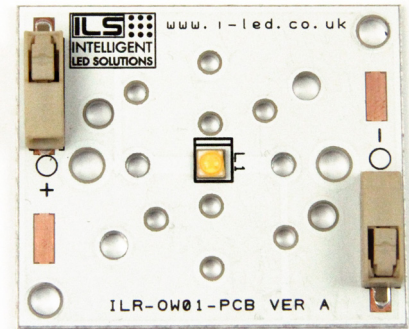


1 OSLO[®] Square Uniform White LEDiL Selector CRI90

ILR-OU01-xx90-LEDIL-SC221.

Product Overview

The LEDiL Selector board from ILS is the latest light engine designed to explore which secondary optic works best with OSRAM OSLO[®] LEDs. At the heart of each OSLO[®] Square Uniform LEDiL Selector is one of the worlds most compact 2W high power LEDs with extremely low thermal resistance, remarkable high efficiency, highly reliable and superior corrosion robustness. The OSLO Square Uniform has an improved radiation pattern and superior color-over-angle performance. 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.



Applications

- General Lighting
- Prototyping
- Selecting the correct lenses for designs
- Plug and play
- Wall-washing
- Architectural lighting

Technical Features

- OSLO[®] Square Uniform LEDiL Selector Boards contain a single OSRAM Opto Semiconductors OSLO[®] Square Uniform LED
- Up to 100,000 hours lifetime to 70% of original brightness
- Mounting holes using M3 screws allow easy installation
- Size (LxWxH): 40 x 35 x 3 mm
- Current range 200mA to 1800mA*
- High CRI 90 minimum
- Suitable Heatsinks available - please see Heatsink section
- Suitable Lenses available - Please see Lens section
- Suitable Drivers available - Please see drivers section
- Suitable Thermal Interface Material available - Please see Thermal Interface Material section

*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 LEDiL Selector away from you and do not shine into the eyes of others.
- Do not operate LEDiL Selector with a Power Supply with unlimited current. Connection to constant voltage Power Supplies that are not current limited may cause the LEDiL Selector 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	Typical Wattage § at 700mA	Forward Voltage	Flux † at 700mA	Radiance Angle	Relevant OS-RAM LED Data
ILR-OU01-HW90-LEDIL-SC221.	Hot White (2700K)	1.96W	2.7-3.2V	190lm	120° (±60°)	GWCSSRMU. CM
ILR-OU01-WM90-LEDIL-SC221.	Warm White (3000K)	1.96W	2.7-3.2V	200lm	120° (±60°)	GWCSSRMU. CM
ILR-OU01-QW90-LEDIL-SC221.	Quartz White (3500K)	1.96W	2.7-3.2V	210lm	120° (±60°)	GWCSSRMU. CM
ILR-OU01-NU90-LEDIL-SC221.	Neutral White (4000K)	1.96W	2.7-3.2V	220lm	120° (±60°)	GWCSSRMU. CM

* 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%

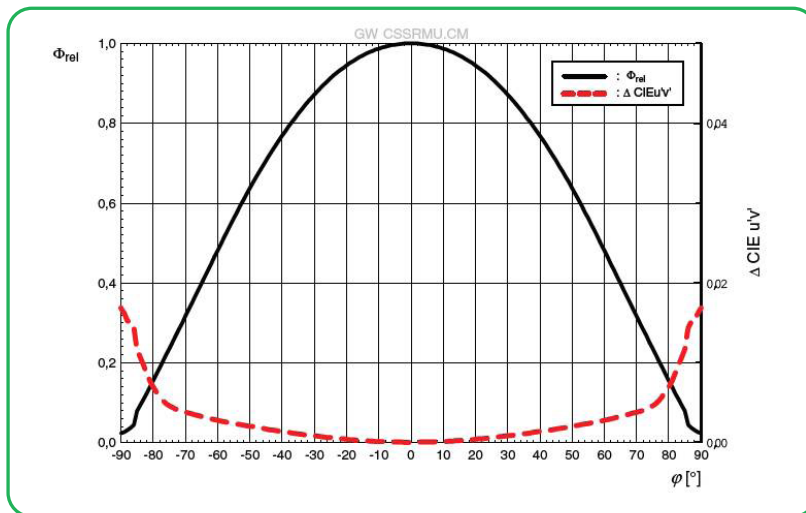
† Measured with 20mS 700mA pulse at 85 °C

