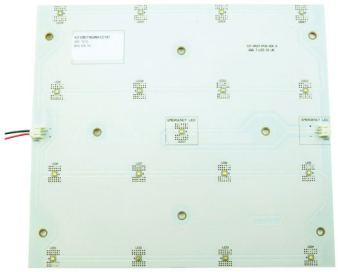
OSLON® IR 17 PowerFlood

ILF-IO17-xxxx-SC201

Product Overview



At the heart of each Flood are 17 OSRAM IR OSLON® Black Series 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. Floods 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® 17 IR PowerFlood contain 17 OSRAM IR OSLON® Black Series LED with either a 150 degree or 90 degree integrated silicon lens
- 100mA to 1,000mA drive
- Up to 70,000 hour lifetime to 70% of original brightness (L70/B50)
- 16 LED in main light section
- Emergency LED built-in will interface with leading manufacturers' LED emergency lighting units
- Flood board size (L x W x H): 215 x 194 x 7.1max mm [includes connectors]
- M4 clearance mounting holes allows installation with screws
- Connection with JST PH type connectors
- Connecting cables available from ILS
- Operation with constant current LED drivers – consult ILS for suitable types

Important Information and Precautions

- The PowerFlood's LED, when powered up, is very bright. Thus it is advised that you do not look directly at it. Turn the PowerFlood away from you and do not shine into the eyes of others.
- PowerFloods will overheat in operation if not attached to a suitable Heat Sink. Over heating can cause failure or irreparable damage.
- Do not operate PowerFloods with a Power Supply with unlimited current. Connection to constant voltage Power Supplies that are not current limited may cause the PowerFlood to consume current above the specified maximum and cause failure or irreparable damage.
- PowerFloods, 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.

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DATASHEET

Product Options

ILS Part Number	IR centroid wavelength	Radiant intensity IF = 1 A , tp = 10 ms	Forward voltage IF = 1 A, tp = 100 µs	Radiance Angle	Relevant OSRAM LED Data Sheet
ILF-IO17-85NL-SC201.	850nm	10710mW	25.5 volts	±45° (90°)	SFH4715
ILF-IO17-85NL-SC211.	850nm "A"	13090mW	28.05 volts	±45° (90°)	SFH4715A
ILF-IO17-85SL-SC201.	850nm Stack	17510mW	49.3 volts	±45° (90°)	SFH4715S
ILF-IO17-85SL-SC211.	850nm Stack "A"	22780mW	54.4 volts	±45° (90°)	SFH4715AS
ILF-IW17-85NL-SC201.	850nm	12580mW	28.05 volts	±75° (150°)	SFH4716A
ILF-IW17-85SL-SC211.	850nm Stack	17510mW	49.3 volts	±75° (150°)	SFH4716S
ILF-IW17-85SL-SC221.	850nm Stack "A"	21590mW	54.4 volts	±75° (150°)	SFH4716AS
ILF-IO17-94SL-SC201.	940nm Stack	16830mW	46.75 volts	±45° (90°)	SFH4725S
ILF-IW17-94SL-SC201.	940nm Stack	16830mW	46.75 volts	±75° (150°)	SFH4726S

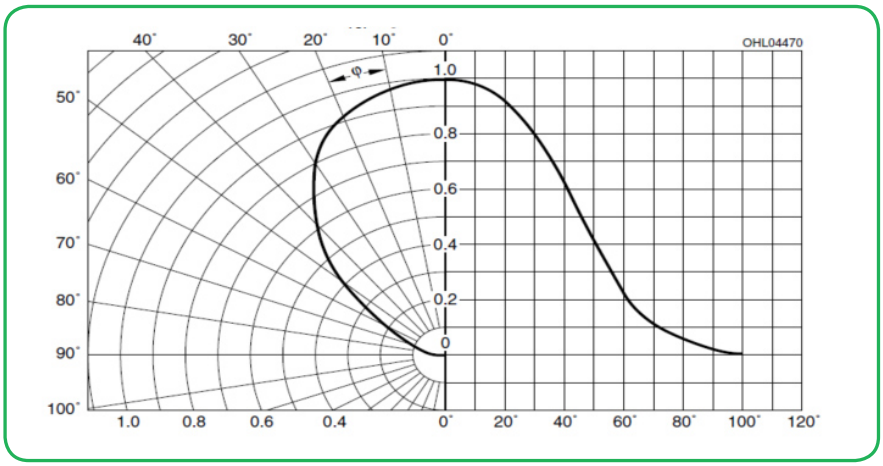
*Due to the special conditions of the manufacturing processes of LEDs, the typical data of technical parameters can only reflect statistical figures and do not necessarily correspond to the actual parameters of each single product which could differ from the typical data.
§ Tolerance +/- 10%
† Measured with 20mS 350mA pulse at 25˚c

