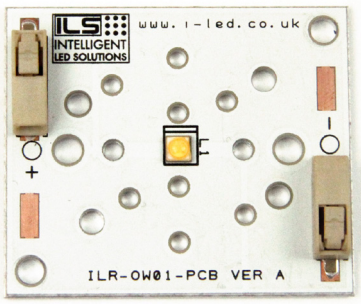
LEDiL Selector OSLON® SSL Light Engine

ILR-O#01-NUWH-LEDIL-SC221-WIR200.

Product Overview

The LEDiL Selector board from ILS is the latest light engine designed to explore which secondary optic works best with OSRAM OSLON® LEDs. There are 3 types of LEDiL selector boards which represent each member of the OSLON® family; OSLON® 80, OSLON® 150 and OSLON® Square (120). The LEDiL Selector has been designed to work with most single source optics from LEDiL and can be connected to an LED driver thanks to the on board connectors. OSLON® SSL 80 and 150 can be driven up to 1300mA whilst the square can be driven up to 1800mA while OSRAM's power chip technology remains efficient even at the highest drive currents. A very low thermal resistance ensures cool running and a highly efficient product.



Applications

- Prototyping
- Selecting correct lenses for designs

Technical Features

- LEDiL Selectors with a part number of ILR-ON01 use a single OSRAM Opto Semi OSLON® SSL 80
- LEDiL Selectors with a part number of ILR-OW01 use a single OSRAM Opto Semi OSLON® SSL 150
- LEDiL Selectors with a part number of ILR-OO01 use a single OSRAM Opto Semi OSLON® SSL Square
- Up to 50,000 hours lifetime to 70% of original brightness
- Mounting holes using M3 screws allow easy installation
- Size (L40 x W35 x H3.0mm
- Current range 200mA to 1800mA*

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

Important Information and Precautions

- LEDiL Selectors, when powered up, are very bright. Thus it is advised that you do not look directly at it. Turn the Light Engine away from you and do not shine into the eyes of others.
- Do not operate Light Engine with a Power Supply with unlimited current. Connection to constant voltage Power Supplies that are not current limited may cause the PowerStar to consume current above the specified maximum and cause failure or irreparable damage.
- LEDiL Selectors, 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)	Typical Wattage § at 350mA	Forward Voltage	Flux † at 350mA	Radiance Angle	Relevant OSRAM LED Data
ILR-ON01-NUWH-SC221-WIR200.	Neutral White	4000K	1.03	2.8-3.25V	130lms	80° (±40°)	GW CS8PM1.EM
ILR-OW01-NUWH-SC221-WIR200.	Neutral White	4000K	1.03	2.8-3.25V	130lms	150° (±75°)	GW CSHPM1.EM
ILR-OO01-NUWH-SC221-WIR200.	Neutral White	4000K	1.03	2.8-3.25V	135lms	120° (±60°)	GW CSSRM1.EC

*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%

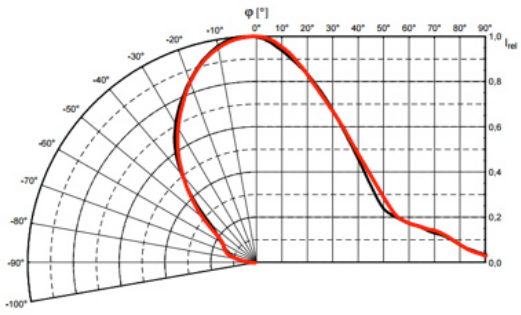
† Measured with 20mS 350mA pulse at 25˚c

Minimum and Maximum Ratings

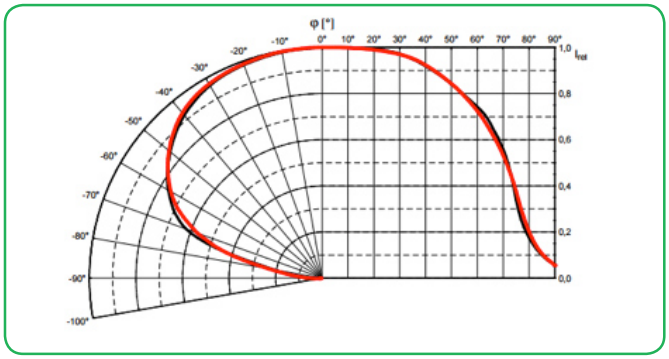
ILS PART NUMBER	Operating Temperature at Tc-Point [˚C]*	Storage Temperature [˚C]*	Forward Current per Chip [mA]*	Reverse Voltage [Vdc]*
ILR-ON01-NUWH-SC221- WIR200.	-40 ... 125 (°C)	-40 ... 125 (°C)	1300mA	Not designed for reverse voltage
ILR-OW01-NUWH-SC221-WIR200.	-40 ... 125 (°C)	-40 ... 125 (°C)	1300mA	Not designed for reverse voltage
ILR-OO01-NUWH-SC221-WIR200.	-40 ... 125 (°C)	-40 ... 125 (°C)	1800mA	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.

