------------------|--------------------------|----------------------|
|                                      | Rated luminous flux | Nominal wattage | Nominal voltage | Nominal current | Type of current | Light color (designation) | Color temperature | Nominal luminous flux | Color rendering index Ra | Beam angle           |
| ST8-HB2 10 W/830 600 mm              | 900 lm              | 10.0 W          | 230 V           | 0.047 A         |                 | Warm White                | 3000 K            | 900 lm                |                          | 160 °                |
| ST8-HB2 10 W/840 600 mm              | 1000 lm             | 10.0 W          | 230 V           | 0.047 A         |                 | Cool White                | 4000 K            | 1000 lm               |                          | 160 °                |
| ST8-HB2 10 W/865 600 mm              | 1000 lm             | 10.0 W          | 230 V           | 0.047 A         |                 | Cool Daylight             | 6500 K            | 1000 lm               |                          | 160 °                |
| ST8-HB2 9 W/830 600 mm               | 800 lm              | 9.00 W          | 230 V           | 0.04 A          | AC              | Warm White                | 3000 K            | 800 lm                | >80                      | 160 °                |
| ST8-HB2 9 W/840 600 mm               | 900 lm              | 9.00 W          | 230 V           | 0.04 A          | AC              | Cool White                | 4000 K            | 900 lm                | >80                      | 160 °                |
| ST8-HB2 9 W/865 600 mm               | 900 lm              | 9.00 W          | 230 V           | 0.04 A          | AC              | Cool Daylight             | 6500 K            | 900 lm                | >80                      | 160 °                |
| ST8-HB4 21 W/830 1200 mm             | 1900 lm             | 21.0 W          | 230 V           | 0.094 A         |                 | Warm White                | 3000 K            | 1900 lm               |                          | 150 °                |
| ST8-HB4 18 W/830 1200 mm             | 1750 lm             | 18.0 W          | 230 V           | 0.079 A         | AC              | Warm White                | 3000 K            | 1750 lm               | >80                      | 160 °                |
| ST8-HB4 18 W/840 1200 mm             | 1900 lm             | 18.0 W          | 230 V           | 0.079 A         | AC              | Cool White                | 4000 K            | 1900 lm               | >80                      | 160 °                |
| ST8-HB4 18 W/865 1200 mm             | 1900 lm             | 18.0 W          | 230 V           | 0.079 A         | AC              | Cool Daylight             | 6500 K            | 1900 lm               | >80                      | 160 °                |
| ST8-HB4 21 W/840 1200 mm             | 2100 lm             | 21.0 W          | 230 V           | 0.094 A         |                 | Cool White                | 4000 K            | 2100 lm               |                          | 150 °                |
| ST8-HB4 21 W/865 1200 mm             | 2100 lm             | 21.0 W          | 230 V           | 0.094 A         |                 | Cool Daylight             | 6500 K            | 2100 lm               |                          | 150 °                |
| ST8-HB5 24 W/830 1500 mm             | 2160 lm             | 24.0 W          | 230 V           | 0.109 A         |                 | Warm White                | 3000 K            | 2160 lm               |                          | 150 °                |
| ST8-HB5 22 W/830 1500 mm             | 2000 lm             | 22.0 W          | 230 V           | 0.096 A         | AC              | Warm White                | 3000 K            | 2000 lm               | >80                      | 160 °                |
| ST8-HB5 22 W/840 1500 mm             | 2200 lm             | 22.0 W          | 230 V           | 0.096 A         | AC              | Cool White                | 4000 K            | 2200 lm               | >80                      | 160 °                |
| ST8-HB5 22 W/865 1500 mm             | 2200 lm             | 22.0 W          | 230 V           | 0.096 A         | AC              | Cool Daylight             | 6500 K            | 2200 lm               | >80                      | 160 °                |
| ST8-HB5 24 W/865 1500 mm             | 2400 lm             | 24.0 W          | 230 V           | 24.0 A          |                 | Cool Daylight             | 6500 K            | 2400 lm               |                          | 150 °                |
| ST8-HB5 24 W/840 1500 mm             | 2400 lm             | 24.0 W          | 230 V           | 0.109 A         |                 | Cool White                | 4000 K            | 2400 lm               |                          | 150 °                |
| ST8-RB2 10 W/840 600 mm<br>Rotatable | 1000 lm             | 10.0 W          | 220...240 V     | 0.047 A         |                 |                           | 4000 K            | 1000 lm               |                          |                      |
| ST8-RB2 10 W/865 600 mm<br>Rotatable | 1000 lm             | 10.0 W          | 220...240 V     | 0.047 A         |                 |                           | 6500 K            | 1000 lm               |                          |                      |

