



***surelight***

# Neon light

## SL Range

### Specification

**NE-SL-HB / NE-SL-VB**

NE-SL-VB



NE-SL-HB



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# Introduction

NE-SL is a new member of the Artist of Light series with monochromatic light to achieve your desired artistic effect. Its exceptionally small physical size and two bending versions allow you to create any custom design applications and facilitate additional types of applications where a smaller profile is required.

NE-SL is UL/cUL, CE, TUV and RoHS compliant. Moreover, it has passed rigorous environmental resistance, optical, mechanical and electrical tests in our lab under the support of advanced experimental equipments and technology to ensure it meets the requirements of harsh environments. Also it has passed relevant tests of third party inspection authority.

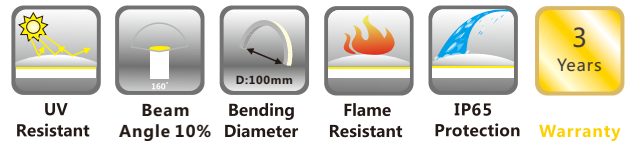
Fully encapsulated in the flexible PVC chamber by utilizing consummate extrusion technology, assembled with multiple patented connectors to achieve IP protection; easy for installation and applicable for various circumstances.

NE-SL features low power consumption and decay, exceptional thermal management, excellent luminous efficacy, homogeneous illumination and super flexibility as well as many superior design elements. It is one of our most unique products!

Applications:

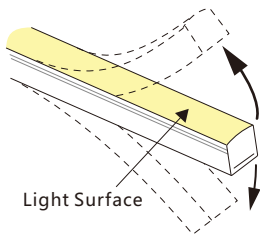
1. Contour/Border Lighting
2. Architectural Decorative Lighting
3. Cove/Accent Lighting
4. Floor/Stair Lighting
5. Signage/Guide Lighting
6. Furniture/Cabinet Lighting

# 1. Specifications & Parameters

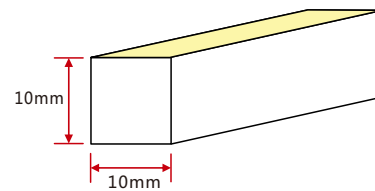
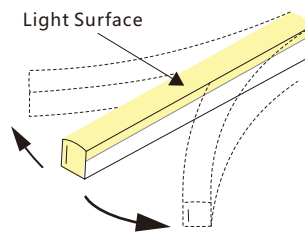


## 1.1 Dimensions of Light

NE-SL-VB



NE-SL-HB

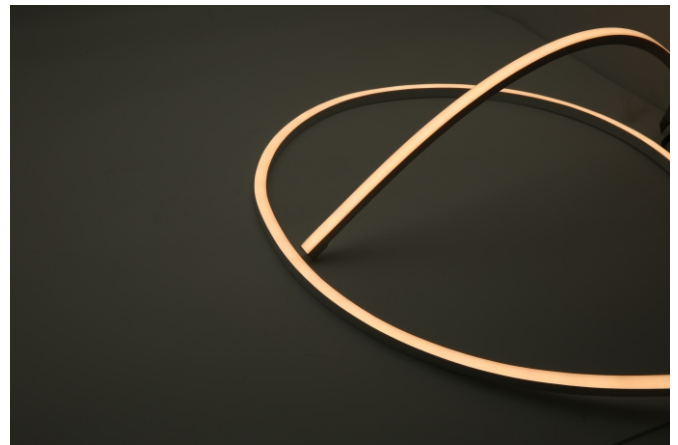


Note: Unless otherwise stated, the tolerance of the light is  $\pm 0.3\text{mm}$ .

## 1.2 Technical Parameters

Technical Parameters

Article No.	NE-SL-XXX
Colour	Red/Green/Blue/Amber/White
Working Voltage	DC24V
Rated Power/m	4.5W
LED Qty/m	144LEDs
LED Distance	6.9mm
Min. Cutting Unit	12LEDs (1unit)
Min. Cutting Length	83.3mm(1unit)
Continuous Length	10m
Weight/m	140g
Storing Temp.	-20~60°C
Environmental Working Temperature	-20~45°C
Environmental Installation Temperature	0~45°C
IP Rating	IP65

