

Technical Datasheet LS05
(All patents pending)

High Power Solid-State LED Light Source

LUSTRON V[™]



Introduction

For a brighter solid-state light source, **LUSTRON V** is an energy-efficient building block generating enough light outputs suitable for most applications in lighting field. **LUSTRON V** offers the best solid-state light source and you might realize your modern ideas of lightings.

LUSTRON V is also available in both Star configurations. Both configurations provide the best possible color rendering capability and color temperature. With a nominal correlated color temperature of 2800~3200K, similar to conventional indoor light source, **LUSTRON V** is particularly designed for architects and commercial lighting designers.

LUSTRON V driving current up to 1500mA gives our customers more flexibility and convenience for circuit design.

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LUSTRON V Part Number Matrix

Table.1

Star

Color

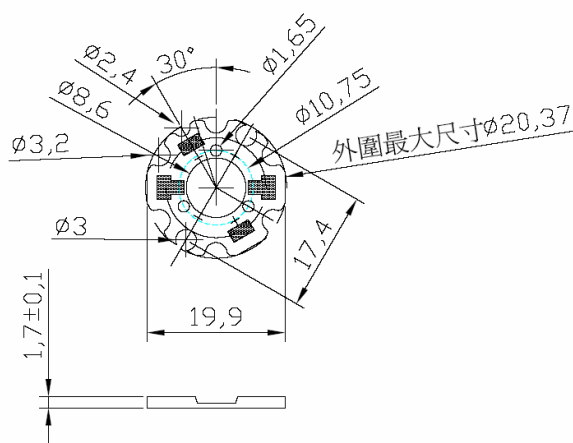


Warm White (3200K)	NHH105CL
White (6500K)	NHH105NW
Blue (470nm)	NHH105NB
Green (525nm)	NHH105PG
Red (625nm)	NHH105NR

Mechanical Dimensions

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Star



Note:

1. Drawing not to scale. All dimensions are in millimeters.

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Flux Characteristics at 700mA, Junction Temperature T_j = 25^oC

Table.2

Color	Minimum Luminous Flux (lm) or Typical Luminous Flux (lm) or Radiometric Power (mW)	
	Radiometric Power (mW)	Radiometric Power (mW)
White (6500K)	180 lm	220 lm
Warm White (3200K)	165 lm	202 lm
Blue (470nm)	24 lm	48 lm
Green (525nm)	68 lm	160 lm
Red (625nm)	80 lm	140 lm

1. Brightness is measured in total power with tolerable errors of 10%. Minimum luminous flux performance guaranteed within published operating conditions.
2. Higher luminous flux will become available in the near future.

Optical Characteristics

Table.3

Color	Dominant Wavelength (nm) or Color Temperature(K)			Spectral Half-Width (nm)	Viewing Angle (degrees)
	Min	Typ	Max		
	White (6500K)	4500K	6500K	8000K	NA
Warm White (3200K)	2700K	3200K	3600K	NA	120
Blue (470nm)	465	470	475	30	120
Green (525nm)	520	525	530	30	120
Red (625nm)	620	625	630	15	120

1. Color Rendering Index (CRI) for our white product is higher than those made with Yag or Tag phosphor. Nitride phosphor consists of green and red spectrum which enhances CRI.

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Electrical Characteristics

Table.4

Color	Forwrad Voltage (V) for 700mA forward current		
	Min	Typ	Max
White (6500K)	6.5	7.0	7.5
Warm White (3200K)	6.5	7.0	7.5
Blue (470nm)	6.5	7.0	7.5
Green (525nm)	6.5	7.0	7.5
Red (625nm)	3.0	5.0	6.0

1. Lustrous Technology allows a tolerance of each LED for voltage measurements.
2. Measurements are taken under each nominal forward current.

Absolute Maximum Ratings

Table.5

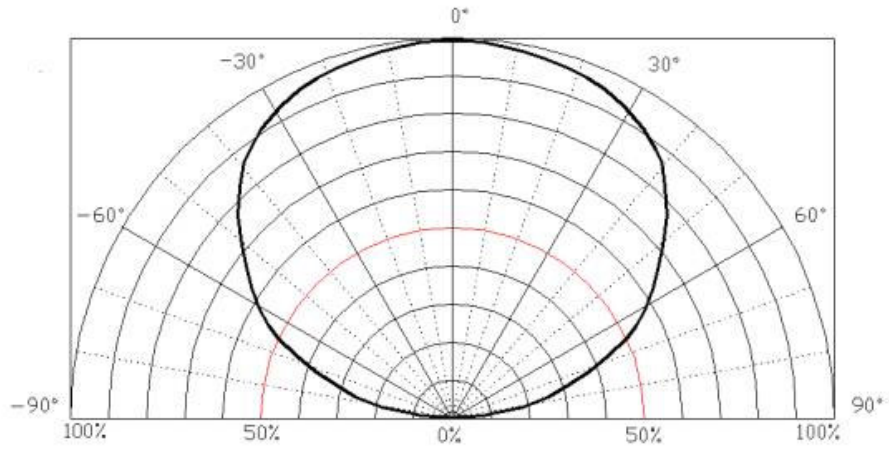
Parameters	For 700mA forward current	
	White/Warm White	
DC Forward Current (mA)	700	
Peak Pulsed Forward Current (mA)	1500	
LED Junction Temperature ($^{\circ}C$)	< 120	
ESD Sensitivity	+/-16000 HBV	
Thermal Resistance ($^{\circ}C/W$)	5	
Operating Temperature ($^{\circ}C$)	-40 ~ +100	
Storage Temperature ($^{\circ}C$)	-40 ~ +100	
Soldering Temperature ($^{\circ}C$)	260 (duration should be less than 5seconds)	

1. Proper current derating must be observed to maintain junction temperature below the maximum
2. For single side circuit Star or O'Ring type cannot be soldered by general IR or reflow.