Minimum and Maximum Ratings

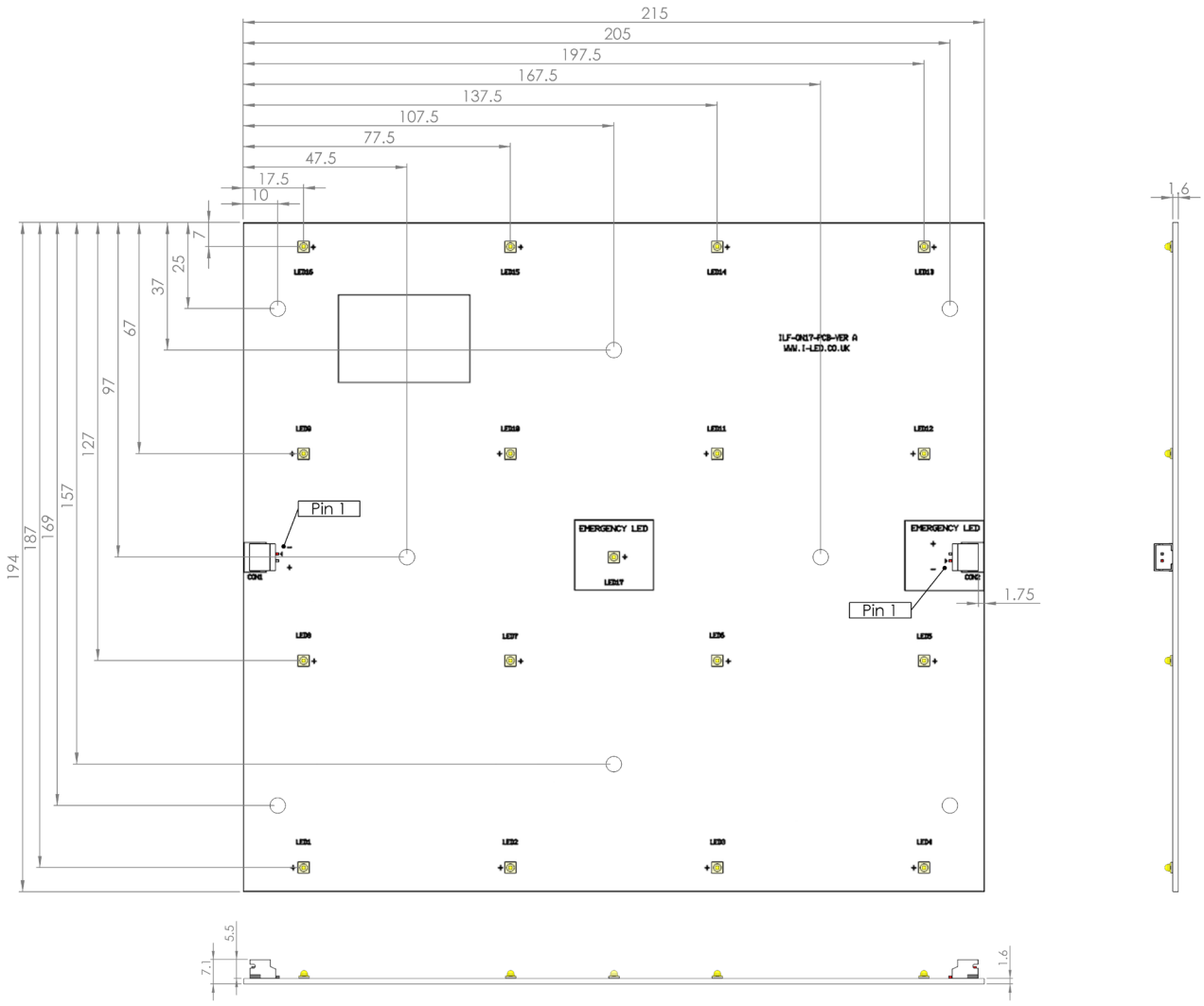
ILS Part Number	Operating Temperature at Tc-Point [˚C]*	Storage Temperature [˚C]*	Maximum Current per chip [mA]*	Surge Current per chip [mA]*	Reverse Voltage [Vdc]*
ILF-IO17-85NL-SC201.	70˚C	-40˚C to +125˚C	1000mA	5000mA	1 volt
ILF-IO17-85NL-SC211.	70˚C	-40˚C to +125˚C	1500mA	2000mA	1 volt
ILF-IO17-85SL-SC201.	70˚C	-40˚C to +125˚C	1000mA	5000mA	1 volt
ILF-IO17-85SL-SC211.	70˚C	-40˚C to +125˚C	1500mA	3000mA	1 volt
ILF-IW17-85NL-SC201.	70˚C	-40˚C to +125˚C	1500mA	2000mA	1 volt
ILF-IW17-85SL-SC211.	70˚C	-40˚C to +125˚C	1000mA	5000mA	1 volt
ILF-IW17-85SL-SC221.	70˚C	-40˚C to +125˚C	1500mA	3000mA	1 volt
ILF-IO17-94SL-SC201.	70˚C	-40˚C to +125˚C	1000mA	5000mA	1 volt
ILF-IW17-94SL-SC201.	70˚C	-40˚C to +125˚C	1500mA	3000mA	1 volt

