DATASHEET

3J high bright LEDs from Stanley Electric

STANLEY
スタンレー電気株式会社
STANLEY ELECTRIC CO.,LTD.

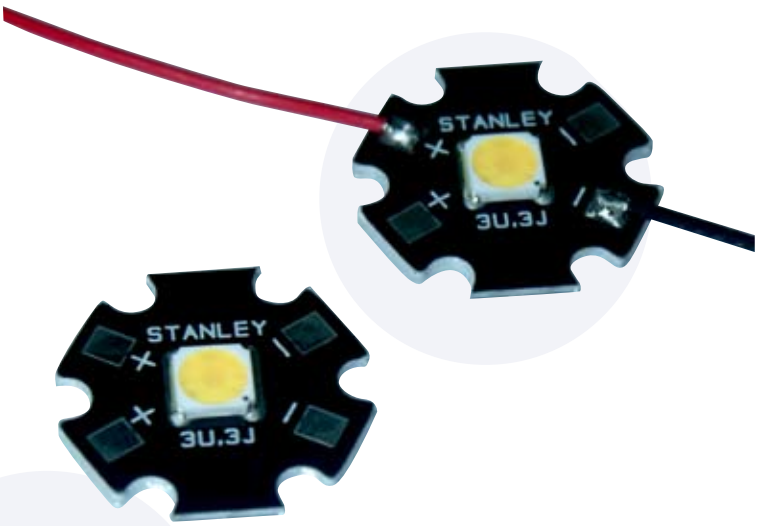
ILS Intelligent LED Solutions

SJ1 PowerStar White

ILH-SJ01-xxxx-SC201-xx series

Product Overview

At the heart of each SJ1 PowerStar is a Stanley Electric 3J Series LED giving outstanding luminance with CRIs [colour rendering indexes] of 70 and 95. PowerStars are compact powerful LED light sources built on aluminium substrates for optimal thermal management. Available with and without connecting wires.



Applications

- General Lighting
- Decorative Lighting
- Task Lighting
- Spot Lighting
- Downlighters
- Retail and Entertainment Lighting

Technical Features:

- SJ1 PowerStars contain Stanley Electric's 3J series LED
- The range features 95 and 70 CRI LEDs
- Up to 40,000 hours lifetime to 70% of original brightness
- M3 clearance mounting holes allows easy installation with screws
- Size (L x W x H) : 20mm x 20mm x 2.45mm
- Available with or without 200mm connecting wires
- PowerStars can be linked together to produce longer chains.
- Current range 100mA to 480mA

Important Information and Precautions

- The PowerStar's LED, when powered up, is very bright thus it is advised that you do NOT look directly at it. Turn the PowerStar away from you and do not shine into the eyes of others.
- PowerStars will overheat in operation if not attached to a suitable heat-sink. Over heating can cause failure or irreparable damage.
- Do not operate PowerStars with power supplies with unlimited current. Connection to constant voltage power supplies that are not current limited may cause the PowerStar to consume current above the specified maximum and cause failure or irreparable damage.
- PowerStar, when operated, can reach high temperatures thus there is risk of injury if they are touched.

