

NeoPac Light Engine

SD14 Series



DESCRIPTIONS

NeoPac Light Engine is an integration of thermal module, heat sink and heat pipe. As of now **NeoPac** Light Engine series is available in white and warm white colors, and exploration of more colors is in pipe line. It can be used as round recessed light, track light, high bay and low bay lighting, and down light. It is perfect for down lighting in offices, hotels, shopping malls, retails, hospitals, residential areas, smoking rooms and more. It can highlight important task areas and provides innovative and energy efficient solutions for the designers and end users meeting all the needs in general lighting.

NeoPac Light Engines are ingeniously engineered LED light engines that are designed based on the proprietary NeoPac Universal Platform (NUP). It is core component for every NeoBulb lighting product. Empowered by this structural LED technological platform, all **NeoPac** Light Engines can operate at ultra-high power with high luminous flux, low junction temperature (T_j) and have outstanding performance with long predictable reliable life.

FEATURE HIGHLIGHTS

- Suitable for offices, hotels, shopping malls, retails, hospitals and show room etc.,
- **NeoPac** System-in-Package structure
- **NeoPac** Emitter as the light source
- High luminous flux density
- Excellent thermal management to ensure LEDs performance
- Effective heat dissipation by back-end natural convection
- Energy efficient and power saving
- Ultra-low thermal resistance from junction to ambient
- LED Life: > 50,000hr
(under STD driving & $T_j \leq 60^\circ\text{C}$)
- RoHS compliant
- 1 year warranty

LIGHT ENGINE SPECIFICATIONS (FOR 8 CHIPS EMITTER)

Light color	White	Warm White
Model No	SD14W	SD14M
CCT / Wavelength	5000~7000K	2800~3200K
Typical power/Operating current	14W/530mA	14W/530mA
Typical Luminous Flux (Initial)	910Lm/530mA	630Lm/530mA
Typical Luminous Flux (Maintained)	800Lm/530mA	530Lm/530mA
Max. Power/ Max. Operating current	20W/700mA	20W/700mA
Max. Luminous Flux (Maintained)	1000Lm/700mA	600Lm/700mA
Thermal resistance (R _{ja})	2.5°C/W	2.5°C/W
Junction Temperature (T _j) @530mA	<60°C	<60°C
Max. Recommend (T _j)	≤75°C	≤75°C
Beam angle (2θ _{1/2})	145°	145°

General Characteristics

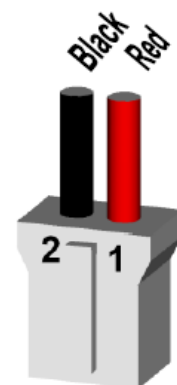
Operating temperature	-30 to 40°C / 85%RH
Storage temperature	-40 to 80°C / 85%RH
Heat pipe / CAP / (FIN material)	Cu / Ni plated Aluminum / Aluminum
Dimension	See the appendix
Net weight	157± 5g (by STD 210mm connector wire)

WIRING (FOR 8 CHIPS EMITTER)

Pin definition:

Pin #	Wire color	LED electrode
P1	Red wire	Anode(+)
P2	Black wire	Cathode(-)

Electrical Connection:



Remark:

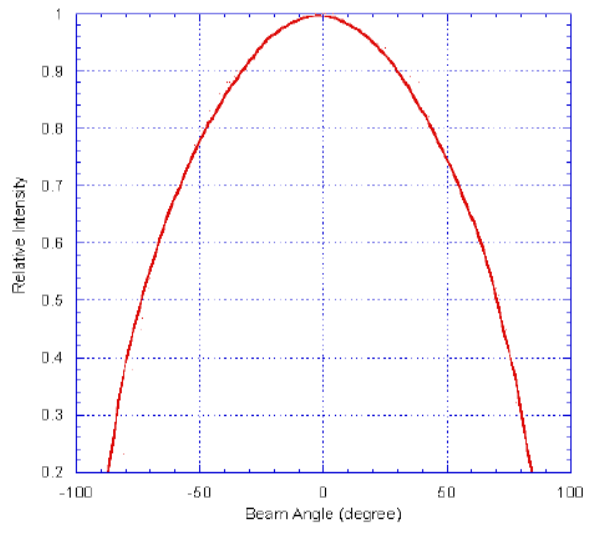
* Wire: #26 AWG

* Connector: 2P/ 2.0mm pitch

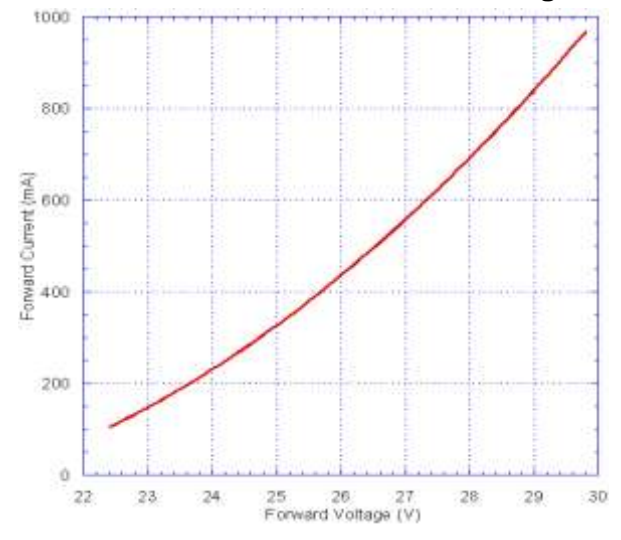
(Unless a range is specified, a ±10% tolerance exists in the preceding values.)

