## ♦Specifications

### 1. 8x8 model

| | | | | |
|---|---|---|---|---|
| Dimensions & Weight | Size | 8x8x2 3/8 inches (200x200x60mm) | | |
| | Weight | 5.9lbs (2.7kg) | | |
| Physical Properties | Modulus of Rupture | 21.8 N/mm$^2$ | (=222 kgf/cm$^2$) | (ASTM C 67) |
| | Compressive Strength | 113,249 N | (=11,549 kgf) | (ASTM C 67) |
| | Breaking Load | 34,888 N | (=3,558 kgf) | (ASTM C 67) |
| Operating Temperature | -13$^o$F ~ 140$^o$F (-25$^o$C ~ 60$^o$C) | | | |
| Operating Time | 12 hours minimum | | | |
| Onset Point | 150 - 350 Lux | | | |
| Charging Time | 1(sunny) to 8 (cloudy and rainy) hours | | | |

Lighting Properties

| Model No | Color | Brightness(Nit)[1] | | Illuminance(Lux)[2] | | Uniformity[3] | |
|---|---|---|---|---|---|---|---|
| | | average | min | average | min | average | min |
| ST-0808GL | Green | 15.0 | 14.3 | 47.1 | 44.7 | 75% | 70% |
| ST-0808BL | Blue | 4.1 | 3.9 | 12.9 | 12.2 | 80% | 75% |
| ST-0808WL | White | 11.5 | 10.9 | 36.1 | 34.2 | 80% | 75% |
| ST-0808RL | Red | 6.0 | 5.7 | 18.8 | 17.9 | 80% | 75% |
| ST-0808OL | Orange | 5.5 | 5.2 | 17.3 | 16.3 | 80% | 75% |
| ST-0808AL | Amber | 3.0 | 2.8 | 9.4 | 8.8 | 80% | 75% |

1. Luminance (cd/m$^2$) measurement: The luminance of 9 points on the lighting area measured and averaged.
2. Illuminance (lm/m$^2$) is obtained by multiplying 3.14 to brightness.
3. Uniformity is obtained by dividing minimum luminance by maximum luminance from 9 point measurement.

### 2. 4x8 model

| | | | | |
|---|---|---|---|---|
| Dimensions & Weight | Size | 4x8x2 3/8 inches (100x200x60mm) | | |
| | Weight | 2.2lbs (1,000g) | | |
| Physical Properties | Modulus of Rupture | 9.3 N/mm$^2$ | (=95 kgf/cm$^2$) | (ASTM C 67) |
| | Compressive Strength | 34,849 N | (=3,564 kgf) | (ASTM C 67) |
| | Breaking Load | 14,876 N | (=1,517 kgf) | (ASTM C 67) |
| Operating Temperature | -13$^o$F ~ 140$^o$F (-25$^o$C ~ 60$^o$C) | | | |
| Operating Time | 8 hours minimum | | | |
| Onset Point | 120 Lux | | | |
| Charging Time | 1(sunny) to 8 (cloudy and rainy) hours | | | |

Lighting Properties

| Model No | Color | Brightness(Nit)[1] | | Illuminance(Lux)[2] | | Uniformity[3] | |
|---|---|---|---|---|---|---|---|
| | | average | min | average | min | average | min |
| ST-0408GL | Green | 10.6 | 10.0 | 33.3 | 31.4 | 75% | 80% |
| ST-0408BL | Blue | 2.6 | 2.4 | 8.2 | 7.5 | 75% | 80% |
| ST-0408WL | White | 6.0 | 5.1 | 18.9 | 15.9 | 75% | 80% |
| ST-0408RL | Red | 5.5 | 4.9 | 17.3 | 15.4 | 75% | 80% |
| ST-0408OL | Orange | 4.7 | 4.2 | 14.8 | 13.2 | 75% | 80% |
| ST-0408AL | Amber | 2.9 | 2.5 | 9.1 | 7.9 | 75% | 80% |

1. Luminance (cd/m$^2$) measurement: The luminance of 9 points on the lighting area measured and averaged.
2. Illuminance (lm/m$^2$) is obtained by multiplying 3.14 to brightness.
3. Uniformity is obtained by dividing minimum luminance by maximum luminance from 9 point measurement.

**3. 4x8-A model**

| | | | | |
|---|---|---|---|---|
| Dimensions & Weight | Size | 4x8x2 3/8 inches (100x200x60mm) | | |
| | Weight | 2.2lbs (1,000g) | | |
| Physical Properties | Modulus of Rupture | 9.3 N/mm$^2$ | (=95 kgf/cm$^2$) | (ASTM C 67) |
| | Compressive Strength | 34,849 N | (=3,564 kgf) | (ASTM C 67) |
| | Breaking Load | 14,876 N | (=1,517 kgf) | (ASTM C 67) |
| Operating Temperature | -13$^o$F ~ 140$^o$F (-25$^o$C ~ 60$^o$C) | | | |
| Operating Time | 8 hours minimum | | | |
| Onset Point | 120 Lux | | | |
| Charging Time | 1(sunny) to 8 (cloudy and rainy) hours | | | |

Lighting Properties

| Model No | Color | Brightness(Nit)[1] | | Illuminance(Lux)[2] | | Uniformity[3] | |
|---|---|---|---|---|---|---|---|
| | | average | min | average | min | average | min |
| ST-0408GL1 | Green | 4.3 | 4.0 | 13.6 | 12.5 | 75% | 80% |
| ST-0408BL1 | Blue | 0.6 | 0.5 | 1.9 | 1.7 | 75% | 80% |
| ST-0408RL1 | Red | 1.6 | 1.5 | 4.9 | 4.6 | 75% | 80% |
| ST-0408OL1 | Orange | 1.5 | 1.5 | 4.8 | 4.7 | 75% | 80% |
| ST-0408AL1 | Amber | 1.7 | 1.5 | 5.2 | 4.6 | 75% | 80% |

1. Luminance (cd/m$^2$) measurement: The luminance of 9 points on the lighting area measured and averaged.
2. Illuminance (lm/m$^2$) is obtained by multiplying 3.14 to brightness.
3. Uniformity is obtained by dividing minimum luminance by maximum luminance from 9 point measurement.

## ♦Basic Components

Single Crystalline Solar Cell
Energy Cache
LED
Electronic Controller
Poly Carbonate Housing

## ♦Installation

Simple set-up: similar to standard paving bricks in both mortarless and mortared installation.
Explansion lugs on each side surface protect the tiles from abrasion and pressure caused by temperature shifts or other environmental factors.

## ♦Reference Standards

ASTM C902: Standard Specification for Pedestrian and Light Traffic Paving Brick
IESNA DG-5-1994: Recommended Lighting for Walkways and Class 1 Bikeways

| Walkway Class | Avg. Maintained Illuminance Levels in Lux (Horizontal Levels) |
|---|---|
| Commercial | 10 |
| Intermediate | 5 |
| Residential | 2 |

## ♦Illumination Example

| Place | Lux | Place | Lux |
|---|---|---|---|
| direct sunlight | 100000 | cloudy day | 30000~70000 |
| very cloudy day | 10000~30000 | rainy day | 7000~10000 |
| full moon | 0.2 | good illumination for reading | 200~500 |