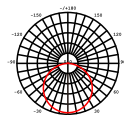


## 1.3 Optical Parameters

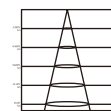
Photometric Data

Article No.	NE-SL-XXX				
LED Type	SMD				
Beam Angle 10%	160°				
Colour	CCT	Lumen/m	Color	CCT	Lumen/m
Red	620-630nm	> 50lm	2500K	2460±120K	> 140lm
Green	520-530nm	> 200lm	2700K	2725±145K	> 140lm
Blue	465-475nm	> 30lm	3000K	3045±175K	> 140lm
Amber	585-595nm	> 50lm	3500K	3465±245K	> 140lm
			4000K	3985±275K	> 140lm
			4500K	4503±243K	> 140lm
			5000K	5029±283K	> 140lm
			5700k	5669±355K	> 140lm

Candle power distribution



Illuminance Characteristics



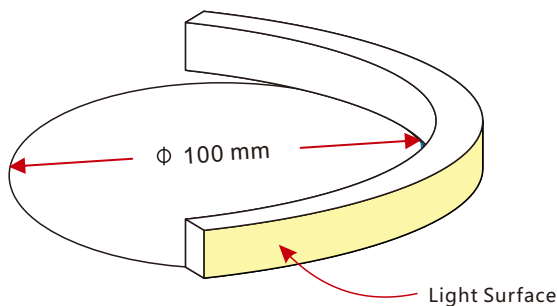
## 2. Functions & Features

### 2.1 Product Features

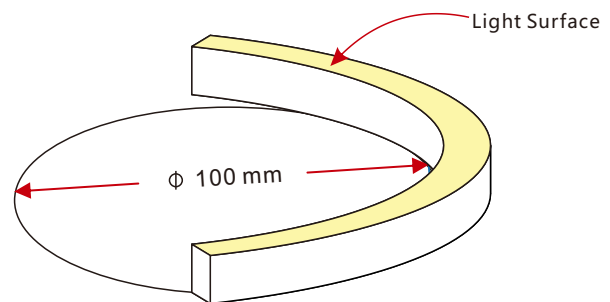
1. High quality and high brightness SMD LED chip, each two LEDs circuit protected.
2. Smallest square physical size 10\*10mm to enable new applications.
3. Wide range of solid white colour options.
4. Horizontal and vertical bending optional for easily custom design.
5. UV & flame resistant construction(PVC).
6. High colour consistency & smooth illumination with non visible light dots.
7. Super flexible with 100mm minimum bending diameter.
8. Innovative mounting profiles and mini connectors for easy installation.
9. Continuous length up to 10m by powering one end.
10. Low power consumption, low heat, energy efficient & environmentally friendly.
11. Automated production, high reliability & long warranty.
12. 5 years life span.

### 2.2 Minimum Bend Diameter

NE-SL-VB



NE-SL-HB

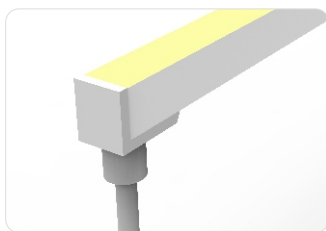


The light can only be bent along the light surface. Do not bend smaller than allowed minimum bend diameter.

## 3. Types of Connector

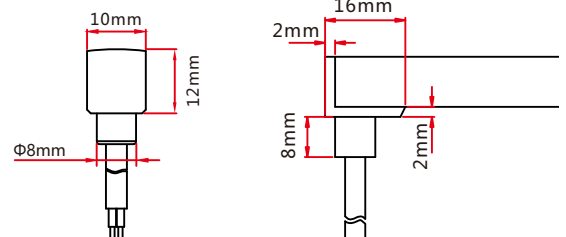
### 3.1 Injection-moulded Connector

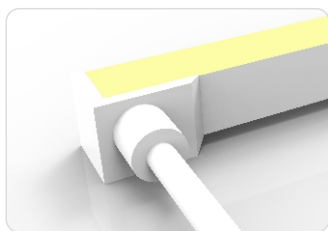
Note: Unless otherwise stated, the tolerance of the connector is  $\pm 0.5\text{mm}$ .



Injection-moulded Front Connector (bottom)

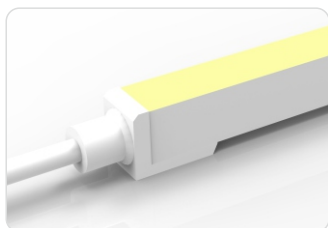
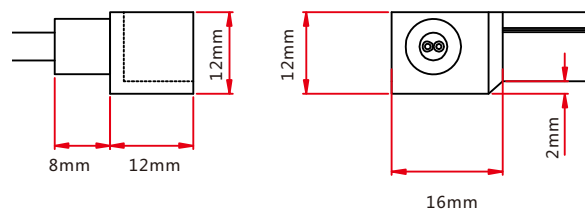
Connects light to power supply with pre-installed bottom feed cable IP40. Cable length available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m lengths.