Minimum and Maximum Ratings

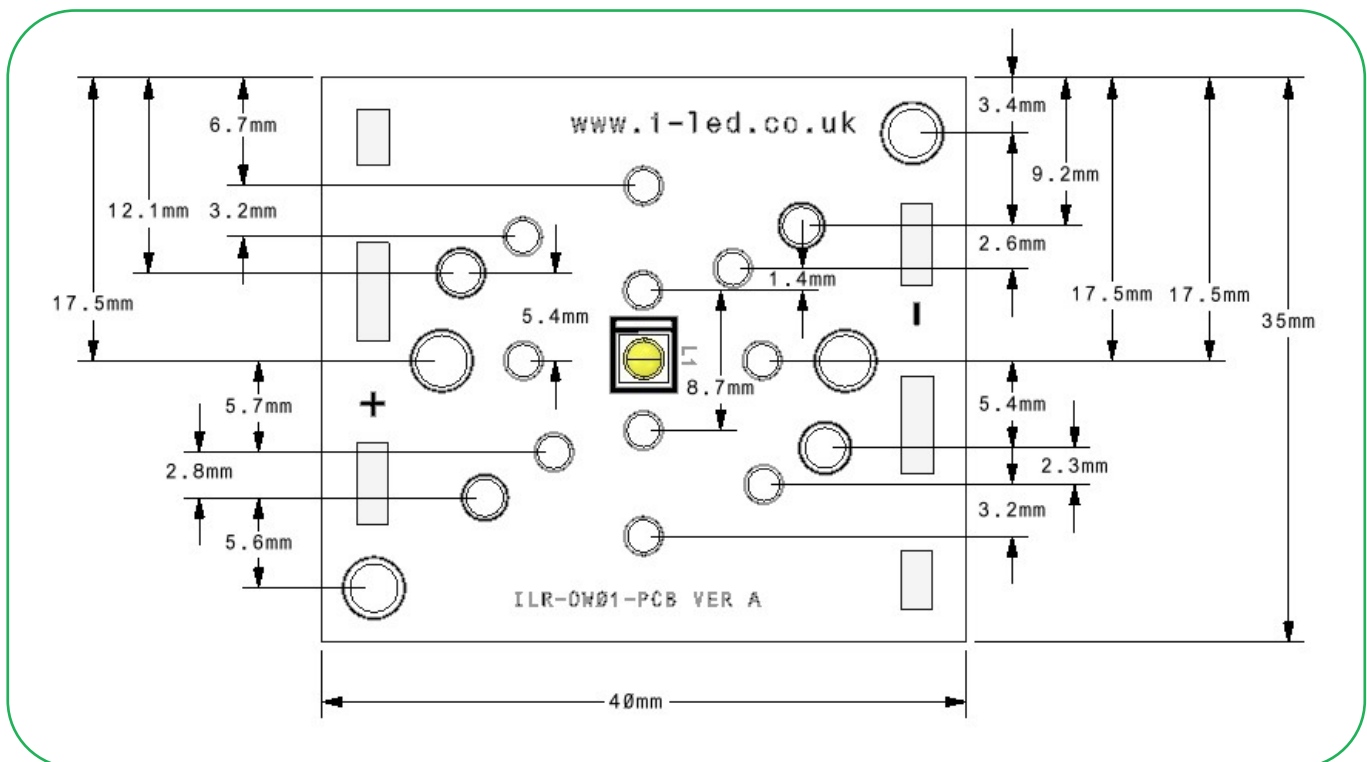
ILS PART NUMBER	Operating Temperature at Tc-Point [°C] *	Storage Temperature [°C] *	Forward Current per chip [mA] *	Reverse Voltage [Vdc] *
ILR-OU01-HW90-LEDIL-SC221.	-40 ... 125 (°C)	-40 ... 125 (°C)	200mA ... 1800mA	Not designed for reverse voltage
ILR-OU01-WM90-LEDIL-SC221.	-40 ... 125 (°C)	-40 ... 125 (°C)	200mA ... 1800mA	Not designed for reverse voltage
ILR-OU01-QW90-LEDIL-SC221.	-40 ... 125 (°C)	-40 ... 125 (°C)	200mA ... 1800mA	Not designed for reverse voltage
ILR-OU01-NU90-LEDIL-SC221.	-40 ... 125 (°C)	-40 ... 125 (°C)	200mA ... 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



