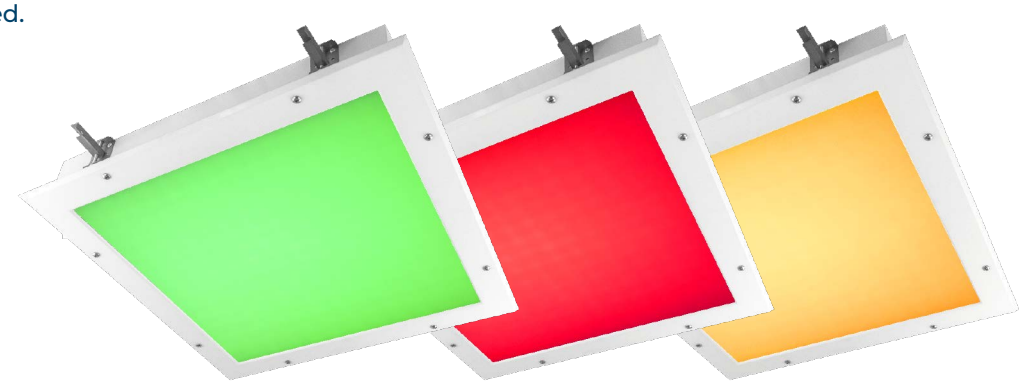
SOLITE

# EPSILON CHROMA

**FS209E** class 1000 | **ISO 14644** class 6

Narrow spectrum front access luminaire designed for modular 'T' and cut aperture ceilings in clean and sterile environments. IP65 (front) / IP54 (rear) ensures the ceiling integrity is maintained at all times, even when the cover is removed.



Hospitals | Laboratories | Pharmaceutical production | Electronics manufacturing | Semiconductor manufacturing

## FEATURES

- Fixed output as standard
- Dual Circuit, 4000K, CRI80 + COLOUR OF CHOICE
- Conforms to FS209E class 1000, ISO14644 class 6 standard
- IP65 (front) / IP54 (rear)
- LUX Guard, LED protection
- Removable LED platform for improved sustainability and longer life cycle

## OPTIONS

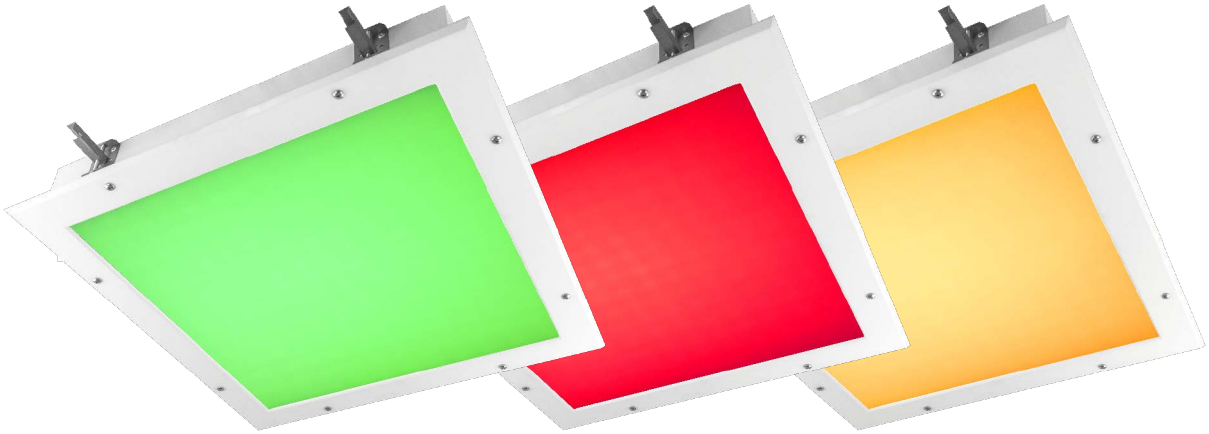
- DALI & DALI EM
- Through access hatch Add suffix **'+AH'**
- Toughened glass front panel: For applications where corrosive cleaning agents may be applied. Glass is supplied in addition to the satin polycarbonate panel. Replace '**S**' suffix with '**TGS**' for Satin and toughened glass

