OSLON® Black 12 MiniFlood IR

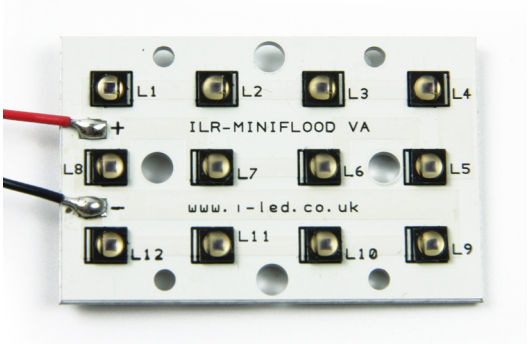
ILR-I#12-####-SC2#1-WIR200. Series

Product Overview

At the heart of each MiniFlood are 12 IR OSLON® Black Series from OSRAM Opto Semiconductors LEDs, which is today's smallest infrared LED with more than one watt of optical power. The small package with an integrated lens allows superior, compact arrangements of very high power density. MiniFloods are compact, powerful LED light sources built on aluminium substrates for optimal thermal management. Available with 200mm wires as standard.

Applications

- Surveillance systems
- IR illumination for cameras
- Machine vision
- Night vision light
- Driver assistance systems



Technical Features

- OSLON® 12 IR MiniFloods contain 12 OSRAM IR OSLON® Black Series LED with either a 50, 90 or 150 degree integrated silicone lens
- 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) with 50 degree lens 25mm x 25mm x 4.2mm
  Size (L x W x H) with 90 degree lens 25mm x 25mm x 4.0mm
  Size (L x W x H) with 150 degree lens 25mm x 25mm x 3.1mm
- Secondary Lens can be fitted – check options in suitable Lens and Reflector section
- Suitable Heatsinks available – check options in Heatsink section
- Matching Power Supply available - check options in Power Supply section
- MiniFloods can be linked together to produce longer chains

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

Important Information and Precautions

- The MiniFlood's LED, when powered up, is very powerful. Although the light may appear off, however IR is invisible to the human eye and can still damage eyes. Thus it is advised that you do not look directly at it. Turn the MiniFlood away from you and do not shine into the eyes of others.
- MiniFloods will overheat in operation if not attached to a suitable Heatsink. Overheating can cause failure or irreparable damage.
- Do not operate MiniFloods with a Power Supply with unlimited current. Connection to constant voltage Power Supplies that are not current limited may cause the MiniFlood to consume current above the specified maximum and cause failure or irreparable damage.
- MiniFloods, 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.

Intelligent LED Solutions, Unit 2, Berkshire Business Centre, Berkshire Drive, Thatcham, Berkshire, RG19 4EW
Telephone: +44 (0)1635 294606 Email: info@i-led.co.uk Web: www.i-led.co.uk
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DATASHEET

Product Options

ILS Part Number	IR Centroid Wavelength*	Radiant intensity IF = 1 A , tp = 10 ms§	Forward Voltage†	Radiance Angle	Relevant OSRAM LED Data Sheet
ILR-IO12-81SL-SC211-WIR200.	810nm	12480mW	31.8-38.4V	±45° (90°)	SFH4703AS
ILR-IN12-85NL-SC201-WIR200.	850nm	7980mW	21.0-27.6V	±25° (50°)	SFH4718A
ILR-IN12-85SL-SC211-WIR200.	850nm	14760mW	35.4-40.8V	±25° (50°)	SFH4717AS
ILR-IO12-85NL-SC201-WIR200.	850nm	7560mW	18.0-21.6V	±45° (90°)	SFH4715
ILR-IO12-85NL-SC211-WIR200.	850nm	9240mW	19.8-25.2V	±45° (90°)	SFH4715A
ILR-IO12-85SL-SC201-WIR200.	850nm	11712mW	38.4-40.8V	±45° (90°)	SFH4715S
ILR-IO12-85SL-SC211-WIR200.	850nm	16080mW	38.4-43.2V	±45° (90°)	SFH4715AS
ILR-IW12-85NL-SC201-WIR200.	850nm	8880mW	19.8-25.2V	±75° (150°)	SFH4716A
ILR-IW12-85SL-SC211-WIR200.	850nm	12360mW	38.4-40.8V	±75° (150°)	SFH4716S
ILR-IW12-85SL-SC221-WIR200.	850nm	15240mW	38.4-43.2V	±75° (150°)	SFH4716AS
ILR-IN12-94SL-SC211-WIR200.	940nm	14760mW	38.4-43.2V	±25° (50°)	SFH4727AS A01
ILR-IO12-94SL-SC201-WIR200.	940nm	11880mW	34.8-40.8V	±45° (90°)	SFH4725S
ILR-IO12-94SL-SC211-WIR200.	940nm	16080mW	38.4-43.2V	±45° (90°)	SFH4725AS A01
ILR-IW12-94SL-SC201-WIR200.	940nm	11880mW	34.8-40.8V	±75° (150°)	SFH4726S
ILR-IW12-94SL-SC211-WIR200.	940nm	16080mW	38.4-43.2V	±75° (150°)	SFH4726AS A01

