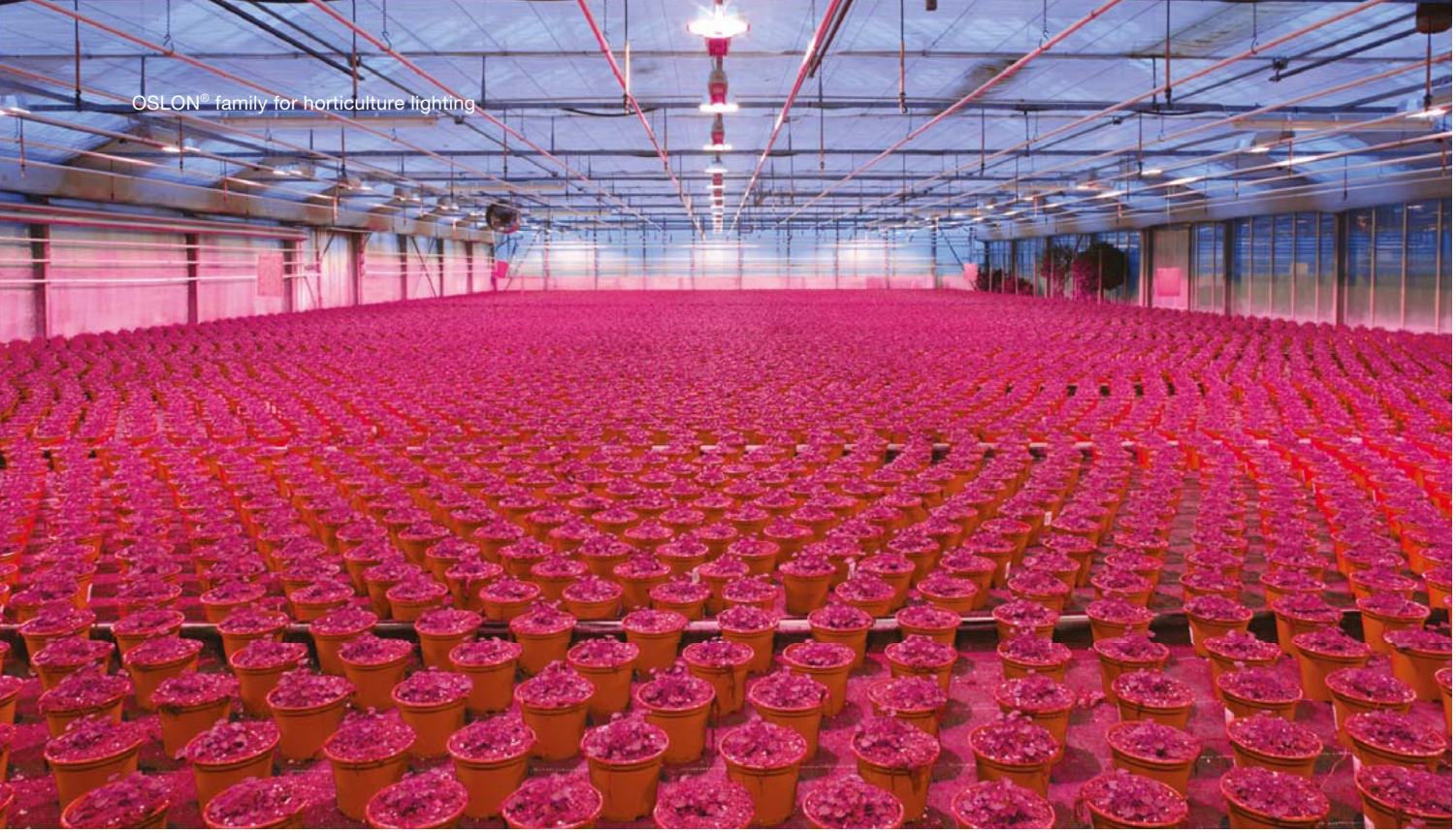
Light is flourishing

LEDs for horticulture lighting

The OSLON® family: deep blue, hyper red and far red

Light is OSRAM

OSRAM
Opto Semiconductors



OSLON® family for horticulture lighting

Grow your business

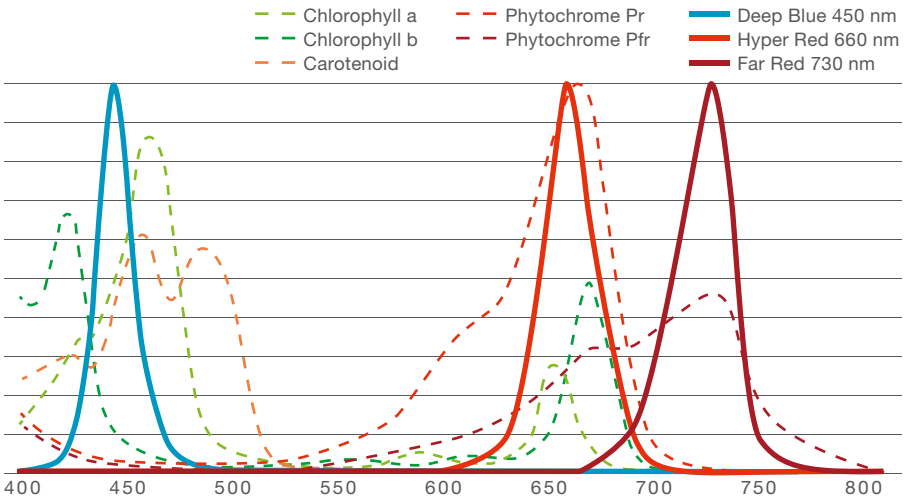
OSRAM Opto Semiconductors now offers a full range of LEDs for horticulture lighting: The new far red OSLON® SSL with 730 nm complements the well established OSLON® SSL with 450 nm (deep blue) and 660 nm (hyper red). Together, these LEDs provide the perfect lighting for all types of plants and flowers, allowing to adapt the light exactly to the needs of various crops.