## Product family datasheet

| Product description                | Electrical data     |                 |                 |                 |                 | Photometrical data        |                   |                       |                          | Light technical data |
|------------------------------------|---------------------|-----------------|-----------------|-----------------|-----------------|---------------------------|-------------------|-----------------------|--------------------------|----------------------|
|                                    | Rated luminous flux | Nominal wattage | Nominal voltage | Nominal current | Type of current | Light color (designation) | Color temperature | Nominal luminous flux | Color rendering index Ra | Beam angle           |
| ST8-RB4 21 W/840 1200 mm Rotatable | 2100 lm             | 21.0 W          | 220...240 V     | 0.094 A         |                 |                           | 4000 K            | 2100 lm               |                          |                      |
| ST8-RB4 21 W/865 1200 mm Rotatable | 2100 lm             | 21.0 W          | 220...240 V     | 0.094 A         |                 |                           | 6500 K            | 2100 lm               |                          |                      |
| ST8-RB5 24 W/840 1500 mm Rotatable | 2400 lm             | 24.0 W          | 220...240 V     | 0.109 A         |                 |                           | 4000 K            | 2400 lm               |                          |                      |
| ST8-RB5 24 W/865 1500 mm Rotatable | 2400 lm             | 24.0 W          | 220...240 V     |                 |                 |                           | 6500 K            | 2400 lm               |                          |                      |

| Product description      | Dimensions & weight |               |               |                | Temperatures              |                                | Lifespan               |  |                            |
|--------------------------|---------------------|---------------|---------------|----------------|---------------------------|--------------------------------|------------------------|--|----------------------------|
|                          | Overall length      | Tube diameter | Base diameter | Product weight | Ambient temperature range | Temperature range in operation | Nominal lamp life time | Lumen main. fact. at end of nom. life time | Number of switching cycles |
| ST8-HB2 10 W/830 600 mm  | 603.0 mm            | 27.5 mm       | 27.5 mm       | 100.00 g       | -20...+45 °C              | -20...75 °C                    | 1000 h                 |  |                            |
| ST8-HB2 10 W/840 600 mm  | 603.2 mm            | 27.5 mm       | 27.5 mm       | 100.00 g       | -20...+45 °C              | -20...75 °C                    | 40000 h                | 0.70                                       | 200000                     |
| ST8-HB2 10 W/865 600 mm  | 603.2 mm            | 27.5 mm       | 27.5 mm       | 100.00 g       | -20...+45 °C              | -20...75 °C                    | 40000 h                | 0.70                                       | 200000                     |
| ST8-HB2 9 W/830 600 mm   | 603.0 mm            | 27.8 mm       | 27.8 mm       | 110.00 g       | -20...+45 °C              |                                | 40000 h                | 0.70                                       | 200000                     |
| ST8-HB2 9 W/840 600 mm   | 603.0 mm            | 27.8 mm       | 27.8 mm       | 110.00 g       | -20...+45 °C              |                                | 40000 h                | 0.70                                       | 200000                     |
| ST8-HB2 9 W/865 600 mm   | 603.0 mm            | 27.8 mm       | 27.8 mm       | 110.00 g       | -20...+45 °C              |                                | 40000 h                | 0.70                                       | 200000                     |
| ST8-HB4 21 W/830 1200 mm | 1213 mm             | 27.5 mm       | 27.5 mm       | 260.00 g       | -20...+45 °C              | -20...75 °C                    | 1000 h                 |  |                            |
| ST8-HB4 18 W/830 1200 mm | 1213 mm             | 27.8 mm       | 27.8 mm       | 200.00 g       | -20...+45 °C              |                                | 40000 h                | 0.70                                       | 200000                     |
| ST8-HB4 18 W/840 1200 mm | 1213 mm             | 27.8 mm       | 27.8 mm       | 200.00 g       | -20...+45 °C              |                                | 40000 h                | 0.70                                       | 200000                     |
| ST8-HB4 18 W/865 1200 mm | 1213 mm             | 27.8 mm       | 27.8 mm       | 200.00 g       | -20...+45 °C              |                                | 40000 h                | 0.70                                       | 200000                     |
| ST8-HB4 21 W/840 1200 mm | 1213 mm             | 27.5 mm       | 27.5 mm       | 260.00 g       | -20...+45 °C              | -20...75 °C                    | 40000 h                | 0.70                                       | 200000                     |