Product Options

ILS PART NUMBER	Colour	CCT*	Colour Rendering Index (CRI)	Typ V_r @350mA	Luminance Flux† @350 mA	Radiance Angle	Relevant Stanley Datasheet
ILH-SJ01-UL95-SC201.	Cool White	6500K	95	3.0 v	100 lumens	120°	GSPW1653JTE-65Z-TR
ILH-SJ01-WW95-SC201.	White	5000K	95	3.0 v	100 lumens	120°	GSPW1653JTE-50Z-TR
ILH-SJ01-NU95-SC201.	Neutral White	4000K	95	3.0 v	80 lumens	120°	GSPW1653JTE-40Z-TR
ILH-SJ01-WM95-SC201.	Warm White	3000K	95	3.0 v	80 lumens	120°	GSPW1653JTE-30Z-TR
ILH-SJ01-HW95-SC201.	Hot White	2700K	95	3.0 v	80 lumens	120°	GSPW1653JTE-27Z-TR
ILH-SJ01-UL70-SC201.	Cool White	6500K	70	3.0 v	140 lumens	120°	GSPW1643JTE-65X-TR
ILH-SJ01-WW70-SC201.	White	5000K	70	3.0 v	140 lumens	120°	GSPW1643JTE-50X-TR
ILH-SJ01-NU70-SC201.	Neutral White	4000K	70	3.0 v	135 lumens	120°	GSPW1653JTE-40X-TR
ILH-SJ01-WM70-SC201.	Warm White	3000K	70	3.0 v	120 lumens	120°	GSPW1653JTE-30X-TR
ILH-SJ01-HW70-SC201.	Hot White	2700K	70	3.0 v	120 lumens	120°	GSPW1653JTE-27X-TR

*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.
§ Tolerance +/- 10%
† Measured with 20mS pulse at 25°c

Part Number Ordering Information for SJ1 PowerStar With and Without Wires

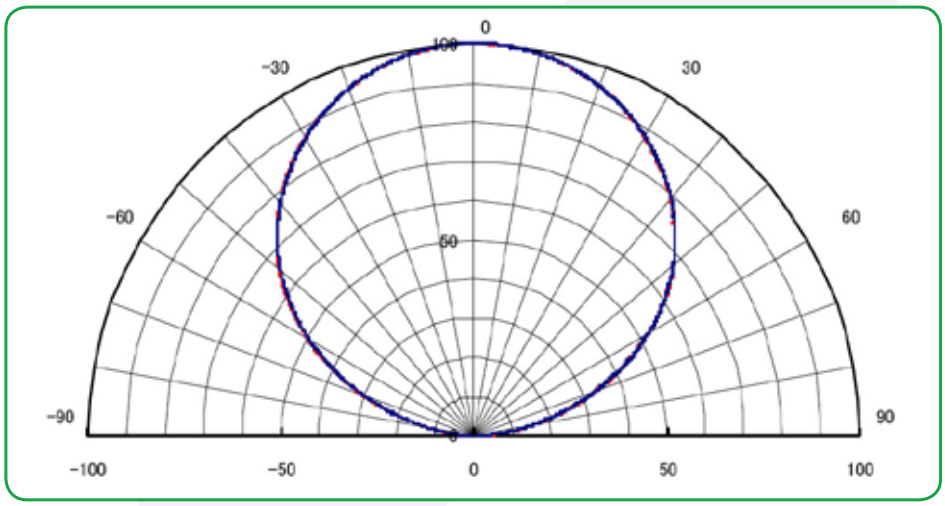
Colour / CCT / CRI Ref	CCT*	CRI	Part Number no wires	Part Number with 200mm wires
Cool White	6500K	95	ILH-SJ01-UL95-SC201.	ILH-SJ01-UL95-SC201-WIR200.
White	5000K	95	ILH-SJ01-WW95-SC201.	ILH-SJ01-WW95-SC201-WIR200.
Neutral White	4000K	95	ILH-SJ01-NU95-SC201.	ILH-SJ01-NU95-SC201-WIR200.
Warm White	3000K	95	ILH-SJ01-WM95-SC201.	ILH-SJ01-WM95-SC201-WIR200.
Hot White	2700K	95	ILH-SJ01-HW95-SC201.	ILH-SJ01-HW95-SC201-WIR200.
Cool White	6500K	70	ILH-SJ01-UL70-SC201.	ILH-SJ01-UL70-SC201-WIR200.
White	5000K	70	ILH-SJ01-WW70-SC201.	ILH-SJ01-WW70-SC201-WIR200.
Neutral White	4000K	70	ILH-SJ01-NU70-SC201.	ILH-SJ01-NU70-SC201-WIR200.
Warm White	3000K	70	ILH-SJ01-WM70-SC201.	ILH-SJ01-WM70-SC201-WIR200.
Hot White	2700K	70	ILH-SJ01-HW70-SC201.	ILH-SJ01-HW70-SC201-WIR200.