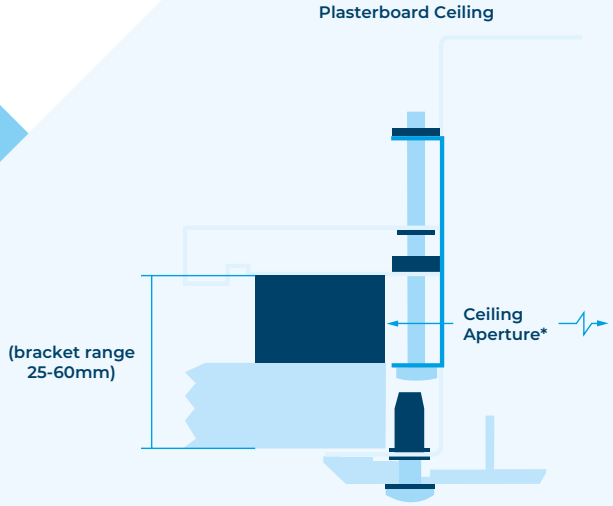
## OPTIONS AVAILABLE ON REQUEST

- Special RAL colour
- Antimicrobial paint
- Stainless steel frame

## EMERGENCY OPTIONS, 3 HOUR INTEGRAL

- Standard, Self-test, DALI
- Emergency lighting should always be a white light source, unless specifically risk assessed and deemed as safe by the site responsible person. Coloured Emergency is always treated as a special request.



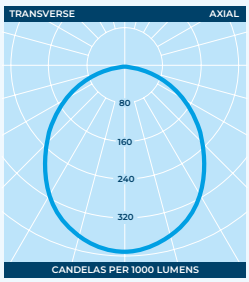



*Ceiling Aperture
575 x 575mm max. +5 -0mm (600 x 600)

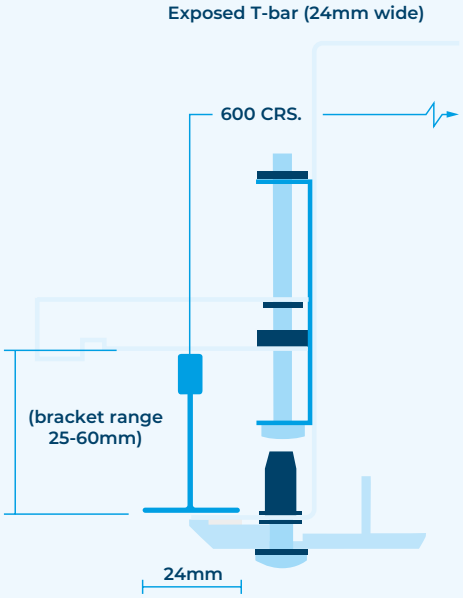
## CONSTRUCTION

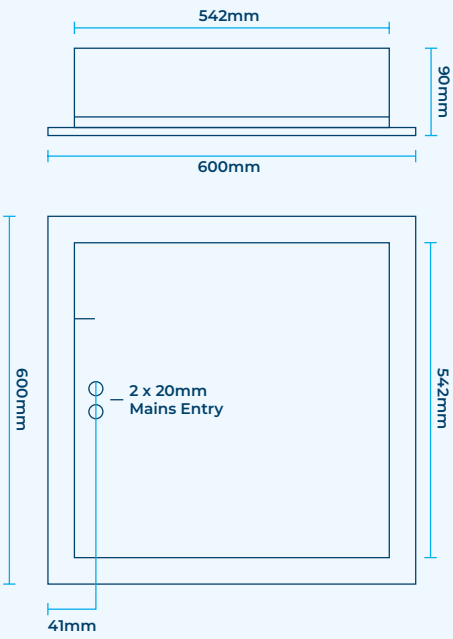
- Zinc plated steel body
- Chamfered 55mm aluminium diffuser frame, with welded and linished corners
- Polyester powder coated body and frame
- Polycarbonate fire-retardant diffuser, TP(a)
- White EPDM closed cell gaskets

