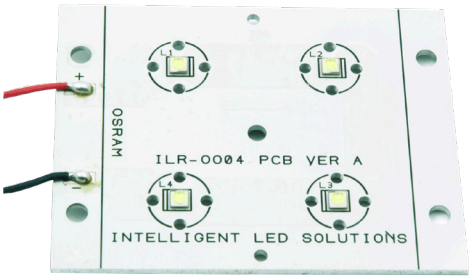
OSLON® Square 4 High Bay

ILB-OO04-xxxx-SC211-WIR200.

Product Overview

At the heart of the High Bay Cluster are 4 OSLON® SSL Square ThinGan (UX:3) LEDs. OSLON® SSL can be driven up to 1800mA while OSRAM's latest power chip technology remains efficient even at the highest drive currents. A low thermal resistance of 7K/W ensures cool running and a highly efficient product. The High Bay Clusters use the highest thermal MCPCB. The top surface of the aluminium has been converted to nano-ceramic which is exceptionally thermally conductive. The High Bay 4 Cluster has also been designed to work in conjunction with a High Bay 2x2 Lens from LEDiL, however additional mounting holes have been drilled in to the PCB to allow the use of other LEDiL lens such as Tina2s and Heidi.



ILS are also to introduce a 2x6 LED PCB

Applications

- High Bay Lighting
- Street Lighting
- Retail Entertainment Lighting

Technical Features

- High Bay Clusters contain OSRAM Opto Semiconductors OSLON® SSL Square LEDS with integral 120 degree silicone resin Lenses
- Up to 100,000 Hour lifetime to 70% of original brightness
- Mounting holes using M3 screws allows easy installation
- Size (L x W x H): 50mm x 65mm x 3.85mm
- Available with 200mm connecting wires
- Secondary Lens can be fitted – check options in Lens and Reflector section
- Suitable Heat Sinks available – check options in Heatsink section
- Matching Power Supply available - check options in Power Supply section
- High Bay Clusters can be linked together to produce longer chains
- Current range 200 to 1,800mA

*This datasheet should be read in conjunction with the relevant OSRAM Opto Semiconductors data on the LED used

DATASHEET

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Important Information and Precautions

- The High Bay's LEDs, when powered up are very bright. Thus it is advised that you do not look directly at it. Turn the High Bay away from you and do not shine into the eyes of others.
- Do not operate High Bay's with a Power Supply with unlimited current. Connection to constant voltage Power Supplies that are not current limited may cause the High Bay to consume current above the specified maximum and cause failure or irreparable damage.
- High Bay's, when operated, can reach high temperatures thus there is risk of injury if they are touched.
- DO NOT HOT PLUG ON LED SIDE OF POWER SUPPLY.
- DO NOT TOUCH or PUSH on the LED as this can cause irreparable damage.

Product Options

ILS PART NUMBER	Colour	Colour Temp* (Degrees Kelvin)	TypicalWattage §			Forward Voltage	Flux † at 700mA	Radiance Angle	Relevant OSRAM LED Data
			at 350mA	@700mA	1000mA				
ILB-OO04-FLWH-SC211-WIR200.	Fire Light White	2400K	3.92W	7.84W	11.2W	10.8-12.8 Volts	>776 lm	120° +/- 60°	LCWCQAR.EC
ILB-OO04-HWWH-SC211-WIR200.	Hot White	2700K	3.92W	7.84W	11.2W	10.8-12.8 Volts	>840 lm	120° +/- 60°	LCWCQAR.EC
ILB-OO04-WMWH-SC211-WIR200.	Warm White	3000K	3.92W	7.84W	11.2W	10.8-12.8 Volts	>896 lm	120° +/- 60°	LCWCQAR.EC
ILB-OO04-QZWH-SC211-WIR200.	Quartz White	3500K	3.92W	7.84W	11.2W	10.8-12.8 Volts	>960 lm	120° +/- 60°	LCWCQAR.EC
ILB-OO04-NUWH-SC211-WIR200.	Neutral White	4000K	3.92W	7.84W	11.2W	10.8-12.8 Volts	>1036 lm	120° +/- 60°	LCWCQAR.EC
ILB-OO04-WHWH-SC211-WIR200.	White	5000K	3.92W	7.84W	11.2W	10.8-12.8 Volts	>960 lm	120° +/- 60°	LCWCQAR.EC
ILB-OO04-STWH-SC211-WIR200.	Street White	5700K	3.92W	7.84W	11.2W	10.8-12.8 Volts	>960 lm	120° +/- 60°	LUWCQAR
ILB-OO04-ULWH-SC211-WIR200.	Ultra White	6500K	3.92W	7.84W	11.2W	10.8-12.8 Volts	>960 lm	120° +/- 60°	LUWCQAR