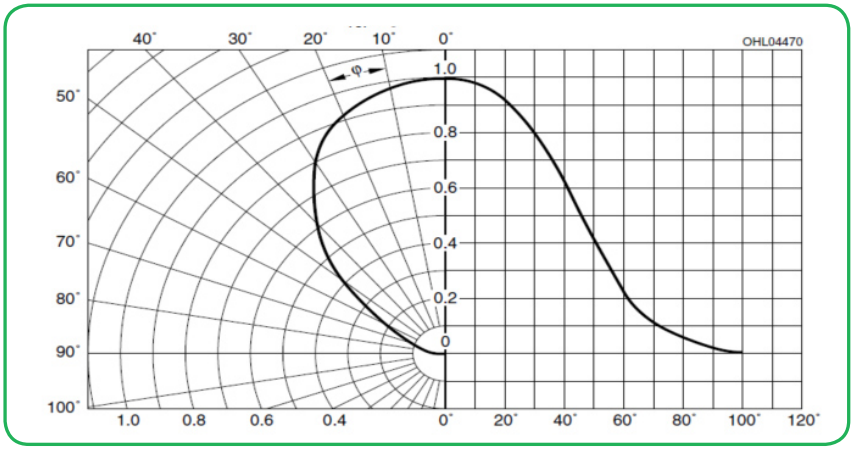
*Due to the special conditions of the manufacturing processes of LEDs, the typical data of technical parameters can only reflect statistical figures and do not necessarily correspond to the actual parameters of each single product which could differ from the typical data.
§ Tolerance +/- 10%
†Measured with 10ms pulse at 1A at 25˚C

Minimum and Maximum Ratings

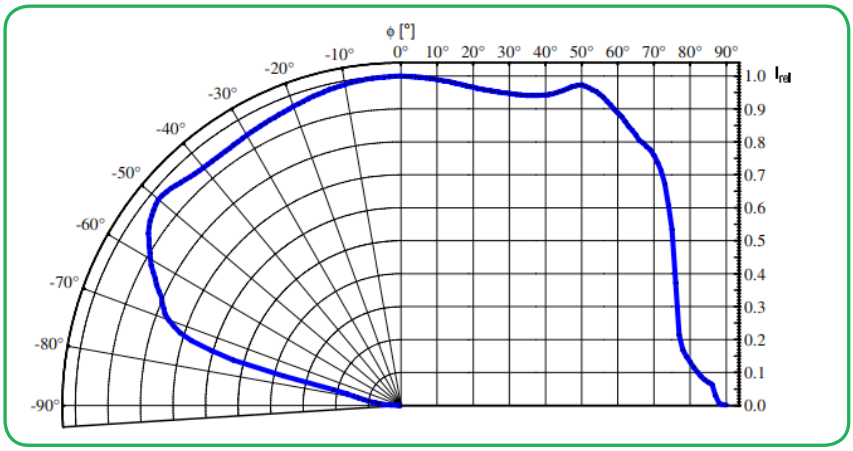
ILS Part Number	Operating Temperature at Tc-Point [˚C]*	Storage Temperature [˚C]*	Maximum Current per chip [mA]*	Surge Current per chip [mA]*	Reverse Voltage [Vdc]*
ILR-IO12-81SL-SC211-WIR200.	-40 °C -125 °C	-40 °C -125 °C	1000mA	2000mA	1.2V
ILR-IN12-85NL-SC201-WIR200.	-40 °C -125 °C	-40 °C -125 °C	1000mA	1000mA	5.0V
ILR-IN12-85SL-SC211-WIR200.	-40 °C -125 °C	-40 °C -125 °C	1500mA	5000mA	5.0V
ILR-IO12-85NL-SC201-WIR200.	-40 °C -125 °C	-40 °C -125 °C	1000mA	5000mA	1.0V
ILR-IO12-85NL-SC211-WIR200.	-40 °C -125 °C	-40 °C -125 °C	1500mA	2000mA	5.0V
ILR-IO12-85SL-SC201-WIR200.	-40 °C -125 °C	-40 °C -125 °C	1000mA	5000mA	1.0V
ILR-IO12-85SL-SC211-WIR200.	-40 °C -125 °C	-40 °C -125 °C	1500mA	3000mA	1.0V
ILR-IW12-85NL-SC201-WIR200.	-40 °C -125 °C	-40 °C -125 °C	1500mA	2000mA	5.0V
ILR-IW12-85SL-SC211-WIR200.	-40 °C -125 °C	-40 °C -125 °C	1000mA	5000mA	1.0V
ILR-IW12-85SL-SC221-WIR200.	-40 °C -125 °C	-40 °C -125 °C	1500mA	3000mA	1.0V
ILR-IN12-94SL-SC211-WIR200.	-40 °C -125 °C	-40 °C -125 °C	1500mA	5000mA	5.0V
ILR-IO12-94SL-SC201-WIR200.	-40 °C -125 °C	-40 °C -125 °C	1000mA	5000mA	1.0V
ILR-IO12-94SL-SC211-WIR200.	-40 °C -125 °C	-40 °C -125 °C	1500mA	5000mA	5.0V
ILR-IW12-94SL-SC201-WIR200.	-40 °C -125 °C	-40 °C -125 °C	1000mA	5000mA	1.0V
ILR-IW12-94SL-SC211-WIR200.	-40 °C -125 °C	-40 °C -125 °C	1500mA	5000mA	5.0V