# Product family datasheet

| Product description                   | Dimensions & weight |               |               |                | Temperatures              |                                | Lifespan               |  |                            |
|---------------------------------------|---------------------|---------------|---------------|----------------|---------------------------|--------------------------------|------------------------|--|----------------------------|
|                                       | Overall length      | Tube diameter | Base diameter | Product weight | Ambient temperature range | Temperature range in operation | Nominal lamp life time | Lumen main. fact. at end of nom. life time | Number of switching cycles |
| ST8-HB4 21 W/865 1200 mm              | 1213 mm             | 27.5 mm       | 27.5 mm       | 260.00 g       | -20...+45 °C              | -20...75 °C                    | 40000 h                | 0.70                                       | 200000                     |
| ST8-HB5 24 W/830 1500 mm              | 1513 mm             | 27.5 mm       | 27.5 mm       | 400.00 g       | -20...+45 °C              | -20...75 °C                    | 1000 h                 |  |                            |
| ST8-HB5 22 W/830 1500 mm              | 1513 mm             | 27.8 mm       | 27.8 mm       | 400.00 g       | -20...+45 °C              |                                | 40000 h                | 0.70                                       | 200000                     |
| ST8-HB5 22 W/840 1500 mm              | 1513 mm             | 27.8 mm       | 27.8 mm       | 400.00 g       | -20...+45 °C              |                                | 40000 h                | 0.70                                       | 200000                     |
| ST8-HB5 22 W/865 1500 mm              | 1513 mm             | 27.8 mm       | 27.8 mm       | 400.00 g       | -20...+45 °C              |                                | 40000 h                | 0.70                                       | 200000                     |
| ST8-HB5 24 W/865 1500 mm              | 1513 mm             | 27.5 mm       | 27.5 mm       | 400.00 g       | -20...+45 °C              | -20...75 °C                    | 40000 h                | 0.70                                       | 200000                     |
| ST8-HB5 24 W/840 1500 mm              | 1513 mm             | 27.5 mm       | 27.5 mm       | 400.00 g       | -20...+45 °C              | -20...75 °C                    | 40000 h                | 0.70                                       | 200000                     |
| ST8-RB2 10 W/840 600 mm<br>Rotatable  | 603.2 mm            |               |               | 120.00 g       |                           |                                | 40000 h                | 0.70                                       | 200000                     |
| ST8-RB2 10 W/865 600 mm<br>Rotatable  | 603.2 mm            |               |               | 120.00 g       |                           |                                | 40000 h                | 0.70                                       | 200000                     |
| ST8-RB4 21 W/840 1200 mm<br>Rotatable | 1213 mm             |               |               | 280.00 g       |                           |                                | 40000 h                | 0.70                                       | 200000                     |
| ST8-RB4 21 W/865 1200 mm<br>Rotatable | 1213 mm             |               |               | 280.00 g       |                           |                                | 40000 h                | 0.70                                       | 200000                     |
| ST8-RB5 24 W/840 1500 mm<br>Rotatable | 1513 mm             |               |               | 335.00 g       |                           |                                | 40000 h                | 0.70                                       | 200000                     |
| ST8-RB5 24 W/865 1500 mm<br>Rotatable | 1513 mm             |               |               | 335.00 g       |                           |                                | 40000 h                | 0.70                                       | 200000                     |