Appendix: (All the below test data is based on ambient temperature $T_a = 25^\circ\text{C}$)

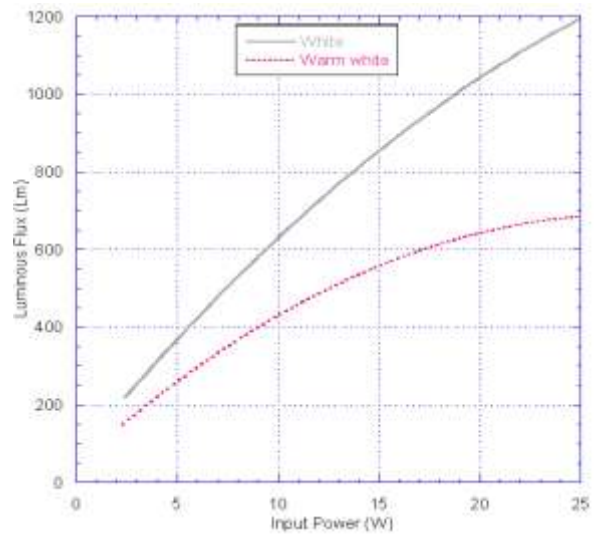
Beam Angle



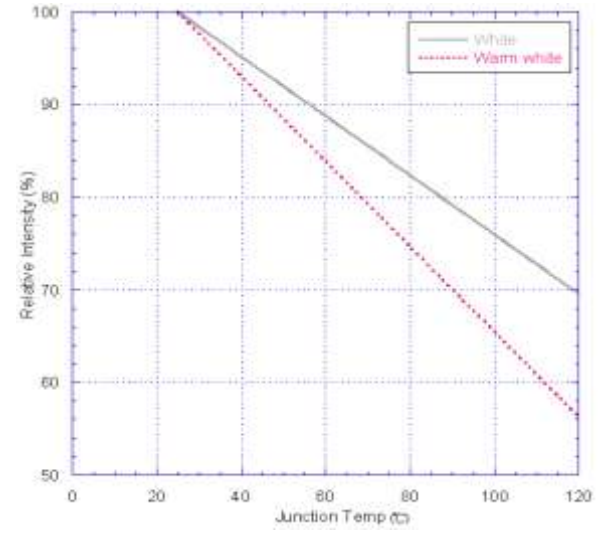
Forward Current Vs. Forward Voltage



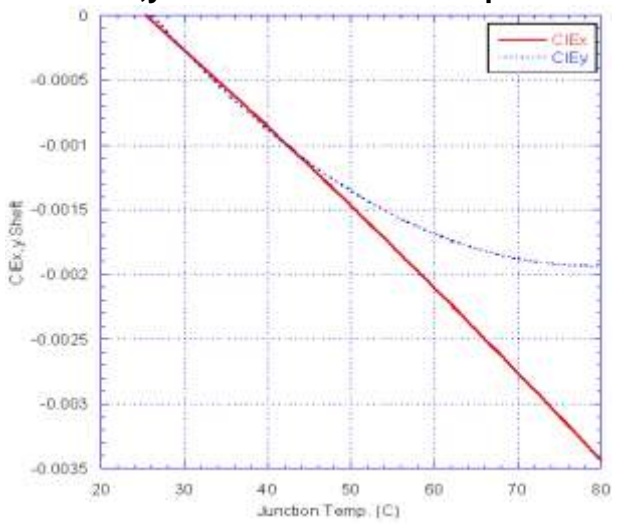
Maintained Lm Vs. Input Power ($T_j = 60^\circ\text{C}$)



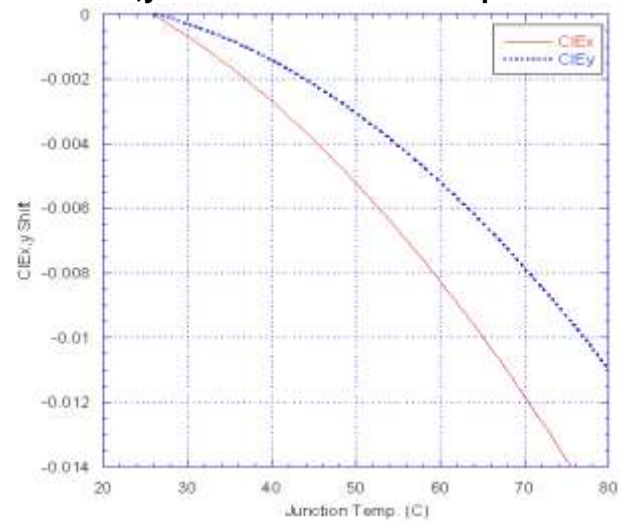
Relative Intensity Vs. Junction Temp.



CIEx,y Shift Vs. Junction Temp.-White



CIEx,y Shift Vs. Junction Temp.-Warm



Dimension