*Due to the special conditions of the manufacturing processes of LEDs, the typical data of technical parameters can only reflect statistical figures and do not necessarily correspond to the actual parameters of each single product which could differ from the typical data.
§ Tolerance +/- 10%
† Measured with 20mS 700mA pulse at 25˚c

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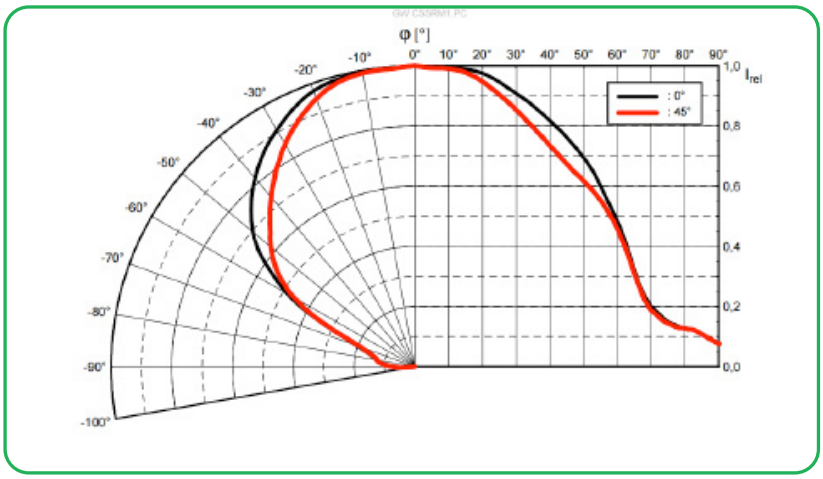
Minimum and Maximum Ratings

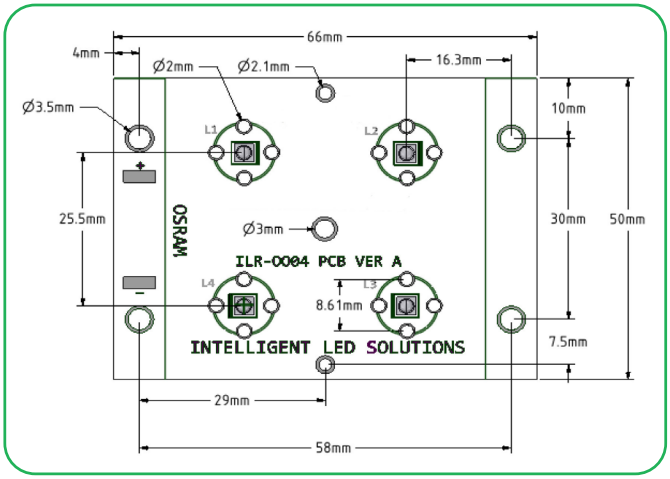
ILS PART NUMBER	Operating Temperature at Tc-Point [°C]*	Storage Temperature [°C]*	Forward Current per chip [mA]*	Reverse Voltage [Vdc]*
ILB-OO04-FLWH-SC211-WIR200.	70°C max	- 40 to 110°C	1800mA max	not designed for reverse voltage
ILB-OO04-HWWH-SC211-WIR200.	70°C max	- 40 to 110°C	1800mA max	not designed for reverse voltage
ILB-OO04-WMWH-SC211-WIR200.	70°C max	- 40 to 110°C	1800mA max	not designed for reverse voltage
ILB-OO04-QZWH-SC211-WIR200.	70°C max	- 40 to 110°C	1800mA max	not designed for reverse voltage
ILB-OO04-NUWH-SC211-WIR200.	70°C max	- 40 to 110°C	1800mA max	not designed for reverse voltage
ILB-OO04-WHWH-SC211-WIR200.	70°C max	- 40 to 110°C	1800mA max	not designed for reverse voltage
ILB-OO04-STWH-SC211-WIR200.	70°C max	- 40 to 110°C	1800mA max	not designed for reverse voltage
ILB-OO04-ULWH-SC211-WIR200.	70°C max	- 40 to 110°C	1800mA max	not designed for reverse voltage
ILB-OO04-DEBL-SC211-WIR200.	70°C max	- 40 to 110°C	1800mA max	not designed for reverse voltage

* Exceeding maximum ratings for operating and storage temperature will reduce expected life time or destroy the LED module. Exceeding maximum ratings for operating voltage will cause hazardous overload and will likely destroy the LED module. The temperature of the LED module must be measured at the Tc-Point according to EN60598-1 in a thermally constant status with a temperature sensor or a temperature sensitive label.