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Typical Angular Beam Profile, $T_j=25^{\circ}C$



View Angle:120 degree

1. Detail beam profile data can be provided to certain qualified customers

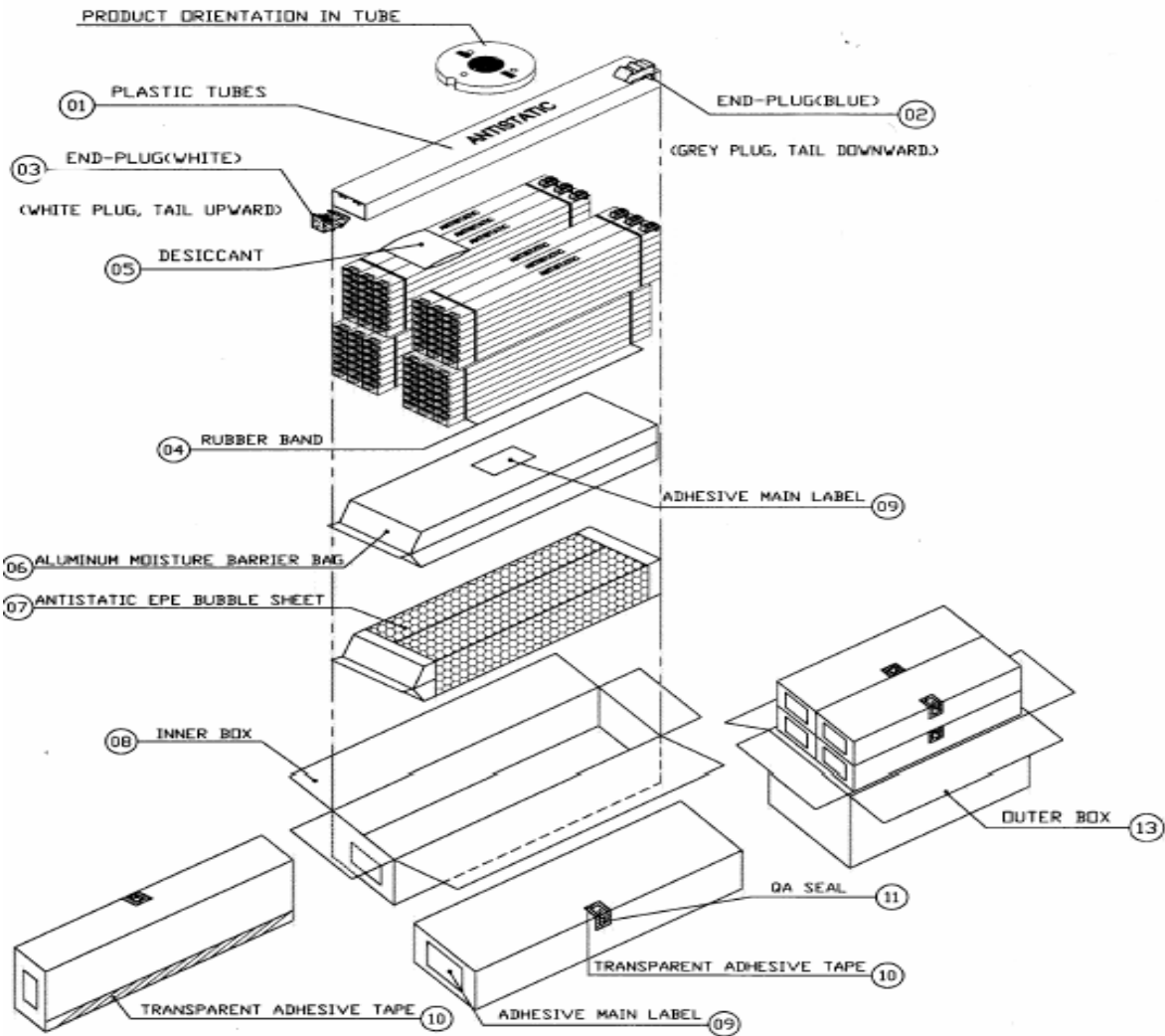
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Typical Packaging

STACKING METHOD

STACKING METHOD	PROD. NO.	FILLED (Ø20.7x1.6mm)
PCS / TUBE		24
TUBES / BUNDLE		21 (3x7)
BUNDLE / BOX		4
PCS / BOX		2016
PCS / OUTER BOX		8064



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Company Information

Lustrous Technology, founded in 2004, endeavors to bring a new era of solid-state lighting. Our R&D development center and production facilities are based in Taiwan, famous island for IT technology in the world. Our products are well designed in both performance and reliability. Lustrous is one of the leading high-power LED manufacturer and solution provider in the world.

**Lustrous Technology may make process and material changes affecting performance and characteristics of our products without further notice. These products supplied after changes will continue to meet published specifications, but may not be identical to products supplied as samples or under prior orders.



LUSTROUS TECHNOLOGY LTD
Green Technology of Lightings

Website: www.LUSTROUS.com.tw
Email: sales@lustrous.com.tw
Tel: +886-2-8647-2862
Fax: +886-2-8647-2863
Address: 5F, No 212-1, Sec.3, Datong Rd, Shiji, Taipei County 221,
Taiwan

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