## PHOTOMETRY




SATIN



## SINGLE CIRCUIT

| WATTAGE* | CAT. NO. | COLOUR | NOMINAL SIZE | CUT APERTURE | LUMENS | LL/CW | APPROX. kg |
|---|---|---|---|---|---|---|---|
| 20W | EPC2211SCRS | Red | 600mm x 600mm | 575mm x 575mm | 1105 | 55 | 11 |
| 39W | EPC2220SCRS | Red | | | 2098 | 54 | |
| 59W | EPC2229SCRS | Red | | | 2967 | 50 | |
| 27W | EPC2223SCGRS | Green | | | 2347 | 87 | |
| 40W | EPC2232SCGRS | Green | | | 3199 | 80 | |
| 54W | EPC2239SCGRS | Green | | | 3945 | 73 | |
| 24W | EPC2228SCYLS | Yellow | | | 2884 | 120 | |
| 37W | EPC2243SCYLS | Yellow | | | 4313 | 117 | |
| 46W | EPC2252SCYLS | Yellow | | | 5286 | 115 | |
| 56W | EPC2262SCYLS | Yellow | | | 6243 | 111 | |

CONTROLS OPTIONS - suffix catalogue number with:
DALI-DIM - DALI dimmable / e.g. **EPC2253/11DSR+DALI-DIM**

**EMERGENCY OPTIONS** - suffix catalogue number with:
**EM** - Standard 3 hour integral / **EM-ST** - Emergency Self-test 3 hour integral / **DALI-EM** - DALI 3 hour integral / - SmartScan 3 hour integral e.g. **EPC2253/11DSRS+EM**

*Figures rounded to the nearest whole number.

**Emergency output is white as standard, coloured emergency available as a special request

Particle PPM


Recessed


Front Access

IP54 Above IP65 Below

Cut Aperture


Modular "T" Ceilings

TP(a) Diffuser

UKCA


CE Mark

## LED CHARACTERISTICS (4000K ONLY)

| | |
|---|---|
| CRI | 80+ |
| COLOUR TEMPERATURE | 4000K |
| RATED LIFE (HOURS) | 100K-L80/B10 |
| PROTECTION | LUX GUARD |
| DRIVER EFFICIENCY | 91% |
| REPLACEABLE | YES |
| POWER FACTOR | >0.9 |
| ENERGY EFFICIENCY CLASSIFICATION | A |
| **LL/CW** | **161** |

## DUAL CIRCUIT

| WATTAGE* 4000K | CAT. NO. | COLOUR | COLOUR WATTAGE | NOMINAL SIZE | CUT APERTURE | LUMENS WHITES | LUMENS COLOUR | 4000K LL/CW | COLOUR LL/CW | APPROX. KG |
|---|---|---|---|---|---|---|---|---|---|---|
| 26W | EPC2240/11DCRS | RED | 20W | 600mm x 600mm | 575mm x 575mm | 4061 | 1105 | 157 | 55 | 11.5kg |
| 26W | EPC2240/20DCRS | RED | 39W | | | 4061 | 2098 | 157 | 54 | |
| 26W | EPC2240/29DCRS | RED | 59W | | | 4061 | 2967 | 157 | 50 | |
| 26W | EPC2240/23DCGRS | GREEN | 27W | | | 4061 | 2347 | 157 | 87 | |
| 26W | EPC2240/31DCGRS | GREEN | 40W | | | 4061 | 3199 | 157 | 80 | |
| 26W | EPC2240/39DCGRS | GREEN | 54W | | | 4061 | 3945 | 157 | 73 | |
| 26W | EPC2240/28DCYLS | YELLOW | 24W | | | 4061 | 2884 | 157 | 120 | |
| 26W | EPC2240/43DCYLS | YELLOW | 37W | | | 4061 | 4313 | 157 | 117 | |
| 26W | EPC2240/52DCYLS | YELLOW | 46W | | | 4061 | 5286 | 157 | 115 | |
| 26W | EPC2240/62DCYLS | YELLOW | 56W | | | 4061 | 6243 | 157 | 111 | |

