

PiNoir Basic Development Kit

PiNoir Advanced Development Kit

Product Overview

ILS have developed and produced a simple and compact IR device designed to work in conjunction with your PiNoir camera for the Raspberry Pi. Featuring the latest IR technology from Osram Opto Semiconductors the IR PowerStar is one of the smallest infrared devices on the market with more than one watt of optical power. Featuring Nanostack™ chip technology which allows the typical optical power to reach 1070mW at an operating current of 1A. Secondary lens can be fitted to widen or reduce the beam angle. The advanced kit contains suitable housing and a cover lens to protect and enclose the LED.

Kit Contents

- 1 x Oslon Black IR 850nm Star board with 200mm wires - ILH-IO01-85NL-SC201-WIR200.
- 1 x LED Heat sink round 50x20mm Blue Kit with TIM - ILA-HSINK-STAR-50X20MM-BLU-K.
- 1 x Constant current 350mA LED Driver - IZC035-005F-0067C-QA
- 1 x ILA-ANNA-BASEPLATE – this will be pre fixed to the heat sink
- 1 x ILA-ANNA-SPACER
- 1 x ILA-ANNA-TOPPLATE
- 1 x ILA-ANNA-ACYLIC
- 1 x SCREWM3X45-PACK3.



For Further Information – please visit

[ILS Oslon IR PowerStars](#)

[ILS Heat sinks](#)

[ILS Thermal Interface Material](#)

[ILS Constant Current Power Supply](#)

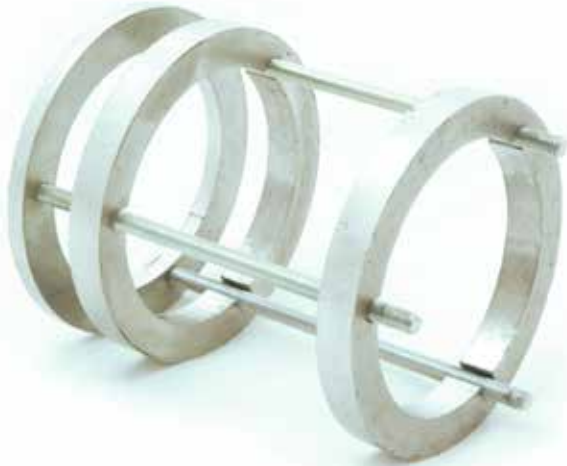
Assembly information

Mounting PCB to the Heat sink

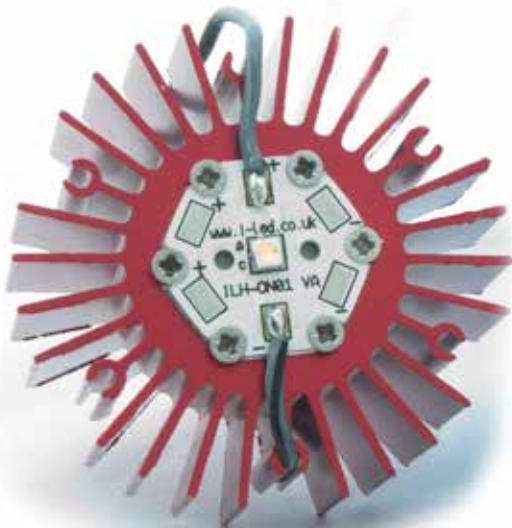
1) Provided in the heat sink kit you will find SCREWM2X4-PACK6. We will use these to fit the PCB to the Heatsink lining up with the TIM already stuck to the heat sink.

Building TopPlate with Diffuser and Spacers

1. Screw 3x45mm screws through the top the TOPPLATE
2. Feed the laser cut diffuser through the 3 screws to sit flush with the TOPPLATE
3. Next feed the ANNA-SPACER to sit flush with the diffuser



4. Now with lens in place put the Kit on flat surface, drop the TopPlate with spacers through the holes of the BasePlate, take care when doing this as lens could move and cause damage to LEDs.
5. Carefully turn kit upside down making sure not to move the lens, fix the TopPlate and fix in place with 2xM3 nut per screw



Powering Up

- 1) Connect the LED module to the power supply before powering up as hot plugging can cause irreparable damage to the LEDs.

Assembly Drawing



Important Information and Precautions

- The PowerAnna's LEDs, when powered up are very bright. Thus it is advised that you do not look directly at it. Turn the PowerAnna away from you and do not shine into the eyes of others.
- Do not operate PowerAnna's with a Power Supply with unlimited current. Connection to constant voltage Power Supplies that are not current limited may cause the PowerAnna to consume current above the specified maximum and cause failure or irreparable damage.
- PowerAnna'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.

Safety Information

- 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® 1 IR PowerStars.
- The OSOLON® 1 IR PowerStars, 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.
- 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.