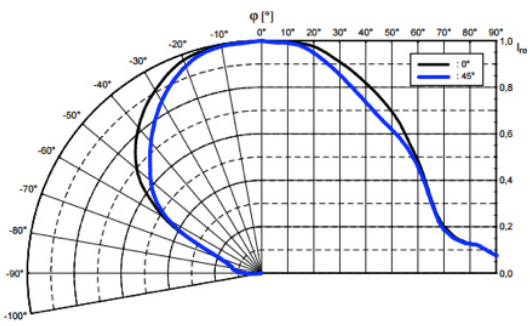
Radiation of Single LED (OSLON 80)



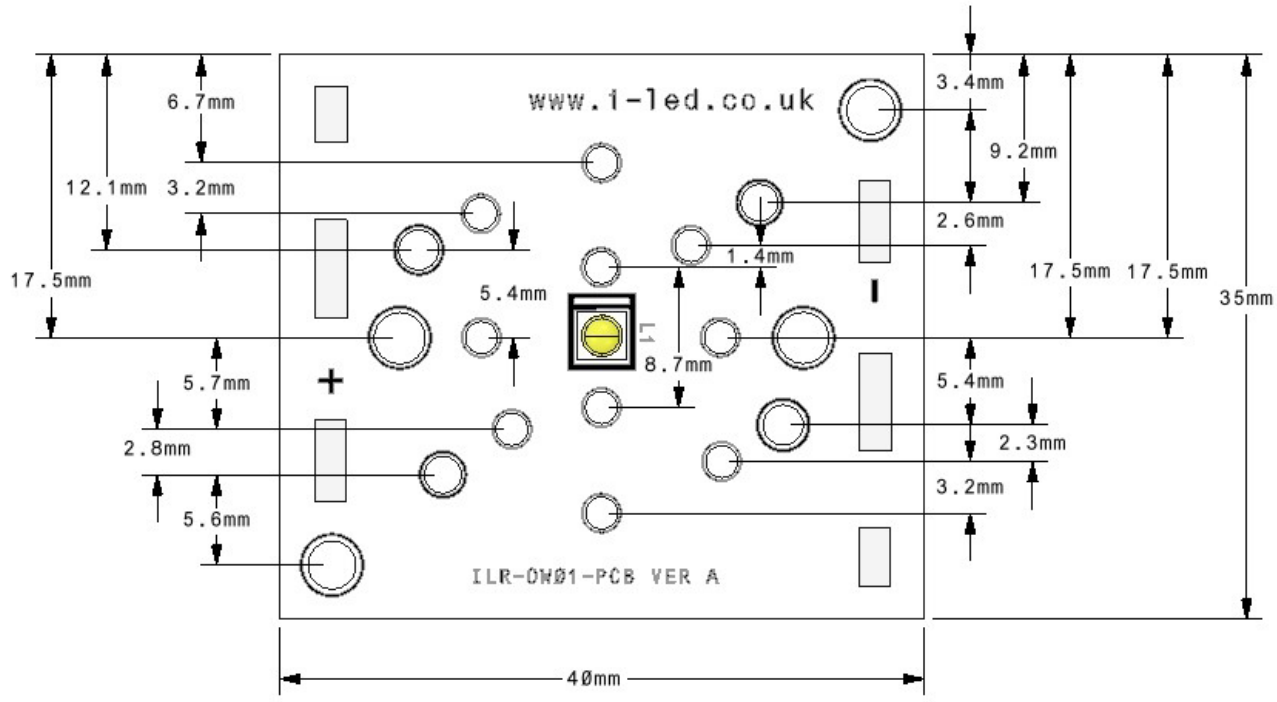
Radiation of Single LED (OSLON 150)