| WATTAGE* 4000K | CAT. NO. | COLOUR | COLOUR WATTAGE | NOMINAL SIZE | CUT APERTURE | LUMENS WHITES | LUMENS COLOUR | 4000K LL/CW | COLOUR LL/CW | APPROX. KG |
|---|---|---|---|---|---|---|---|---|---|---|
| 33W | EPC2253/11DCRS | RED | 20W | 600mm x 600mm | 575mm x 575mm | 5330 | 1105 | 160 | 55 | 11.5kg |
| 33W | EPC2253/20DCRS | RED | 39W | | | 5330 | 2098 | 160 | 54 | |
| 33W | EPC2253/29DCRS | RED | 59W | | | 5330 | 2967 | 160 | 50 | |
| 33W | EPC2253/23DCGRS | GREEN | 27W | | | 5330 | 2347 | 160 | 87 | |
| 33W | EPC2253/31DCGRS | GREEN | 40W | | | 5330 | 3199 | 160 | 80 | |
| 33W | EPC2253/39DCGRS | GREEN | 54W | | | 5330 | 3945 | 160 | 73 | |
| 33W | EPC2253/28DCYLS | YELLOW | 24W | | | 5330 | 2884 | 160 | 120 | |
| 33W | EPC2253/43DCYLS | YELLOW | 37W | | | 5330 | 4313 | 160 | 117 | |
| 33W | EPC2253/52DCYLS | YELLOW | 46W | | | 5330 | 5286 | 160 | 115 | |
| 33W | EPC2253/62DCYLS | YELLOW | 56W | | | 5330 | 6243 | 160 | 111 | |

| WATTAGE* 4000K | CAT. NO. | COLOUR | COLOUR WATTAGE | NOMINAL SIZE | CUT APERTURE | LUMENS WHITES | LUMENS COLOUR | 4000K LL/CW | COLOUR LL/CW | APPROX. KG |
|---|---|---|---|---|---|---|---|---|---|---|
| 42W | EPC2266/11DCRS | RED | 20W | 600mm x 600mm | 575mm x 575mm | 6689 | 1105 | 161 | 55 | 11.5kg |
| 42W | EPC2266/20DCRS | RED | 39W | | | 6689 | 2098 | 161 | 54 | |
| 42W | EPC2266/29DCRS | RED | 59W | | | 6689 | 2967 | 161 | 50 | |
| 42W | EPC2266/23DCGRS | GREEN | 27W | | | 6689 | 2347 | 161 | 87 | |
| 42W | EPC2266/31DCGRS | GREEN | 40W | | | 6689 | 3199 | 161 | 80 | |
| 42W | EPC2266/39DCGRS | GREEN | 54W | | | 6689 | 3945 | 161 | 73 | |
| 42W | EPC2266/28DCYLS | YELLOW | 24W | | | 6689 | 2884 | 161 | 120 | |
| 42W | EPC2266/43DCYLS | YELLOW | 37W | | | 6689 | 4313 | 161 | 117 | |
| 42W | EPC2266/52DCYLS | YELLOW | 46W | | | 6689 | 5286 | 161 | 115 | |
| 42W | EPC2266/62DCYLS | YELLOW | 56W | | | 6689 | 6243 | 161 | 111 | |