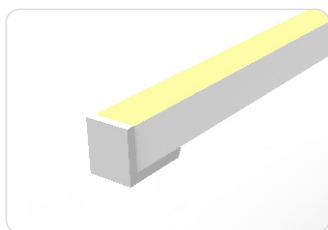
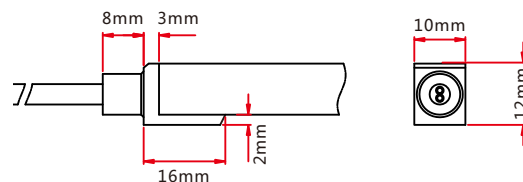
### Injection-moulded Front Connector (side)

Connects light to power supply with pre-installed side feed cable, IP40. Cable length available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m lengths.



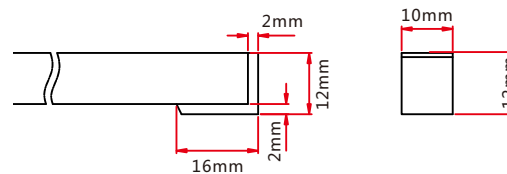
### Injection-moulded Front Connector (end)

Connects light to power supply with pre-installed end feed cable, IP40. Cable length available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m lengths.



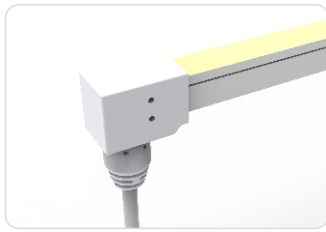
### Injection-moulded End Cap

Pre-installed termination protection of the light, IP40.



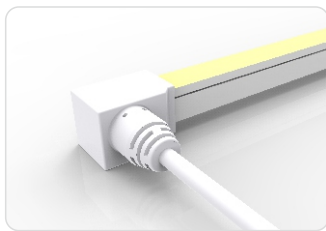
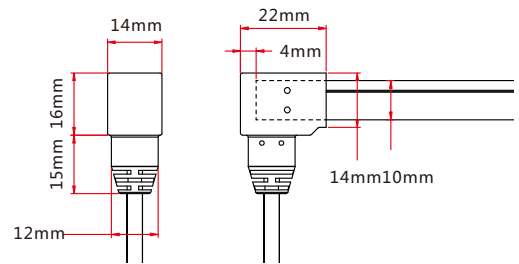
### 3.2 Dual Injection-moulded Connector

Note: Unless otherwise stated, the tolerance of the connector is  $\pm 0.5\text{mm}$ .



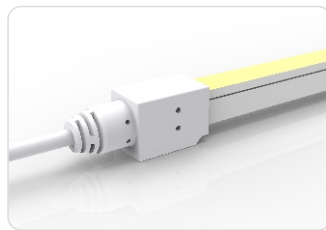
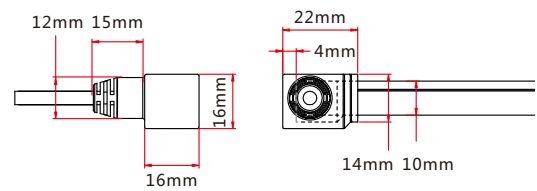
#### Dual Injection-moulded Front Connector (bottom)

Connects light to power supply with pre-installed bottom feed cable, IP65. Cable length available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m.



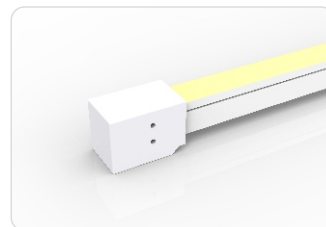
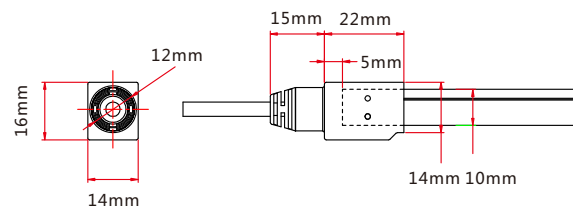
#### Dual Injection-moulded Front Connector (side)

Connects light to power supply with pre-installed side feed cable, IP65. Cable length available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m.



