

# 9 LED Horticultural PowerCluster

IHR-xx09-xxxx-SC2x1-WIR200

## Product Overview

IHS PowerClusters are compact but powerful light sources for horticultural development. Size (L x W x H): 25mm x 25mm x 3.85mm with mounting holes using M3 screws allows easy installation.

Available with 200mm connecting wires, chaining multiple PowerClusters together to form complex systems is very quick and simple – excellent for prototyping your design.

In our portfolio we have 3 types of PowerClusters available, 9 LED Horticultural PowerClusters are also available in parallel versions;

N3535: Industry standard 3535 package with a ceramic substrate for superior reliability at higher temperatures.

UVA technology with offerings at 385, 395, 405 and 415nm.

Current range from 100 to 1000mA

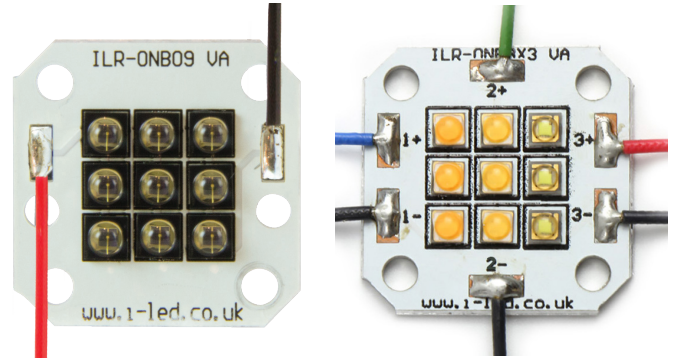
OSRAM OSOLON® SSL: OSOLON® SSL delivers the high efficacy that is necessary for professional indoor and outdoor lighting. The ceramic based package with its superior corrosion robustness addresses perfectly the needs for long lifetime applications.

Current range from 100 to 1000mA

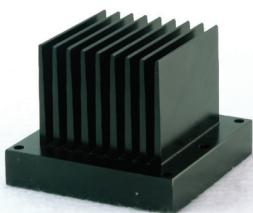
OSOLON Square: OSRAMs most compact 2W high power LED with extremely low thermal resistance, remarkable high efficiency, high reliable and superior corrosion robustness.

Current range from 200 to 1800mA

Many other wavelengths are available, such as IR, so if you don't see the wavelength value you are looking for, please ask.

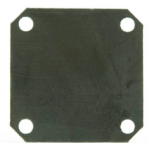


## Accessories Designed for the PowerCluster



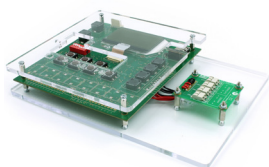
Heat Sink kits with pre-tapped screw holes and mounting screws. Standard size of 70x70x55mm. They also come with Thermal Interface Material (TIM) attached to the top surface and mounting screws. Available in Black.

IHS have produced a range of high-performance, cost effective Thermal Interface Materials (TIM) to perfectly match their standard products.



Our product fills the air pockets between the two surfaces, forming a continuous layer to conduct heat away from the LED to the heatsink. As you'd imagine, this is why it's called thermal interface material. IHS offer TIM in three options – double sided adhesive, single sided adhesive and no adhesive.

IHS have developed a driver to help in the development of Tuneable White and RGB/RGBW LED products. The PSU can also be used with any system that requires up to 4 channels of controllable LED drive.



Select from our range of IP rated AC/DC LED drivers suitable for use with our range of LED engines. All tried and tested ready to plug and play...



The majority of the products in this flyer are available for sale through RS. If you require small quantities please go to their website to check their stock situation.