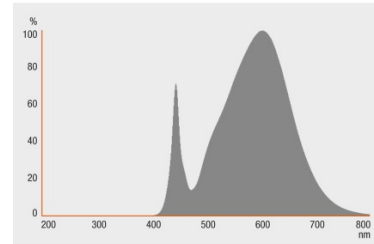
| Product description     | Additional product data     |              | Country specific categorizations | Certificates & standards |
|-------------------------|-----------------------------|--------------|----------------------------------|--------------------------|
|                         | Base (standard designation) | Mercury-free | ILCOS                            | Energy efficiency class  |
| ST8-HB2 10 W/830 600 mm | G13                         | Yes          | DR-10/830-G13-27.5/590           |                          |

## Product family datasheet

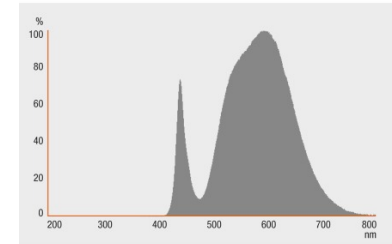
| Product description                   | Additional product data     |              | Country specific categorizations | Certificates & standards |
|---------------------------------------|-----------------------------|--------------|----------------------------------|--------------------------|
|                                       | Base (standard designation) | Mercury-free | ILCOS                            | Energy efficiency class  |
| ST8-HB2 10 W/840 600 mm               | G13                         | Yes          | DR-10/840-G13-27.5/590           | A+                       |
| ST8-HB2 10 W/865 600 mm               | G13                         | Yes          | DR-10/865-G13-26/590             | A+                       |
| ST8-HB2 9 W/830 600 mm                | G13                         | Yes          | DR-9/30/1B-G13-26/590            | A+                       |
| ST8-HB2 9 W/840 600 mm                | G13                         | Yes          | DR-9/40/1B-G13-26/590            | A+                       |
| ST8-HB2 9 W/865 600 mm                | G13                         | Yes          | DR-9/65/1B-G13-26/590            | A+                       |
| ST8-HB4 21 W/830 1200 mm              | G13                         | Yes          | DR-21/830-G13-27.5/590           |                          |
| ST8-HB4 18 W/830 1200 mm              | G13                         | Yes          | DR-18/30/1B-G13-26/1200          | A+                       |
| ST8-HB4 18 W/840 1200 mm              | G13                         | Yes          | DR-18/40/1B-G13-26/1200          | A+                       |
| ST8-HB4 18 W/865 1200 mm              | G13                         | Yes          | DR-18/65/1B-G13-26/1200          | A+                       |
| ST8-HB4 21 W/840 1200 mm              | G13                         | Yes          | DR-20/840-G13-27.5/1200          | A+                       |
| ST8-HB4 21 W/865 1200 mm              | G13                         | Yes          | DR-20/865-G13-26/1200            | A+                       |
| ST8-HB5 24 W/830 1500 mm              | G13                         | Yes          | DR-24/830-G13-27.5/1500          |                          |
| ST8-HB5 22 W/830 1500 mm              | G13                         | Yes          | DR-22/30/1B-G13-26/1500          | A+                       |
| ST8-HB5 22 W/840 1500 mm              | G13                         | Yes          | DR-22/40/1B-G13-26/1500          | A+                       |
| ST8-HB5 22 W/865 1500 mm              | G13                         | Yes          | DR-22/65/1B-G13-26/1500          | A+                       |
| ST8-HB5 24 W/865 1500 mm              | G13                         | Yes          | DR-24/865-G13-27.5/1500          | A+                       |
| ST8-HB5 24 W/840 1500 mm              | G13                         | Yes          | DR-23/840-G13-26/1500            | A+                       |
| ST8-RB2 10 W/840 600 mm<br>Rotatable  | G13                         |              | DR-10/840-G13-27.5/590           | A+                       |
| ST8-RB2 10 W/865 600 mm<br>Rotatable  | G13                         |              | DR-10/865-G13-26/590             | A+                       |
| ST8-RB4 21 W/840 1200 mm<br>Rotatable | G13                         |              | DR-21/840-G13-27.5/1200          | A+                       |
| ST8-RB4 21 W/865 1200 mm<br>Rotatable | G13                         |              |                                  | A+                       |