## DUAL CIRCUIT

| WATTAGE* 4000K | CAT. NO. | COLOUR | COLOUR WATTAGE | NOMINAL SIZE | CUT APERTURE | LUMENS WHITES | LUMENS COLOUR | 4000K LL/CW | COLOUR LL/CW | APPROX. KG |
|---|---|---|---|---|---|---|---|---|---|---|
| 50W | EPC2277/11DCRS | RED | 20W | 600mm x 600mm | 575mm x 575mm | 7778 | 1105 | 157 | 55 | 11.5kg |
| 50W | EPC2277/20DCRS | RED | 39W | | | 7778 | 2098 | 157 | 54 | |
| 50W | EPC2277/29DCRS | RED | 59W | | | 7778 | 2967 | 157 | 50 | |
| 50W | EPC2277/23DCGRS | GREEN | 27W | | | 7778 | 2347 | 157 | 87 | |
| 50W | EPC2277/31DCGRS | GREEN | 40W | | | 7778 | 3199 | 157 | 80 | |
| 50W | EPC2277/39DCGRS | GREEN | 54W | | | 7778 | 3945 | 157 | 73 | |
| 50W | EPC2277/28DCYLS | YELLOW | 24W | | | 7778 | 2884 | 157 | 120 | |
| 50W | EPC2277/43DCYLS | YELLOW | 37W | | | 7778 | 4313 | 157 | 117 | |
| 50W | EPC2277/52DCYLS | YELLOW | 46W | | | 7778 | 5286 | 157 | 115 | |
| 50W | EPC2277/62DCYLS | YELLOW | 56W | | | 7778 | 6243 | 157 | 111 | |

| WATTAGE* 4000K | CAT. NO. | COLOUR | COLOUR WATTAGE | NOMINAL SIZE | CUT APERTURE | LUMENS WHITES | LUMENS COLOUR | 4000K LL/CW | COLOUR LL/CW | APPROX. KG |
|---|---|---|---|---|---|---|---|---|---|---|
| 53W | EPC2282/11DCRS | RED | 20W | 600mm x 600mm | 575mm x 575mm | 8273 | 1105 | 156 | 55 | 11.5kg |
| 53W | EPC2282/20DCRS | RED | 39W | | | 8273 | 2098 | 156 | 54 | |
| 53W | EPC2282/29DCRS | RED | 59W | | | 8273 | 2967 | 156 | 50 | |
| 53W | EPC2282/23DCGRS | GREEN | 27W | | | 8273 | 2347 | 156 | 87 | |
| 53W | EPC2282/31DCGRS | GREEN | 40W | | | 8273 | 3199 | 156 | 80 | |
| 53W | EPC2282/39DCGRS | GREEN | 54W | | | 8273 | 3945 | 156 | 73 | |
| 53W | EPC2282/28DCYLS | YELLOW | 24W | | | 8273 | 2884 | 156 | 120 | |
| 53W | EPC2282/43DCYLS | YELLOW | 37W | | | 8273 | 4313 | 156 | 117 | |
| 53W | EPC2282/52DCYLS | YELLOW | 46W | | | 8273 | 5286 | 156 | 115 | |
| 53W | EPC2282/62DCYLS | YELLOW | 56W | | | 8273 | 6243 | 156 | 111 | |