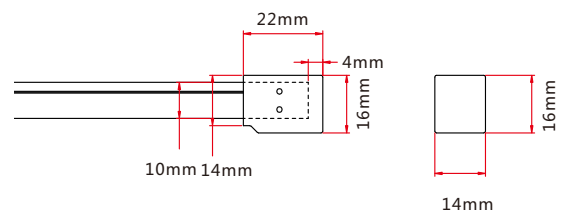
#### Dual Injection-moulded Front Connector (top end)

Connects light to power supply with pre-installed end feed cable, IP65. Cable length available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m.



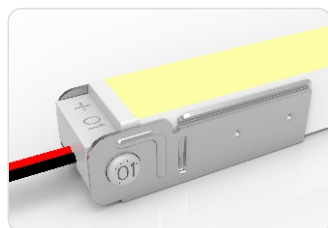
#### Dual Injection-moulded End Cap

Pre-installed termination protection of the light, IP65.



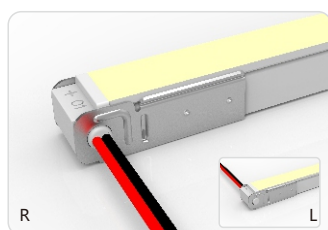
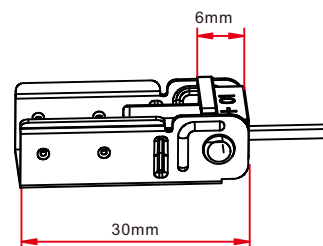
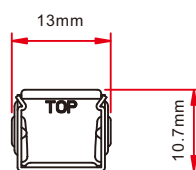
### 3.3 Swivel Connector

Note: Unless otherwise stated, the tolerance of the connector is  $\pm 0.5\text{mm}$ .



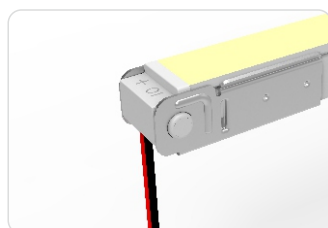
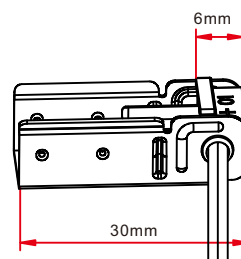
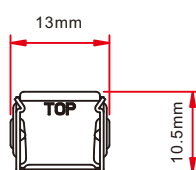
**Swivel Front Connector (top end)**

Connects light to power supply, IP20. DIY connector. Cable available in 0.3m, 1m lengths.



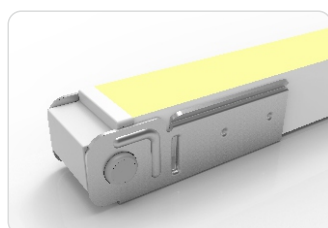
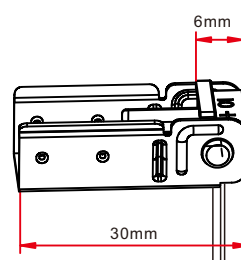
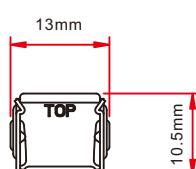
**Swivel Front Connector (side right/left)**

Connects light to power supply, IP20. DIY connector. Cable available in 0.3m, 1m lengths.



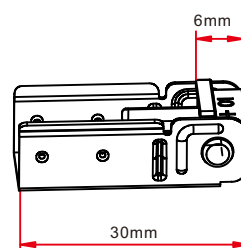
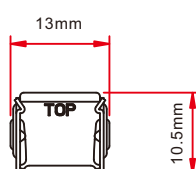
**Swivel Front Connector (bottom)**

Connects light to power supply, IP20. DIY connector. Cable available in 0.3m, 1m lengths.



**Swivel End Cap**

Termination protection of the light, IP20 DIY connector.



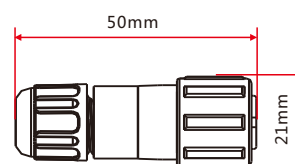
### 3.4 Male & Female Connector

Note: Unless otherwise stated, the tolerance is  $\pm 2\text{mm}$ .