# Product family datasheet

| Product description                   | Additional product data     |              | Country specific categorizations | Certificates & standards      |
|---------------------------------------|-----------------------------|--------------|----------------------------------|-------------------------------|
|                                       | Base (standard designation) | Mercury-free |                                  |                               |
| ST8-RB5 24 W/840 1500 mm<br>Rotatable | G13                         |              | ILCOS                            | Energy efficiency class<br>A+ |
| ST8-RB5 24 W/865 1500 mm<br>Rotatable | G13                         |              | DR-24/865-G13-27.5/1500          | A+                            |

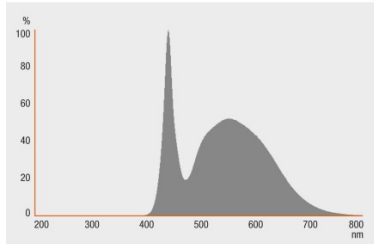


ST8-HB2 9 W/830 600 mm, ST8-HB4  
18 W/830 1200 mm, ST8-HB5 22  
W/830 1500 mm



ST8-HB2 9 W/840 600 mm, ST8-HB4  
18 W/840 1200 mm, ST8-HB5 22  
W/840 1500 mm

## Product family datasheet



ST8-HB2 9 W/865 600 mm, ST8-HB4  
18 W/865 1200 mm, ST8-HB5 22  
W/865 1500 mm

### Application advice

For more detailed application information and graphics please see product datasheet.

### Logistical Data

| Product code  | Product description     | Packaging unit (Pieces/Unit) | Dimensions (length x width x height) | Volume                | Gross weight |
|---------------|-------------------------|------------------------------|--------------------------------------|-----------------------|--------------|
| 4052899922471 | ST8-HB2 10 W/830 600 mm | Shipping carton box<br>25    | 726 mm x 191 mm x 207 mm             | 28.70 dm <sup>3</sup> | 4224.00 g    |
| 4052899922488 | ST8-HB2 10 W/840 600 mm | Shipping carton box<br>25    | 726 mm x 191 mm x 207 mm             | 28.70 dm <sup>3</sup> | 4462.00 g    |

## Product family datasheet

| Product code  | Product description      | Packaging unit (Pieces/Unit) | Dimensions (length x width x height) | Volume                | Gross weight |
|---------------|--------------------------|------------------------------|--------------------------------------|-----------------------|--------------|
| 4052899922495 | ST8-HB2 10 W/865 600 mm  | Shipping carton box<br>25    | 726 mm x 191 mm x 207 mm             | 28.70 dm <sup>3</sup> | 4474.00 g    |
| 4052899913912 | ST8-HB2 9 W/830 600 mm   | Shipping carton box<br>25    | 726 mm x 191 mm x 207 mm             | 28.70 dm <sup>3</sup> | 4474.00 g    |
| 4052899913929 | ST8-HB2 9 W/840 600 mm   | Shipping carton box<br>25    | 726 mm x 191 mm x 207 mm             | 28.70 dm <sup>3</sup> | 4650.00 g    |
| 4052899913936 | ST8-HB2 9 W/865 600 mm   | Shipping carton box<br>25    | 726 mm x 191 mm x 207 mm             | 28.70 dm <sup>3</sup> | 4584.00 g    |
| 4052899922501 | ST8-HB4 21 W/830 1200 mm | Shipping carton box<br>25    | 1335 mm x 191 mm x 207 mm            | 52.78 dm <sup>3</sup> | 9623.00 g    |
| 4052899913943 | ST8-HB4 18 W/830 1200 mm | Shipping carton box<br>25    | 1335 mm x 191 mm x 207 mm            | 52.78 dm <sup>3</sup> | 8070.00 g    |
| 4052899913950 | ST8-HB4 18 W/840 1200 mm | Shipping carton box<br>25    | 1335 mm x 191 mm x 207 mm            | 52.78 dm <sup>3</sup> | 8123.00 g    |
| 4052899913967 | ST8-HB4 18 W/865 1200 mm | Shipping carton box<br>25    | 1335 mm x 191 mm x 207 mm            | 52.78 dm <sup>3</sup> | 7860.00 g    |
| 4052899922518 | ST8-HB4 21 W/840 1200 mm | Shipping carton box<br>25    | 1335 mm x 191 mm x 207 mm            | 52.78 dm <sup>3</sup> | 9540.00 g    |
| 4052899922525 | ST8-HB4 21 W/865 1200 mm | Shipping carton box<br>25    | 1335 mm x 191 mm x 207 mm            | 52.78 dm <sup>3</sup> | 9623.00 g    |
| 4052899922532 | ST8-HB5 24 W/830 1500 mm | Shipping carton box<br>25    | 1637 mm x 191 mm x 207 mm            | 64.72 dm <sup>3</sup> | 13941.00 g   |
| 4052899913974 | ST8-HB5 22 W/830 1500 mm | Shipping carton box<br>25    | 1637 mm x 191 mm x 207 mm            | 64.72 dm <sup>3</sup> | 13510.00 g   |
| 4052899913981 | ST8-HB5 22 W/840 1500 mm | Shipping carton box<br>25    | 1637 mm x 191 mm x 207 mm            | 64.72 dm <sup>3</sup> | 13941.00 g   |
| 4052899913998 | ST8-HB5 22 W/865 1500 mm | Shipping carton box<br>25    | 1637 mm x 191 mm x 207 mm            | 64.72 dm <sup>3</sup> | 13941.00 g   |