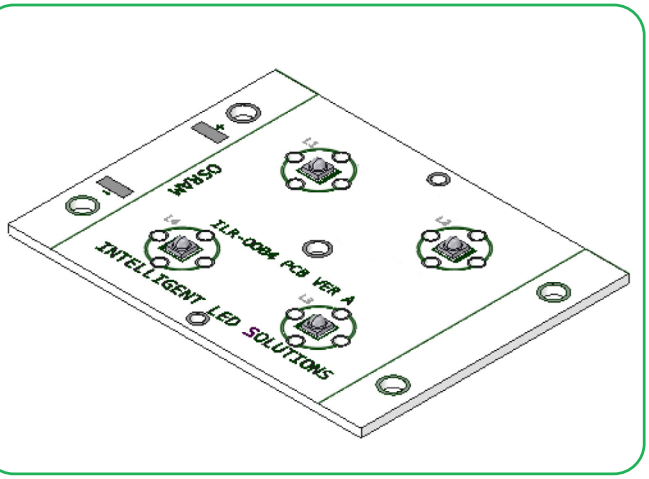
Radiation of single LED



Technical Drawing



3D Drawing



OSLON® Square 4 High Bay Lens and Reflector Options

LEDiL precision-engineered Lenses and Reflectors allow for rapid deployment of all types of light fixtures, including street lights, wall-wash, high-bay, sconces, emergency beacons, parking garage/low-bay, MR and AR downlights, and dock lights. Precision-engineered for maximum efficiency and durability, LEDiL Lenses and Reflectors are released alongside the latest product releases from our LED suppliers. You select the best LED for the application; choose LEDiL and you're selecting the best optical solution as well.

ILS PART NUMBER	OSLON 80 Beam Angle (FWHM)	OSLON 150 Beam Angle (FWHM)	OSLON Square Beam Angle (FWHM)	Mounting Type
C13749_HB-2X2-O	N/A	N/A	25+124	Pin, Glue
C14541_HB-2X2-RS	N/A	N/A	11	Pin, Glue
C12361_HB-2X2-W	43	N/A	54	Pin, Glue
C13232_HB-2X2-WW	54	N/A	63	Pin, Glue
C13233_HB-2X2-M	N/A	N/A	30	Pin, Glue
C13237_HB-2X2-WW-BLIND	N/A	N/A	65	Pin, Glue
C13239_HB-2X2-M-BLIND	N/A	N/A	30	Pin, Glue
C13605_HB-2X2-RW	46	N/A	50	Pin, Glue
C14724_HB-2X2-WWW	82	N/A	N/A	Pin, Glue
C14556_STRADA-2X2-TF	N/A	N/A	Asymmetric	Pin, Glue
C13936_STRADA-2X2-B2-STP	N/A	N/A	120+48	Pin, Glue
C13937_STRADA-2X2-C-STP	Asymmetric	Asymmetric	130	Pin, Glue
C13299_STRADA-2X2-ME	Asymmetric	Asymmetric	Asymmetric	Pin, Glue
C13300_STRADA-2X2-T2	Asymmetric	Asymmetric	Asymmetric	Pin, Glue
C13604_STRADA-2X2-FN	Asymmetric	Asymmetric	Asymmetric	Pin, Glue
C13301_STRADA-2X2-T3	Asymmetric	Asymmetric	Asymmetric	Pin, Glue
C13699_STRADA-2X2-DN	Asymmetric	Asymmetric	Asymmetric	Pin, Glue
C12360_STRADA-2X2-DNW	Asymmetric	Asymmetric	Asymmetric	Pin, Glue
C12362_STRADA-2X2-DWC	Asymmetric	Asymmetric	Asymmetric	Pin, Glue
C12419_STRADA-2X2-A-T	Asymmetric	Asymmetric	Asymmetric	Pin, Glue
C13499_STRADA-2X2-CY	Asymmetric	Asymmetric	122+122	Pin, Glue
C13805_STRADA-2X2-T4	Asymmetric	Asymmetric	Asymmetric	Pin, Glue

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ILS PART NUMBER	OSLON 80 Beam Angle (FWHM)	OSLON 150 Beam Angle (FWHM)	OSLON Square Beam Angle (FWHM)	Mounting Type
C13858_STRADA-2X2-XW	Asymmetric	Asymmetric	Asymmetric	Pin, Glue
C14109_STRADA-2X2-NHS	Asymmetric	Asymmetric	Asymmetric	Pin, Glue
C14116_STRADA-2X2-PX	Asymmetric	Asymmetric	Asymmetric	Pin, Glue
C14164_STRADA-2X2-ME-WIDE1	Asymmetric	Asymmetric	Asymmetric	Pin, Glue

OSLON® Square 4 High Bay Heatsink Options

ILS has a series of Aluminium Alloy Heatsinks to be used with our standard range of PowerStars and PowerClusters. These Heatsinks are supplied with fixing screws for the light engine and for fixing to a base plate. They also come with Thermal Interface Material (TIM) attached to the top surface. More versions will be introduced over the coming months and we are also happy to manufacture custom Heatsinks to your request.

