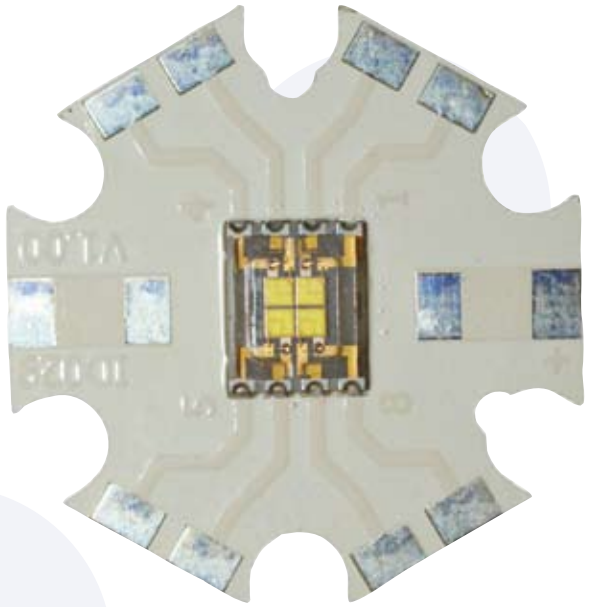
DATASHEET

Intelligent LED Solutions

SMT 4-Die Hex Board

ILH-OS01-XXXX-SCX01

Product Overview



- 4 Die in a single package Blue , True Green or Amber
- Outstanding brightness and luminance due to pure surface emission
- Compact lightsource in multi chip SMT technology
- Low Profile
- Aluminium PCB for optimal thermal management
- Connections to each die brought out for individual control on the parallel version
- Serial and parallel connection available

Applications

- General Lighting
- Mood Lighting
- Architectural lighting
- Spot Lighting
- Shop and Entertainment lighting

Technical Features:

- Each board contains one Osram 4 Die Ostar SMT light source
- Up to 70,000 Hour lifetime to 70% of original brightness (L70B50)
- Mounting holes using a M3 screw allows easy installation
- Size of printed circuit board (L x W x H) : 23mm x 20mm x 3mm
- Cable length 300mm, AWG24 x2 for serial, x8 for parallel
- Many secondary lens options available
- Operation with optotronic power supplies from Osram, or other high quality constant current power supplies
- Boards can be linked together to produce longer chains.
- Nominal current 700mA
- Current range 100 to 1000mA

Note : This datasheet can be read in conjunction with the Osram datasheet "Ostar SMT LExx52W"

Product Options

ILS PARTNUMBER	Version	colour	Peak Wavelength	Wattage (W)*	Typical Forward Voltage (Vdc)	Flux (lumens) at 700mA	Typical Current (A)*	Radiance Angle °	Cable
ILH-OS01-BLUE-SC101^	Parallel	Blue	470	2.52	3.6	82 - 150	700mA	120	No cables attached
ILH-OS01-TRGR-SC101^	Parallel	True green	525	2.52	3.6	330 - 610	700mA	120	No cables attached
ILH-OS01-RDOR-SC101^	Parallel	Amber	617	1.75	2.5	180 - 280	700mA	120	No cables attached
ILH-OS01-BLUE-SC201*	Serial	Blue	470	10	14.4	82 - 150	700mA	120	No cables attached
ILH-OS01-TRGR-SC201*	Serial	True green	525	10	14.4	330 - 610	700mA	120	No cables attached
ILH-OS01-RDOR-SC201*	Serial	Amber	617	7	10.0	180 - 280	700mA	120	No cables attached
ILH-OS01-BLUE-SC102^	Parallel	Blue	470	2.52	3.6	82 - 150	700mA	120	300mm AWG24
ILH-OS01-TRGR-SC102^	Parallel	True green	525	2.52	3.6	330 - 610	700mA	120	300mm AWG24
ILH-OS01-RDOR-SC102^	Parallel	Amber	617	1.75	2.5	180 - 280	700mA	120	300mm AWG24
ILH-OS01-BLUE-SC202*	Serial	Blue	470	10	14.4	82 - 150	700mA	120	300mm AWG24
ILH-OS01-TRGR-SC202*	Serial	True green	525	10	14.4	330 - 610	700mA	120	300mm AWG24
ILH-OS01-RDOR-SC202*	Serial	Amber	617	7	10.0	180 - 280	700mA	120	300mm AWG24