* 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.

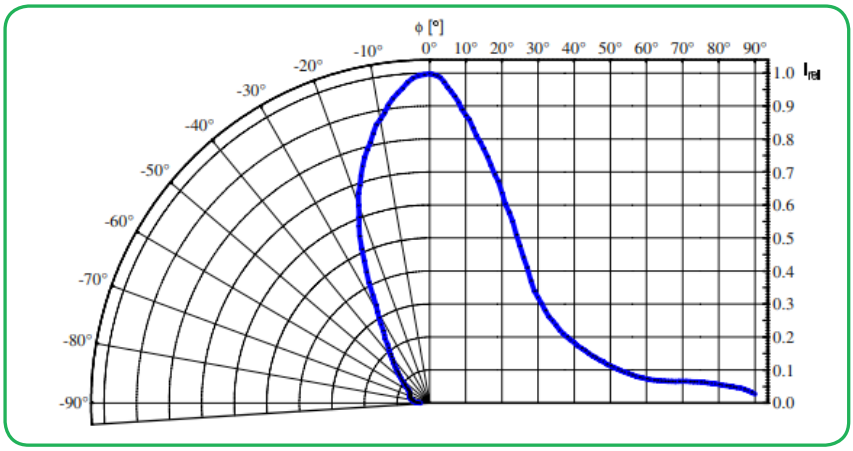
Radiation of single LED (IO)



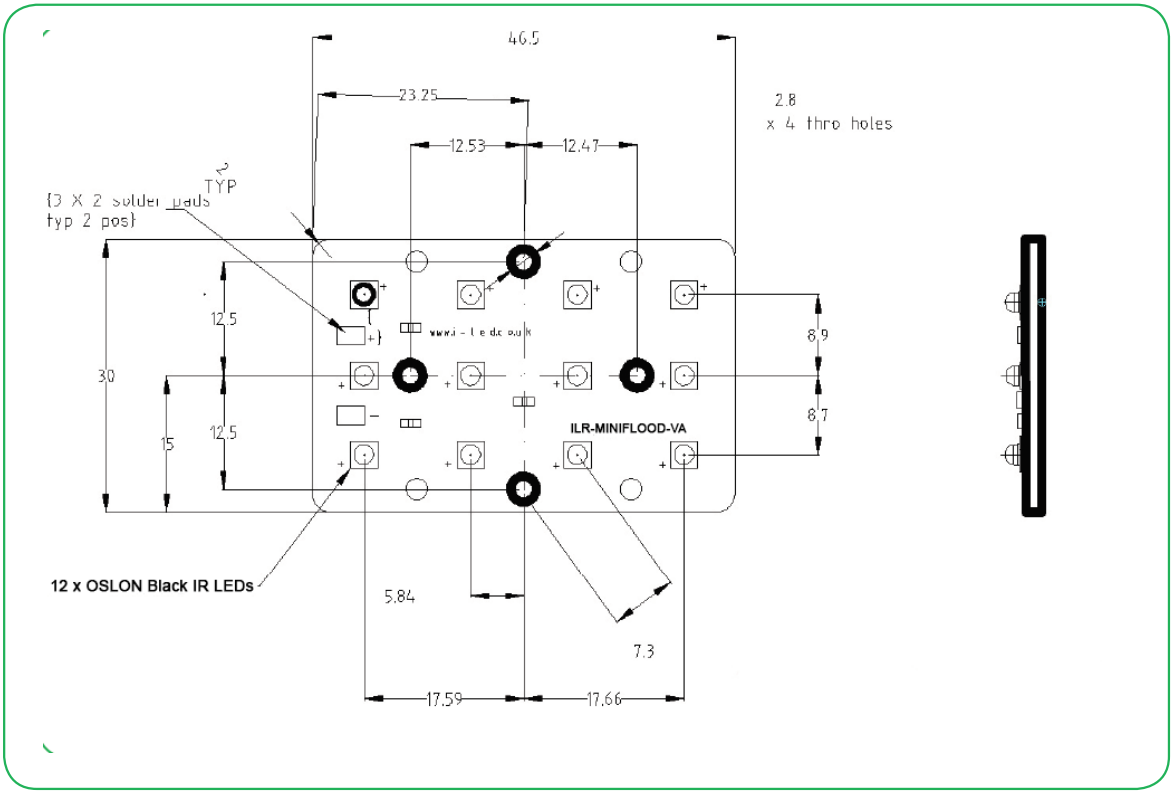
Radiation of single LED (IW)