## Product Options

IHS Part Number	Description	Typical Current mA	240-790nm Total radiometric flux	PAR 400-700nm PPF $\mu\text{mol/s}$	PAR 360-780nm PPF $\mu\text{mol/s}$
IHR-XO09-S380-SC211-WIR200.	TSLC N3535U 9 PowerCluster UV 385nm	350	3708 mW	0.64	11.96
IHR-XO09-S390-SC211-WIR200.	TSLC N3535U 9 PowerCluster UV 395nm	350	4068 mW	3.84	13.45
IHR-XO09-S400-SC211-WIR200.	TSLC N3535U 9 PowerCluster UV 405nm	350	4446 mW	12.54	15.15
IHR-XO09-S410-SC211-WIR200.	TSLC N3535U 9 PowerCluster UV 415nm	350	4446 mW	14.71	15.47
IHR-OM09-DEBL-SC221-WIR200.	OSLON 120 9 PowerCluster Deep Blue 445nm	350	6390 mW	24.09	24.13
IHR-OW09-BLUE-SC221-WIR200.	OSLON 150 9 PowerCluster Blue 465nm	350	5181 lm	20.15	20.18
IHR-OM09-TRGR-SC221-WIR200.	OSLON 120 9 PowerCluster True Green 519nm	350	2839 lm	12.43	12.43
IHR-OW09-YELL-SC221-WIR200.	OSLON 150 9 PowerCluster Yellow 594nm	350	1619 lm	8.01	8.01
IHR-OM09-RDOR-SC221-WIR200.	OSLON 120 9 PowerCluster Amber 617nm	350	4548 lm	23.69	23.69
IHR-OW09-RED1-SC221-WIR200.	OSLON 150 9 PowerCluster Red 625nm	350	3997 lm	21.06	21.06
IHR-OM09-HYRE-SC221-WIR200.	OSLON 120 9 PowerCluster Hyper Red 656nm	350	4500 mW	24.55	24.62
IHR-OM09-FRED-SC221-WIR200.	OSLON 120 9 PowerCluster Far Red 730nm	350	2835 mW	2.35	16.98
IHR-OW09-HW90-SC221-WIR200.	OSLON 150 9 PowerCluster Hot White 2700K 90 CRI	350	2894 lm	13.25	14.43
IHR-OW09-WM80-SC221-WIR200.	OSLON 150 9 PowerCluster Warm White 3000K 80 CRI	350	3785 lm	17.26	18.52
IHR-OW09-QZ90-SC221-WIR200.	OSLON 150 9 PowerCluster Quartz White 3500K 90 CRI	350	3123 lm	14.12	15.13
IHR-OW09-NW80-SC221-WIR200.	OSLON 1509 PowerCluster Neutral White 4000K 80 CRI	350	3170mW	14.41	14.92
IHR-OW09-WH80-SC221-WIR200.	OSLON 150 9 PowerCluster White 5000K 80 CRI	350	4183 lm	18.47	19.28
IHR-OW09-UL70-SC221-WIR200.	OSLON 150 9 PowerCluster Ultra White 6500K 70 CRI	350	4425 lm	19.19	19.71
IHR-OG09-DEBL-SC221-WIR200.	OSLON Square 3rd Gen 9 PowerCluster Deep Blue 445nm	700	11187 mW	42.18	42.24
IHR-OG09-HYRE-SC221-WIR200.	OSLON Square 3rd Gen 9 PowerCluster Hyper Red 656nm	700	7875 mW	42.95	43.08
IHR-OG09-HW90-SC221-WIR200.	OSLON Square 3rd Gen 9 PowerCluster Hot White 2700K 90 CRI	700	5049 lm	23.11	25.18
IHR-OG09-WM80-SC221-WIR200.	OSLON Square 3rd Gen 9 PowerCluster Warm White 3000K 80 CRI	700	6609 lm	30.14	32.34
IHR-OG09-QZ90-SC221-WIR200.	OSLON Square 3rd Gen 9 PowerCluster Quartz White 3500K 90 CRI	700	5465 lm	24.70	26.47
IHR-OG09-NW80-SC221-WIR200.	OSLON Square 3rd Gen 9 PowerCluster Neutral White 4000K 80 CRI	700	6780mW	30.87	31.97
IHR-OG09-WH80-SC221-WIR200.	OSLON Square 3rd Gen 9 PowerCluster White 5000K 80 CRI	700	7321 lm	32.33	33.74
IHR-OG09-UL70-SC221-WIR200.	OSLON Square 3rd Gen 9 PowerCluster Ultra White 6500K 70 CRI	700	7759 lm	33.64	34.56

### For further information please contact IHS

The values contained in this data sheet can change due to technical innovations. Any such changes will be made without separate notification.

Intelligent Horticultural Solutions is a division of Intelligent LED Solutions focusing on providing LED solutions to the rapidly evolving and highly important horticultural lighting market.