| WATTAGE* 4000K | CAT. NO. | COLOUR | COLOUR WATTAGE | NOMINAL SIZE | CUT APERTURE | LUMENS WHITES | LUMENS COLOUR | 4000K LL/CW | COLOUR LL/CW | APPROX. KG |
|---|---|---|---|---|---|---|---|---|---|---|
| 64W | EPC2299/11DCRS | RED | 20W | 600mm x 600mm | 575mm x 575mm | 9991 | 1105 | 157 | 55 | 11.5kg |
| 64W | EPC2299/20DCRS | RED | 39W | | | 9991 | 2098 | 157 | 54 | |
| 64W | EPC2299/29DCRS | RED | 59W | | | 9991 | 2967 | 157 | 50 | |
| 64W | EPC2299/23DCGRS | GREEN | 27W | | | 9991 | 2347 | 157 | 87 | |
| 64W | EPC2299/31DCGRS | GREEN | 40W | | | 9991 | 3199 | 157 | 80 | |
| 64W | EPC2299/39DCGRS | GREEN | 54W | | | 9991 | 3945 | 157 | 73 | |
| 64W | EPC2299/28DCYLS | YELLOW | 24W | | | 9991 | 2884 | 157 | 120 | |
| 64W | EPC2299/43DCYLS | YELLOW | 37W | | | 9991 | 4313 | 157 | 117 | |
| 64W | EPC2299/52DCYLS | YELLOW | 46W | | | 9991 | 5286 | 157 | 115 | |
| 64W | EPC2299/62DCYLS | YELLOW | 56W | | | 9991 | 6243 | 157 | 111 | |

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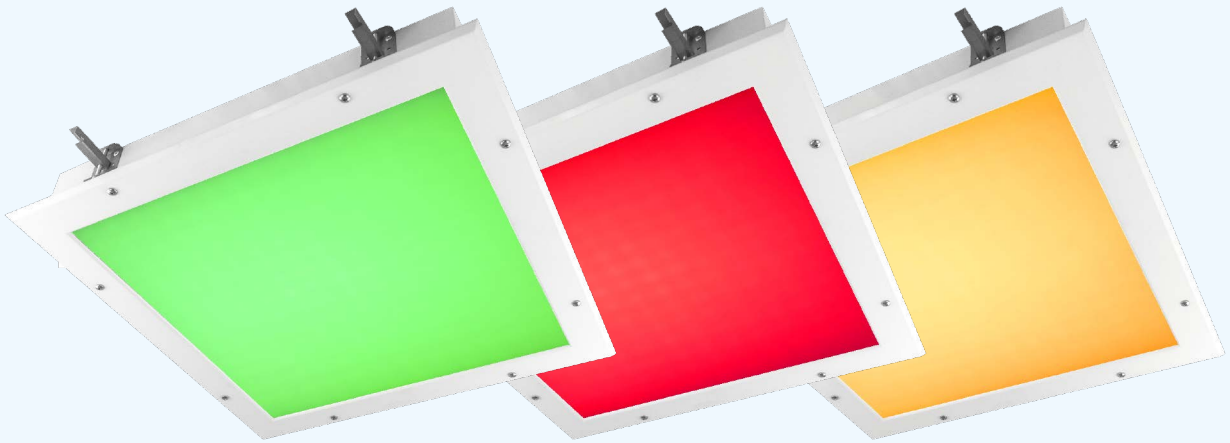
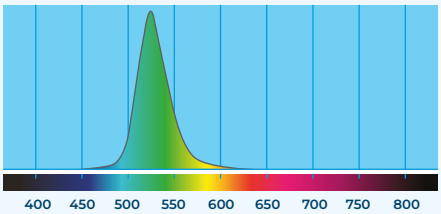
| WATTAGE* 4000K | CAT. NO. | COLOUR | COLOUR WATTAGE | NOMINAL SIZE | CUT APERTURE | LUMENS WHITES | LUMENS COLOUR | 4000K LL/CW | COLOUR LL/CW | APPROX. KG |
|---|---|---|---|---|---|---|---|---|---|---|
| 90W | EPC22137/11DCRS | RED | 20W | 600mm x 600mm | 575mm x 575mm | 13708 | 1105 | 153 | 55 | 11.5kg |
| 90W | EPC22137/20DCRS | RED | 39W | | | 13708 | 2098 | 153 | 54 | |
| 90W | EPC22137/29DCRS | RED | 59W | | | 13708 | 2967 | 153 | 50 | |
| 90W | EPC22137/23DCGRS | GREEN | 27W | | | 13708 | 2347 | 153 | 87 | |
| 90W | EPC22137/31DCGRS | GREEN | 40W | | | 13708 | 3199 | 153 | 80 | |
| 90W | EPC22137/39DCGRS | GREEN | 54W | | | 13708 | 3945 | 153 | 73 | |
| 90W | EPC22137/28DCYLS | YELLOW | 24W | | | 13708 | 2884 | 153 | 120 | |
| 90W | EPC22137/43DCYLS | YELLOW | 37W | | | 13708 | 4313 | 153 | 117 | |
| 90W | EPC22137/52DCYLS | YELLOW | 46W | | | 13708 | 5286 | 153 | 115 | |
| 90W | EPC22137/62DCYLS | YELLOW | 56W | | | 13708 | 6243 | 153 | 111 | |