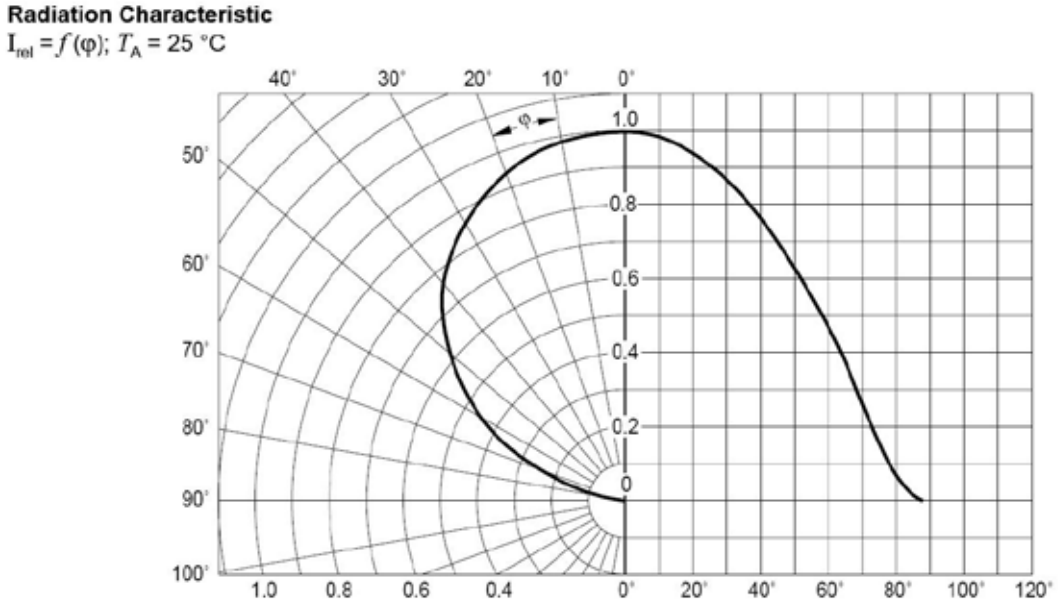
*Data is related to the entire SMT Hex board
^data is related to each die
*Due to the special conditions of the manufacturing processes of LED the typical data of technical parameters can only reflect statistical figures and do not necessarily correspond to the actual parameters of each single product which could differ from the typical data.

Minimum and Maximum Ratings

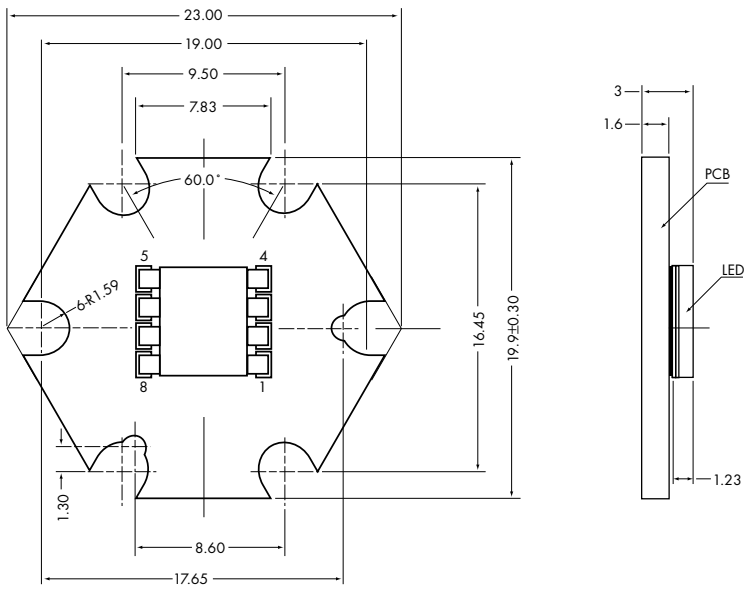
ILS PARTNUMBER	Operating Temperature at Tc-Point [°C]*	Storage Temperature [°C]*	Forward current per chip (mA)*	Reverse Voltage [Vdc]*
ILH-OS01-RDOR-SC101	-20...75	-40...85	100 ... 1000	Not Allowed

* 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 a the Tc-Point according to EN60598-1 in a thermally constant status with a temperature sensor or a temperature sensitive label.