Technical Drawing (mm)



3D drawing files are available on request from ILS. Please call or email

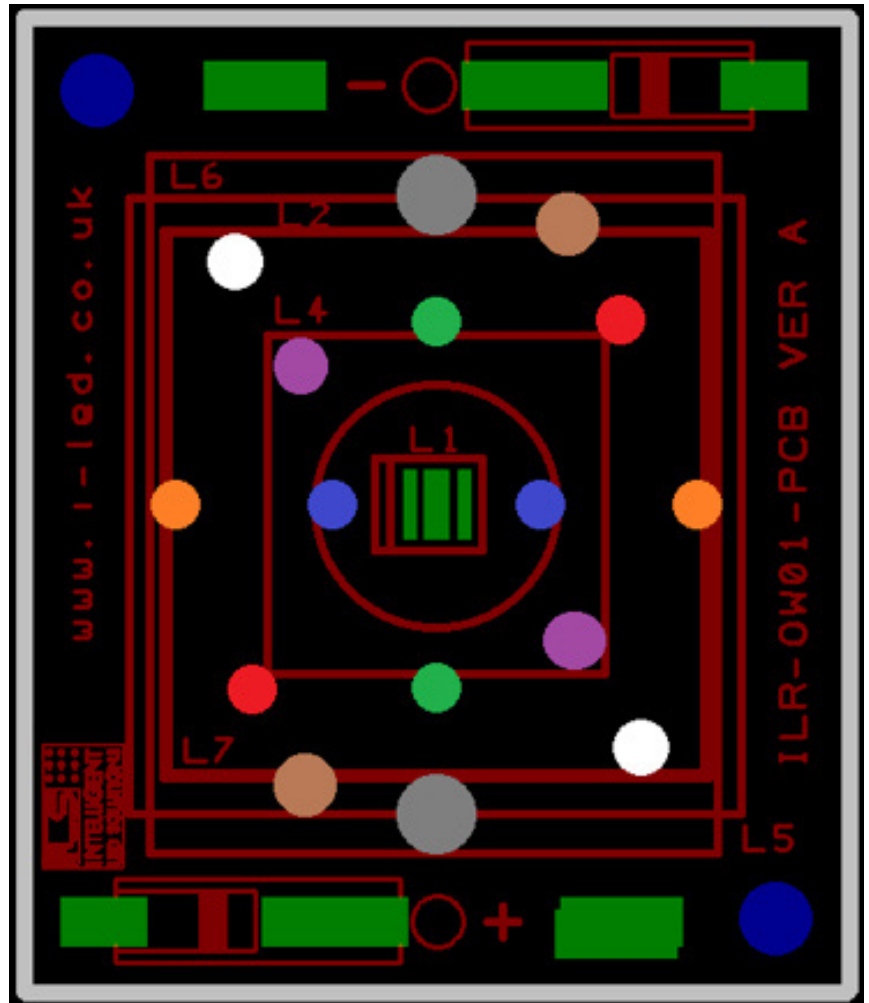
OSLON® Square Uniform LEDiL Selector Lens and Reflector Options