· **No emergency available** on the 90w variant.



### Spectra




**Green** illuminance is often used for tasks where visual acuity is important, the reasons for this are:

**Peak Sensitivity of the Human Eye:** The human eye is most sensitive to light in the green spectrum, around 555 nanometres. With a 520nm peak, our Green spectrum LED is perceived more vividly and clearly than other colours, allowing for better visual sharpness and detail recognition.

**Enhanced Contrast:** Green light provides excellent contrast against red and blue, the other primary colours of light. This contrast is beneficial for distinguishing different objects and details, which is crucial for tasks requiring precision and fine motor skills, such as surgery or laboratory work.

**Reduction in Chromatic Aberration:** Chromatic aberration is a type of distortion that occurs because different colours (wavelengths) of light refract differently as they pass through lenses. Since green light is near the middle of the visible spectrum, it experiences less chromatic aberration compared to the extremes of the spectrum (red and blue). This means images appear sharper and clearer under green light, enhancing visual acuity.

**Minimisation of Glare and Eye Strain:** Green light is less intense and less likely to cause glare compared to blue or white light, which can be harsh on the eyes, especially in prolonged use. Reduced glare leads to less eye strain, allowing for better sustained visual acuity over time.

**Optimal Pupil Response:** Green light helps maintain a moderate level of pupil constriction, balancing the amount of light entering the eye. This optimal level of constriction helps enhance focus and clarity, leading to improved visual acuity.

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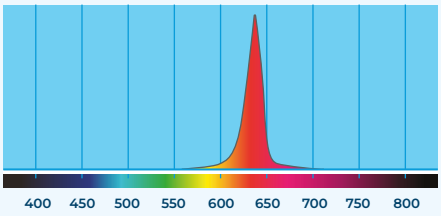
### Spectra




**Red** light sources are often used to provide comfortable night time lighting, without disturbing the circadian rhythm of animals within research environments and animal welfare enviroments.

A number of species used within laboratory environments will have a visual spectrum from around 300-575nm. Red peak output sits around 630nm and offers undiscernible output of 570nm or below, this range sits comfortably within the human visible spectrum of 400-750nm allowing lab operatives to monitor the welfare of the animals, without disturbing their sleep patterns (Circadian Rhythm).

Solite can offer Red alongside white light in a dual circuit luminaire for daytime and night time use, or full circadian or colour tuneable lighting alongside a red circuit for full daytime simulation depending welfare needs of the animals concerned.

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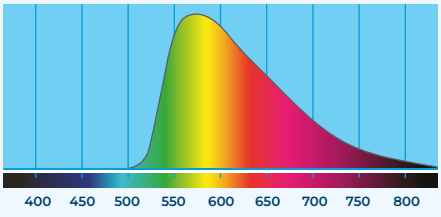
### Spectra




**Yellow** light sources are widely used as an efficient solution for blocking UV and blue light energy up to 500 nm. But why is this important?

When you look at the light spectrum, you'll notice that ultraviolet (UV) light sits just before the visible range. Although invisible to the human eye, UV light can be harmful in certain applications. For instance, during silicon wafer fabrication, exposure to UV light can damage the product. Therefore, it's essential to eliminate UV light from the luminaire being used.