**Male & female Connector**

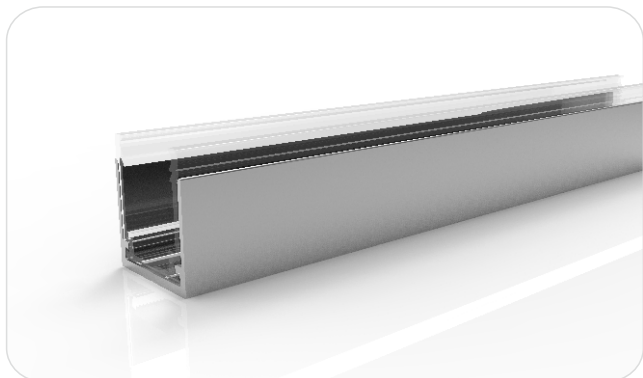
For plug and play cable junction, DIY or Pre-installed connector, IP68



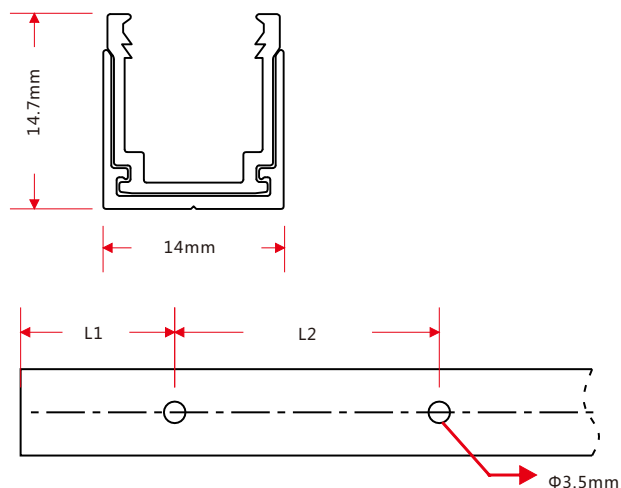


## 4. Mounting Profile

### 4.1 Plastic & Aluminum Combination Profile



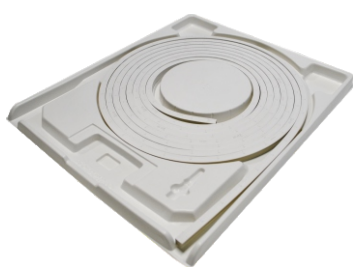
Note: Unless otherwise stated, the tolerance of the profile is  $\pm 0.5\text{mm}$ .



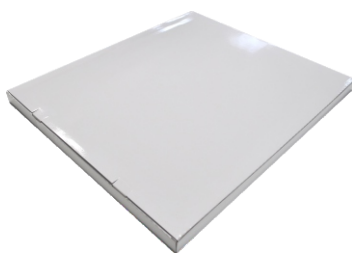
Model	W*H(mm)	Standard Length (mm)	L1 (mm)	L2 (mm)	Screw Hole (mm)	Hole Number	For Product
NE-SL-CH	14*14.7	35	17.5	/	$\Phi 3.5$	1	SL
		500	50	200	$\Phi 3.5$	3	SL
		1000	100	200	$\Phi 3.5$	5	SL
		2000	100	200	$\Phi 3.5$	10	SL

## 5. Packaging

### Packaging Method



Plastic Plate



White Box



Carton



### Packaging Detail

Light Length	White Box Dimension(cm)	Carton Dimension(cm)	Numbers of White Box	Carton Weight(KG)
10m	46*3.5*56	58*49*5.3	1	2
10m	46*3.5*56	58*48*21	5	8
20m	57.5*3.5*68	70*60.5*5.3	1	4
20m	57.5*3.5*68	70*59.5*21	5	16

## 6. Appendix

### 6.1 Certificate

Certificating Type	Testing Organization	Certificate Serial Number	Report Reference
CE-EMC	SGS	SZEM1702001259LMV	SZEM160600421302

### 6.2 Third-Party Test Report

Testing Item	Testing Organization	Report Number
RoHS	SGS	CANEC1202163502 A01
Flame retardant	TUV SUD	68.140.13.068.01
UV@340nm: Light	AOV	A002R130308065—1R01
UV@340nm: PVC	AOV	A002R130308065—2R01