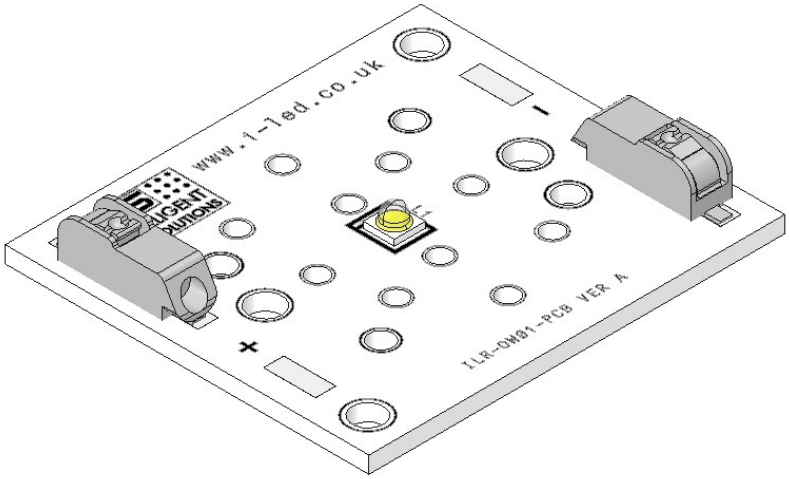
Radiation of Single LED (OSLON Square)



Technical Drawings

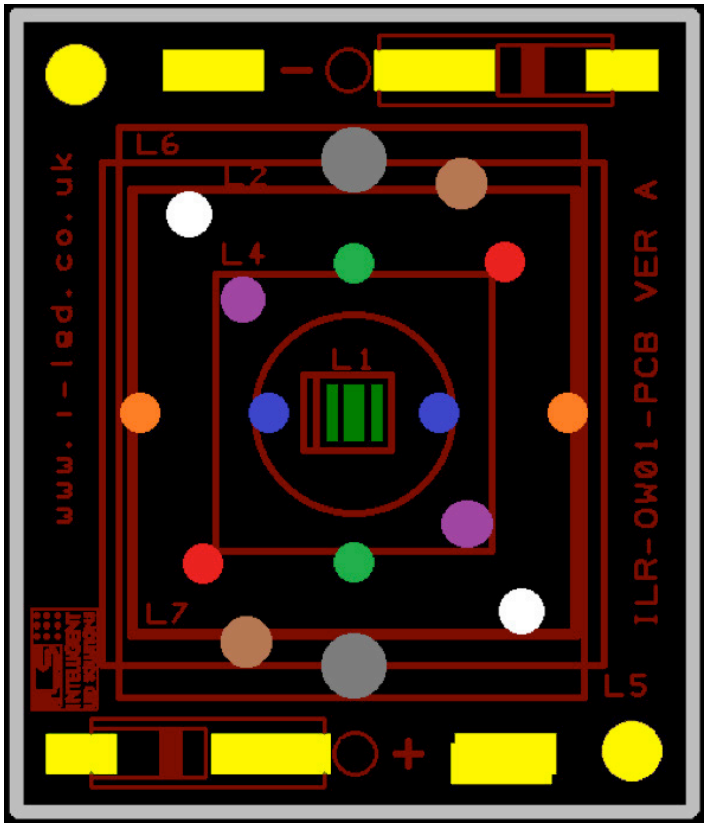


3D Drawings



1 OSLON® LEDiL Selector 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 down lights, 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. The LEDiL selector LED Engine is compatible with over 1000 lens, consult the illustration below to check which lenses are compatible and where these would fix on the PCB. Other compatible families for the LEDiL selector. Consult the table and image of the PCB below for lens locations.



Family	Locator Pin
AMELIA	RED
BILLIE	BLUE
CRYSTAL	RED
EMERALD	BLUE
EMILY	BLUE
EMMA	BLUE
EVA	NO HOLE NEEDED
EYA	NO HOLE NEEDED
FLARE	WHITE
FLARE-MINI	BLUE
FLARE-MAXI	ORANGE
FLORENTINA-1	RED
FRIDA	BLUE
HEIDI	BLUE
IRENE	BLUE
IRINA	BLUE
IRIS	BLUE
JULIA	BLUE
KIKI	ORANGE
LARISA	BLUE
LAURA	BLUE
LEILA	BLUE
LISA2	BLUE
LOTTA	BLUE
MIRELLA	BLUE
OONA	NO HOLE NEEDED
REGINA	BLUE
RITA	BLUE
ROSE	GREEN
SEANNA	NO HOLE NEEDED
SIRI	BLUE
STRADA-A	BLUE
STRADA-C2	BLUE
STRADA-D	BLUE
STRADA FORWARD	BLUE
STRADA-K	BLUE
STRADA-S	BLUE
STRADA-SQ	ORANGE
STRADA-T	BLUE
STRADELLA	BLUE
TINA	BLUE
TINA2	BLUE
TINA3	BLUE
TWIDDLE	BLUE
VERONICA	GREEN
VERONICA-MINI	PURPLE
VERONICA-SQUARE	RED
VERONICA-ROUND	ORANGE
ZOWIE	NO HOLE NEEDED