Advantages

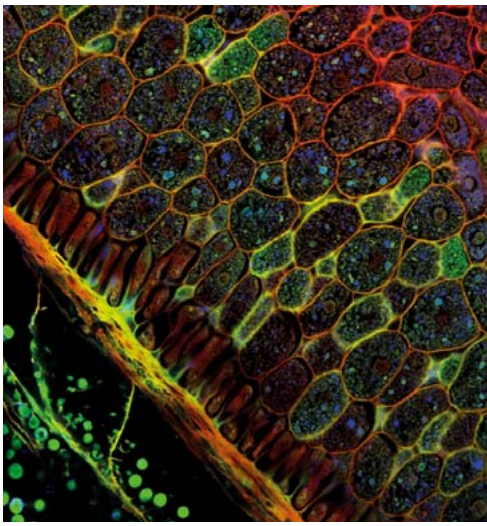
One footprint for cost-effective and flexible design

Different ratios between deep blue, hyper red and far red can be achieved simply by varying the number of the respective OSLON® family LEDs, without any change of the PCB or luminaire design. The 80°/150° radiation characteristics save the costs for additional lenses for those applications in which focused light or a wide viewing angle is required. The small footprint of 3.0 × 3.0 mm² allows a very compact clustering of the LEDs, which enables an easy and efficient design of the optics. The ceramic package can withstand very high temperatures of up to Tmax = 135 °C and makes the thermal design cost-effective and stress-free.

Spectral Power Distribution



Each sort of plant needs it's own tailored Spectral Power Distribution (SPD) to achieve the best results. Our OSLON® family Portfolio provides the perfect illumination for all kind of plants and flowers.



Confocal microscopy of living plant tissue

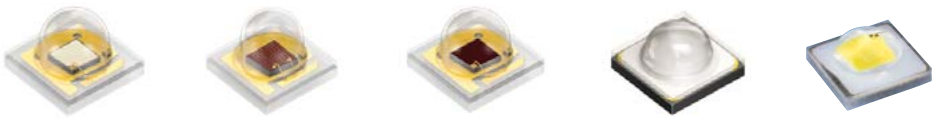
Features

- 100 % footprint compatible with complete color and radiation angle options
- Deep blue (450 nm) and hyper red (660 nm) to provide the light for the photosynthesis
- Far red (730 nm) to control the plant from germination to vegetative growth and flowering
- EQ white to add green content
- EQ white to provide a human friendly working environment
- High energy efficacy in µmol/J
- High maximum driving current up to 1 A
- Low thermal resistance of 3.8 – 6 K/W
- Different radiation angles – spot or wide illumination characteristic without additional optics: 80° and 150°, also 120° for deep blue
- High reliable ceramic package with superior lifetime and corrosion stability
- Robust even in humid environment

Applications:

- Top lighting, inter lighting and multilayer cultivation
- Supplemental lighting and cultivation without natural daylight
- Photoperiodic lighting and photo-morphological control
- Urban farming and controlled environment farming
- Algae grow lights and agriculture lighting

OSLON® family



Type	LD CQxP	LH CPxP	GF CSxPM1.24	LD CQAR	LUW CRDP (EQW)
Color	Deep blue	Hyper Red	Far Red	Deep Blue	EQ white
Wave length	450 nm	660 nm	730 nm	450 nm	–
Binning Current	350 mA	350 mA	350 mA	700 mA	350 mA
Maximum forward current	1,000 mA	1,000 mA	1,000 mA	2,000 mA	1,000 mA
Typical forward voltage	2.95 V	2.10 V	1.85 V	3.05 V	2.95 V
Typical optical power	620 mW	410 mW	250 mW	1,279 mW	494 mW
Efficiency WPE	60 %	56 %	39 %	60 %	48 %
Typical PPF	2.34 µmol/s	2.24 µmol/s	1.51 µmol/s	4.75 µmol/s	2.14 µmol/s
Typical PPF Efficacy	2.27 µmol/J	3.05 µmol/J	2.33 µmol/J	2.22 µmol/J	2.07w µmol/J
Available viewing angle	80°/150°	80°/150°	80°/150°	120°	80°/150°

OSLON® family on the Internet:
www.osram-os.com/horticulturelighting

For further information on the available products please visit our product catalog at http://catalog.osram-os.com

More information about LED in General Lighting:

LED Light Site
ledlight.osram-os.com

LED Light for you Network
www.ledlightforyou.com

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