Radiation of single LED (IN)



Technical Drawing with Cables (mm)



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

OSLON® 12 MiniFlood IR Lens

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.

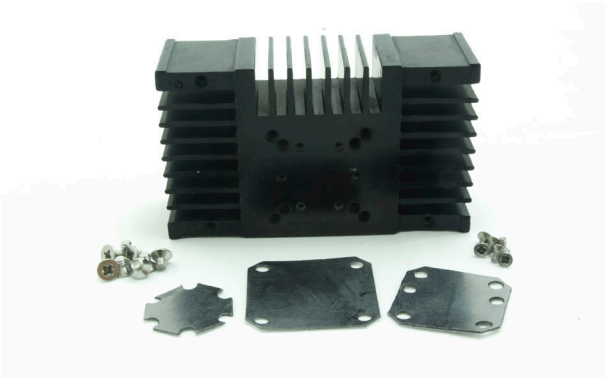
Ordering Code	Beam	Size	Height	Family	FWHM	Material	Colour	Fastening
C12528_PETUNIA	Medium	30 x 47mm	7.4mm	Petunia	30	PMMA	Clear	Pin
C16520_PETUNIA2	Medium	30 x 47mm	7.4mm	Petunia	25	PMMA	Clear	Pin

OSLON® 12 MiniFlood IR Heatsink Options

ILS has a series of Aluminium Alloy Heatsinks to be used with our standard range of PowerStars, PowerClusters and MiniFloods. 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	Current	No Heatsink, in free air	ILA-HSINK-70X70X55MM	ILA-HSINK-78X46X25MM
OSLON® 12 MiniFlood	350mA			
	700mA			
	1000mA			



OSLON® 12 MiniFlood IR Power Supply Options

ILS has a comprehensive range of standard Power Supplies.

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

ILS Driver Part No.	Rating	Current	Forward Voltage	
IZC035-017F-0067A-SA	17W	350mA	6-48V	
IZC035-018T-9500A-SX	18W	350mA	15-52V	
IZC070-035F-0067C-SA	35W	700mA	9-48V	
IZC045-040A-9266C-SA	40W	450mA	30-89V	
IZCVAR-040M-9020C-SAL	40W	350mA 500mA 600mA 700mA 900mA 1050mA	2-100V 2-80V 2-67V 2-57V 2-45V 2-40V	
IZC070-050A-9267C-SA	50W	700mA	24-72V	
IZC050-060F-9067C-QA	60W	500mA	40-110V	
IZC070-075A-9267C-SA	75W	700mA	54-108V	
IZC140-120M-9065C-SAL	120W	1400mA	54-108V	

Thermal Interface Material Options

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

These products fill the air pockets between the two surfaces, forming a continuous layer to conduct heat away from the LED to the Heatsink.

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

Product	Non Adhesive	Single Sided Adhesive	Double Sided Adhesive
MiniFlood	ILA-TIM-PETUNIA-0A	ILA-TIM-PETUNIA-1A	ILA-TIM-PETUNIA-2A

Other sizes are available, including customised parts

Assembly Information

- The mounting of the OSLON® 12 MiniFlood IR 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 OSLON® 12 MiniFlood IRs.
- The OSLON® 12 MiniFlood IRs, 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.
- Depending on the mode of operation, these devices emit highly concentrated non visible infrared light which can be hazardous to the human eye. Products which incorporate these devices have to follow the safety precautions given in IEC 60825-1 and IEC 62471.

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.

Intelligent LED Solutions, Unit 2, Berkshire Business Centre, Berkshire Drive, Thatcham, Berkshire, RG19 4EW
Telephone: +44 (0)1635 294606 Email: info@i-led.co.uk Web: www.i-led.co.uk
A division of Intelligent Group Solutions Ltd