1 OSLON® LEDiL Selector Heat Sink Options

ILS has a series of Aluminium Alloy Heat Sinks to be used with our standard range of PowerStars, PowerClusters and PowerLinear Engines. These Heat Sinks 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. Available in Black, Red, Silver and Blue colour variants. More versions will be introduced over the coming months and we are also happy to manufacture custom Heat Sinks to your request.

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

ILS Product	Drive Current	No Heat Sink, in free air	ILA-HSINK-STAR-50X20MM.	ILA-HSINK-STAR-50X40MM.	ILA-HSINK-STAR-50X60MM.	ILA-HSINK-STAR-50X80MM.	ILA-HSINK-CLUSTER-70X70X55MM.	ILA-HSINK-CLUSTER-78X46X25MM.
LEDiL Selector PCB	350mA		N/A	N/A	N/A	N/A	N/A	
	700mA		N/A	N/A	N/A	N/A	N/A	
	1000mA		N/A	N/A	N/A	N/A	N/A	

1 OSLON® LEDiL Selector 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 Types

ILS Driver Part Number	Rating Watts	Output	IP Rating	Output Volts	PF	Dimming	
IZC015-005F-0067C-QA	5	150mA	IP67	20-33	0.6	NO	
IZC035-005F-0067C-QA	5	350mA	IP67	2-12	0.6	NO	
IZC070-005F-0067C-QA	5	700mA	IP67	2-5	0.6	NO	
IZC035-008F-5065C-SA	8	350mA	IP65	3-36	0.5	NO	
IZC070-008F-5065C-SA	8	700mA	IP65	3-12	0.5	NO	
IZCXXX-012T-8000-SA	12	350mA - 1050mA	IPZ0	2-27	0.8	YES	

ILS Driver Part Number	Rating Watts	Output	IP Rating	Output Volts	PF	Dimming	
IZC035-017F-0067A-SA	17	350mA	IP67	6-48	0.6	NO	
IZC035-018T-9500A-SX	18	350mA	IP20	15-52	1	Triac	
IZC050-018T-9500A-SX	18	500mA	IP20	9-36	1	Triac	
IZC070-018T-9500A-SX	18	700mA	IP20	6-26	1	Triac	
IZC035-035F-9067C-QA	35	350mA	IP67	40-50	0.9	NO	
IZC070-035F-0067C-SA	35	700mA	IP67	9-48	0.6	NO	
IZC105-035F-9067C-QA	35	1.05A	IP67	16-32	0.9	NO	
IZC045-040A-9266C-SA	40	450mA	IP66	30-89	0.9	0-10 v	
IZC105-040A-0067C-QA	40	1.05A	IP67	24-40	0	0-10 v	
IZC070-050A-9267C-SA	50	700mA	IP67	24-72	0.9	0-10 v	
IZC050-060F-9067C-QA	60	500mA	IP67	40-110	0.9	NO	
IZC105-060F-9067C-QA	60	1.05A	IP67	30-60	0.9	NO	
IZC140-060F-9067C-QA	60	1.4A	IP67	20-42	0.9	NO	
IZC070-075A-9267C-SA	75	700mA	IP67	54-108	0.9	0-10 v	
IZC140-075F-9067A-QAL	75	1400mA	IP67	30-53	0.9	NO	

Thermal Interface Material Options

ILS have produced a range of High-performance, cost effective Thermal Interface Materials to match perfectly with 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 Heat Sink. 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
LEDiL Selector	ILA-TIM-LEDIL-40x35-0A	ILA-TIM-LEDIL-40x35-1A	ILA-TIM-LEDIL-40x35-2A

Assembly Information

- The mounting of the OSLON® LEDiL Selector has to be on a metal Heat Sink.
- 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 OSLON® LEDiL Selector.
- The OSLON® LEDiL Selector, 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, a 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 housings 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.