Minimum and Maximum Ratings

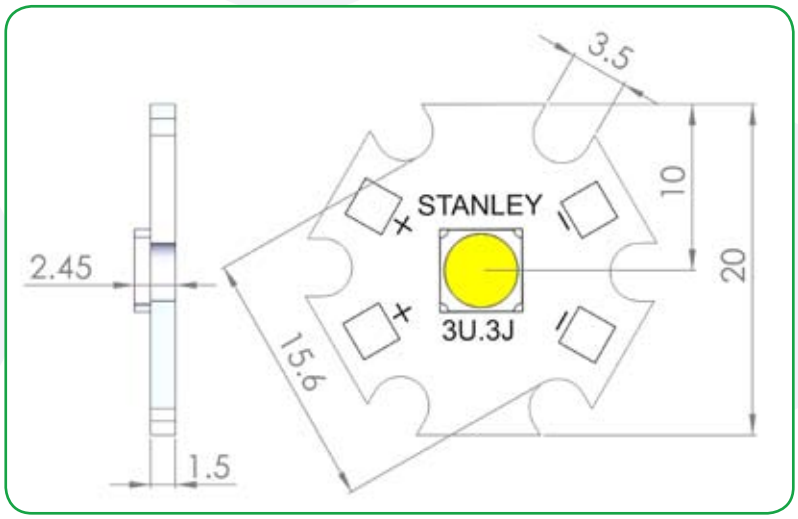
ILS PART NUMBER	Operating Temperature at Tc-Point [°C]*	Storage Temperature [°C]*	Forward Current [mA]*	Max reverse current
Complete ILH-SJ01-xxxx-SC201 series	+70°C	-40°C ~ 100°C	480mA [max]	1.7 v / 85 mA
Complete ILH-SJ01-xxxx-SC201-WIR200 series	+70°C	-40°C ~ 100°C	480mA [max]	1.7 v / 85 mA

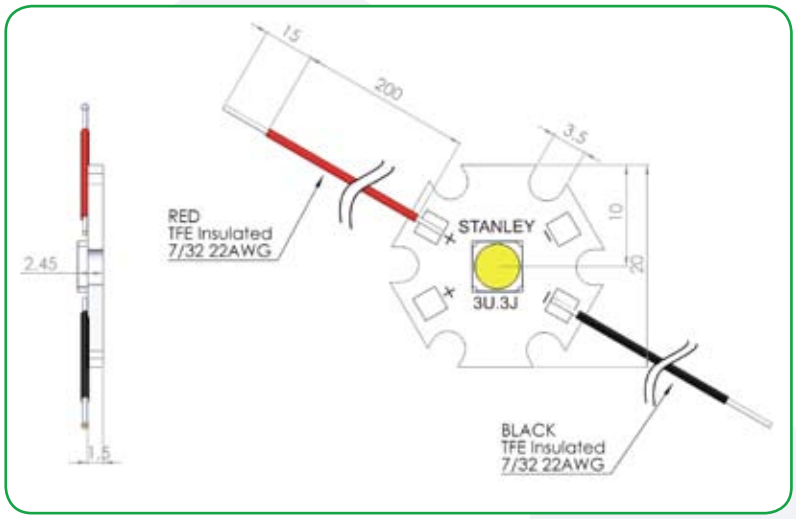
* Exceeding maximum ratings for operating and storage temperature will reduce expected life time or destroy the LED module. Exceeding maximum ratings for operating voltage will cause hazardous overload and will likely destroy the LED module. The temperature of the LED module must be measured a the Tc-Point according to EN60598-1 in a thermally constant status with a temperature sensor or a temperature sensitive label.

Radiation of single LED



Dimensional Drawings





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

Assembly Information

- The mounting of the SJ1 PowerStars 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 SJ1 PowerStar.
- The SJ1 PowerStars, 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.