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 lenses, 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	N/A
EYA	N/A
FLARE	WHITE
FLARE-MINI	BLUE
FLORENTINA-1	RED
FRIDA	BLUE
HEIDI	RED
IRENE	BLUE
IRINA	BLUE
IRIS	BLUE
JULIA	BLUE
KIKI	ORANGE
LARISA	BLUE
LAURA	BLUE
LEILA	BLUE
LISA2	BLUE
LISA3	BLUE
LOTTA	BLUE
MIRELLA	BLUE
OONA	N/A
REGINA	BLUE
RITA	BLUE
ROSE	N/A
SEANNA	N/A
SIRI	BLUE
STRADA-A	BLUE
STRADA-C2	BLUE
STRADA-D	BLUE
STRADA FORWARD	BLUE
STRADA-K	BLUE



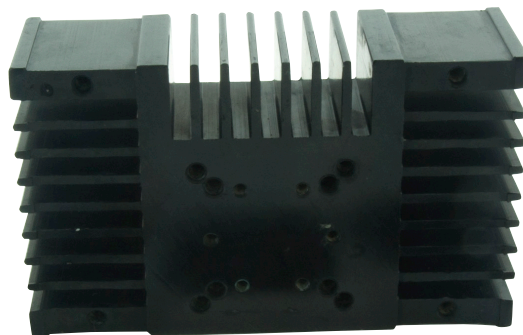
Family	Locator Pin
STRADA-S	BLUE
STRADA-SQ	N/A
STRADA-T	BLUE
STRADELLA	BLUE
TINA	BLUE
TINA2	BLUE
TINA3	BLUE
TWIDDLE	BLUE
VERONICA	GREEN
ZOWIE	N/A

OSLON® Square Uniform LEDiL Selector Heatsink Option

ILS has a series of Aluminium Alloy Heatsinks to be used with our standard range of PowerStars, PowerClusters and PowerLinear Engines. 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.

ILS Product		No Heatsink, in free air	ILA-HSINK-75X46X25MM
1 OSLON® LEDiL Selector	350mA	Yellow	Green
	700mA	Yellow	Green
	1000mA	Red	Green

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






OSLON Square Uniform 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.

ILS Driver Part No.	Rating Watts	Current	LED Driver Forward Voltage	
IZC035-008F-5065C-SA	8W	350mA	3-36V	
IZC035-017F-0067A-SA	17W	350mA	6-48V	
IZC035-018T-9500A-SX	18W	350mA	15-52V	
IZC050-018T-9500A-SX	18W	500mA	9-36V	
IZC070-018T-9500A-SX	18W	700mA	6-26V	
IZC070-035F-0067C-SA	35W	700mA	9-48V	
IZC045-040A-9266C-SA	40W	450mA	30-89V	
IZC095-040M-9067C-SAL	40W	950mA	25.2-42V	
IZCVAR-040M-9020C-SAL	40W	350mA, 500mA, 600mA, 700mA, 900mA, 1050mA	350mA 2-100V, 500mA 2-80V, 600mA 2-67V, 700mA 2-57V, 900mA 2-45V, 1050mA 2-40V	
OT-FIT-30/220-240/700-CS-G2	30W	500-700mA	23-42V	
OT-FIT-40/220-240/1A0-LT2-LP	40W	500-1050mA	15-50V	
OTE-10/220-240/700-PC	10W	700mA	7-14V	

ILS Driver Part No.	Rating Watts	Current	LED Driver Forward Voltage	
OTi-DALI-10/220-240/700-NFC	10W	150-700mA	2.5-45V	
OTi-DALI-50/220...240/1A4-LT2-FAN-NFC	50W	600-1400mA	15-54V	
OT-20/170-240/800-4DIMLT2-G2-CE	20W	200-1050mA	10-38V	

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.

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

Other sizes are available, including customised parts

Assembly Information

- The mounting of the OSOLON® Square Uniform LEDiL Selector has to be on a metal Heatsink.
- 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 OSOLON® Square Uniform LEDiL Selectors.
- The OSOLON® Square Uniform LEDiL Selectors, 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.