## Product family datasheet

| Product code  | Product description                | Packaging unit (Pieces/Unit) | Dimensions (length x width x height) | Volume                | Gross weight |
|---------------|------------------------------------|------------------------------|--------------------------------------|-----------------------|--------------|
| 4052899922556 | ST8-HB5 24 W/865 1500 mm           | Shipping carton box<br>25    | 1637 mm x 191 mm x 207 mm            | 64.72 dm <sup>3</sup> | 13941.00 g   |
| 4052899922549 | ST8-HB5 24 W/840 1500 mm           | Shipping carton box<br>25    | 1637 mm x 191 mm x 207 mm            | 64.72 dm <sup>3</sup> | 12720.00 g   |
| 4052899934535 | ST8-RB2 10 W/840 600 mm Rotatable  | Shipping carton box<br>25    | 726 mm x 191 mm x 207 mm             | 28.70 dm <sup>3</sup> | 4919.00 g    |
| 4052899934542 | ST8-RB2 10 W/865 600 mm Rotatable  | Shipping carton box<br>25    | 726 mm x 191 mm x 207 mm             | 28.70 dm <sup>3</sup> | 4927.00 g    |
| 4052899934559 | ST8-RB4 21 W/840 1200 mm Rotatable | Shipping carton box<br>25    | 1335 mm x 191 mm x 207 mm            | 52.78 dm <sup>3</sup> | 10110.00 g   |
| 4052899934566 | ST8-RB4 21 W/865 1200 mm Rotatable | Shipping carton box<br>25    | 1335 mm x 191 mm x 207 mm            | 52.78 dm <sup>3</sup> | 10110.00 g   |
| 4052899934573 | ST8-RB5 24 W/840 1500 mm Rotatable | Shipping carton box<br>25    | 1637 mm x 191 mm x 207 mm            | 64.72 dm <sup>3</sup> | 12570.00 g   |
| 4052899934580 | ST8-RB5 24 W/865 1500 mm Rotatable | Shipping carton box<br>25    | 1637 mm x 191 mm x 207 mm            | 64.72 dm <sup>3</sup> | 11750.00 g   |

The mentioned product code describes the smallest quantity unit which can be ordered. One shipping unit can contain one or more single products. When placing an order, for the quantity please enter single or multiples of a shipping unit.

### References / Links

For current information see

▶ [www.osram.com/substitute](http://www.osram.com/substitute)

### Disclaimer

## Product family datasheet

Subject to change without notice. Errors and omission excepted. Always make sure to use the most recent release.