	Operates under the recommended ILS junction temperature
	Operates under the recommended LED maximum junction temperature
	Not suitable for use
N/A	Heatsink not designed for use with this product

ILS Product	Drive Current	No Heatsink, in free air	LA-HSINK-CLUSTER-70X70X55MM.
OSLON 4 High Bay	350mA		
	500mA		
	700mA		
	1050mA		
	1400mA		
	1800mA		

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OSLON® Square 4 High Bay Power Supply Options

ILS has a comprehensive range of standard Power Supplies. The table below shows the total number of ILS products each Power Supply can drive.

Additional Power Supplies are being introduced so please call us or check our website for the latest offering. Constant Current LED Drivers

ILS Driver Part No.	Rating (W)	Current	OSLON® SSL Square High Bay	
IZC035-008F-5065C-SA	8	350mA	1-3	
IZC035-017F-0067A-SA	17	350mA	1-4	
IZC035-018T-9500A-SA	18	350mA	2-4	
IZC050-018T-9500A-SA	18	500mA	1-3	
IZC070-018T-9500A-SA	18	700mA	1-2	
IZC070-035F-0067C-SA	35	700mA	1-4	
IZC045-040A-9266C-SA	40	450mA	3-7	
IZC070-050A-9267C-SA	50	700mA	2-6	
IZC070-075A-9267C-SA	75	700mA	5-9	

Thermal Interface Material Options

ILS have produced a range of High-performance, cost effective Thermal Interface Materials to match perfectly 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.

ILS offer our TIM in three options – double sided adhesive, single sided adhesive and non-adhesive.

Product	Non Adhesive	Single Sided Adhesive	Double Sided Adhesive
2x2 High Bay	ILA-TIM-HB-66X50MM-0A	ILA-TIM-HB-66X50MM-1A	ILA-TIM-HB-66X50MM-2A

Other sizes are available, including customised parts

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Assembly Information

- In order to optimise the thermal management, the metal surface needs to be clean (dirt and oil free) and planar for the best contact with the LED module. A thermal grease or heat transfer material is highly recommended.

Safety Information

- The LED module itself and all its components must not be mechanically stressed.
- Assembly must not damage or destroy conducting paths on the circuit board.
- The mounting of the module is carried out by attaching it at the mounting holes. Metal mounting screws must be insulated with synthetic washers to prevent circuit board damage and possible short circuiting.
- To avoid mechanical damage to the connecting cables, the boards should be attached securely to the intended substrate. Heavy vibration should be avoided.
- Observe correct polarity!
- Depending on the product, incorrect polarity will lead to emission of red or no light. The module can be destroyed!
- Pay attention to standard ESD precautions when installing the High Bay.
- The High Bay, as manufactured, have no conformal coating and therefore offer no inherent protection against corrosion.
- Damage by corrosion will not be accepted as a materials defect claim. It is the user's responsibility to provide suitable protection against corrosive agents such as moisture and condensation and other harmful elements.
- For outdoor usage, housing is definitely required to protect the board against environmental influences. The design of the housing must correspond to the IP standards in the application. It is also the responsibility of the user to ensure any housing or modifications keep the Tc junction temperature to within stated ranges.
- To also ease the luminaire/installation approval, electronic control gear for LED or LED modules should carry the CE mark and be ENEC certified. In Europe the declarations of conformity must include the following standards: CE: EC
- 61374-2-13, EN 55015, IEC 61547 and IEC 61000-3-2 - ENEC: 61374-2-13 and IEC/EN 62384.
- The evaluation of eye safety occurs according to the standard IEC 62471:2006 ("photobiological safety of lamps and lamp systems"). Within the risk grouping system of this CIE standard, the LED specified in this data sheet falls into the class "moderate risk" (exposure time 0.25s). Under real circumstances (for exposure time, eye pupils, observation distance), it is assumed that no endangerment to the eye exists from these devices. As a matter of principle, however, it should be mentioned that intense light sources have a high secondary exposure potential due to their blinding effect. As is also true when viewing other bright light sources (e.g. headlights), temporary reduction in visual acuity and afterimages can occur, leading to irritation, annoyance, visual impairment and even accidents, depending on the situation.

For further information please contact ILS

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

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