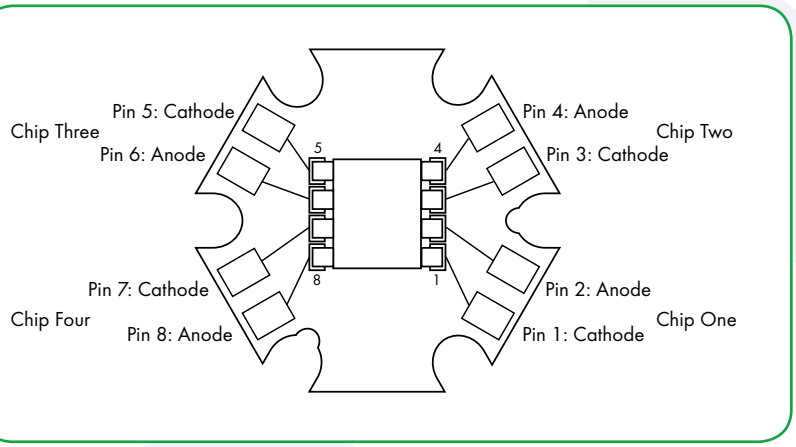
Radiation of single LED

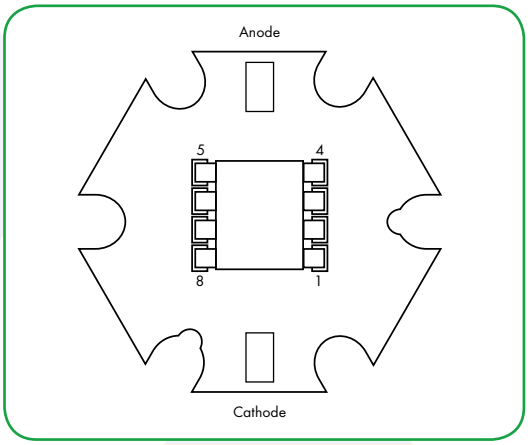


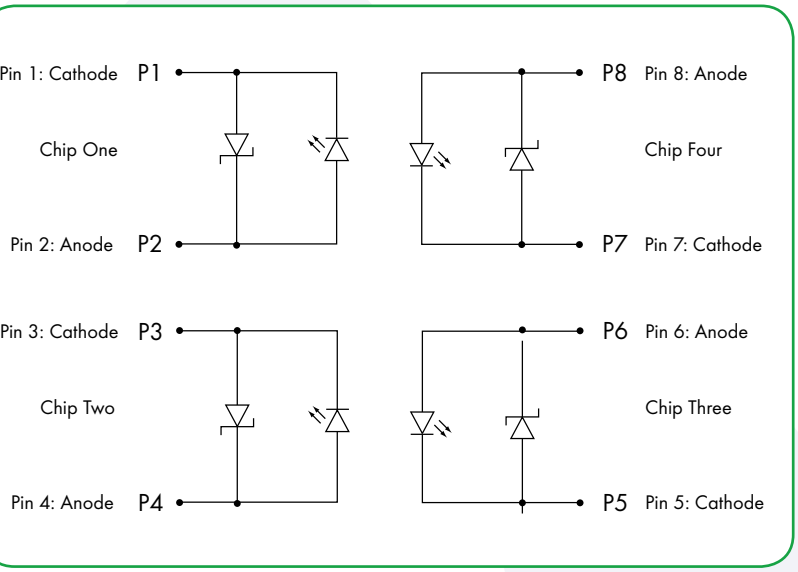
Technical Drawing

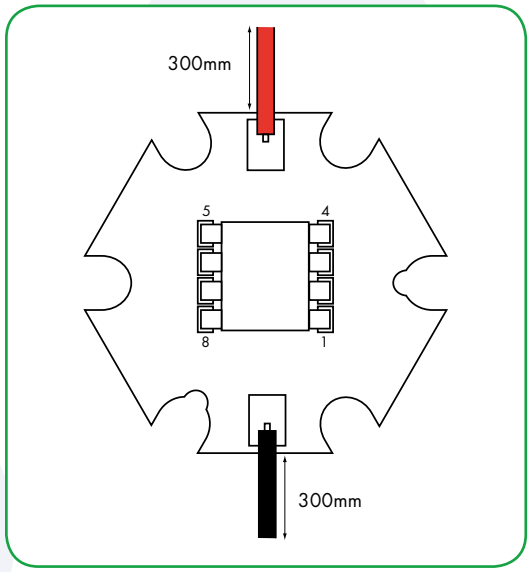


Connection Diagram









Assembly Information

- The mounting of the SMT 4 die Hex Board 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 SMT 4 dieHex Board.
- The SMT Ultra 4 die Board, as manufactured, has no conformal coating and therefore offers 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.

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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