* 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

Cables

Connecting cable 300 mm long with mating connector one end and un-terminated at the other is available : ILS part number CAB-ILF-OX17, you will need 2 of these if you also wish to connect the emergency LED.

OSLON® IR 17 PowerFlood 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.

Currently we do not have any Lens or Reflectors for these products.

OSLON® IR 17 PowerFlood Heat Sink Options

ILS has recently introduced a series of Aluminium Alloy heat sinks to be used with our standard range of PowerStars and PowerClusters. 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		No Heat Sink, in free air	ILA-HSINK-280X190X50MM-BLK	ILA-HSINK-270X216X83MM-BLK	ILA-HSINK-230X250X100MM-BLK	ILA-HSINK-210X200X25MM-BLK	ILA-HSINK-220X190X50MM-BLK	ILA-HSINK-250X200X15MM-BLK	ILA-HSINK-250X200X25MM-BLK
Dragon 72 Flood	350mA					N/A	N/A	N/A	N/A
	700mA					N/A	N/A	N/A	N/A
	1000mA					N/A	N/A	N/A	N/A
Oslon 72 Flood	350mA					N/A	N/A	N/A	N/A
	700mA					N/A	N/A	N/A	N/A
	1000mA					N/A	N/A	N/A	N/A
Oslon 27 Flood	350mA		N/A	N/A	N/A			N/A	N/A
	700mA		N/A	N/A	N/A			N/A	N/A
Stanley 3J/6J 27 Flood	350mA		N/A	N/A	N/A			N/A	N/A
	700mA		N/A	N/A	N/A			N/A	N/A
Oslon 17 Flood	350mA		N/A	N/A	N/A	N/A	N/A		
	700mA		N/A	N/A	N/A	N/A	N/A		

OSLON® IR 17 PowerFlood 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	Current	OSLON® IR 17 PowerFlood	
IZC045-040A-9266C-SA	40W	450 mA dim	1	
IZC070-050A-9267C-SA	50W	700 mA dim	1	
IZC070-075A-9267C-SA	75W	700 mA dim	1-2	

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 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
Dragon 72 Flood	ILA-TIM-72FL-235X170-0A	ILA-TIM-72FL-235X170-1A	ILA-TIM-72FL-235X170-2A
Oslon 72 Flood	ILA-TIM-72FL-235X170-0A	ILA-TIM-72FL-235X170-1A	ILA-TIM-72FL-235X170-2A
Oslon 27 Flood	ILA-TIM-27FL-180X180-0A	ILA-TIM-27FL-180X180-1A	ILA-TIM-27FL-180X180-2A
Stanley 3J/6J 27 Flood	ILA-TIM-27FL-180X180-0A	ILA-TIM-27FL-180X180-1A	ILA-TIM-27FL-180X180-2A
Oslon 17 Flood	ILA-TIM-17FL-215X194-0A	ILA-TIM-17FL-215X194-1A	ILA-TIM-17FL-215X194-2A

Other sizes are available, including customised parts

Assembly Information

- The mounting of the OSLON® IR 17 PowerFlood 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® IR 17 PowerFloods.
- The OSLON® IR 17 PowerFloods, 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.

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