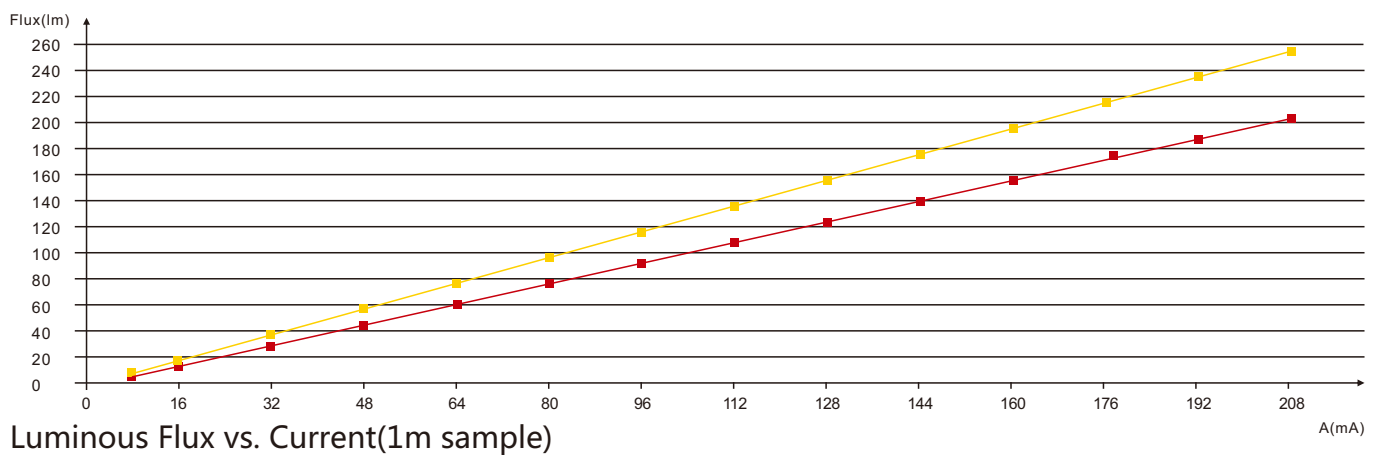
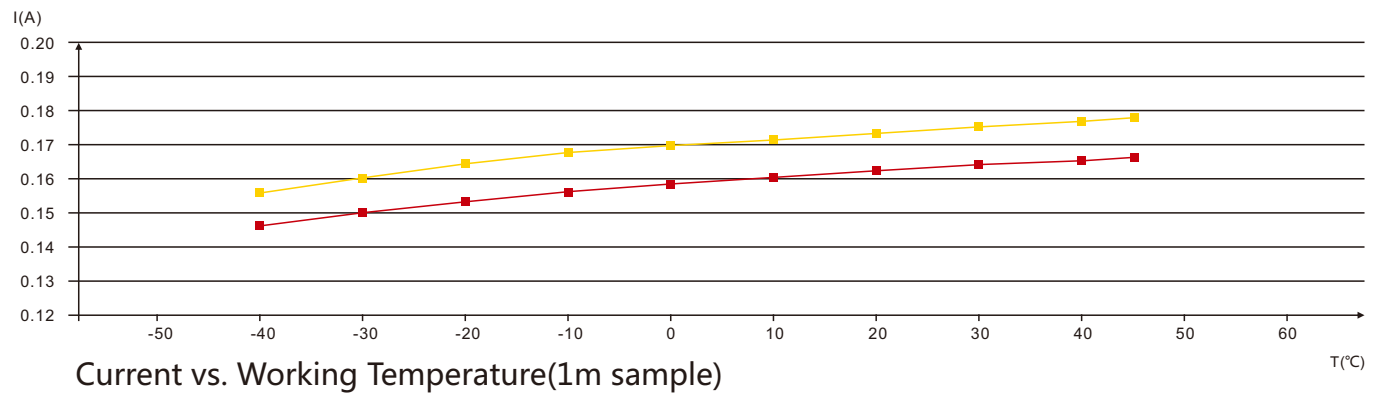
>>Note: The testing reports and certificates are available from the related official website.

### 6.3 Reliability Test of Light

TESTING ITEM	PERFORMANCE	STANDARD/REFERENCE VALUE/DESCRIPTION
PHOTOMETRIC TESTING	Spectrum Analysis	IES LM 79 (lumen, CCT, CRI, XY, SDCM, wave length)
	Photometric Distribution	IES LM 79(lumen intensity distribution & Lux diagram)
	Lumen maintenance & Life time	IES LM84 & IES TM28
MECHANICS & PHYSICS TESTING	Bending Test	Manufacturer-defined, 500 cycles
	Tensile Test	Manufacturer-defined, > the weight of light in
	Twist Test	maximum connection length with both ends feed
		Manufacturer-defined, >200 cycles

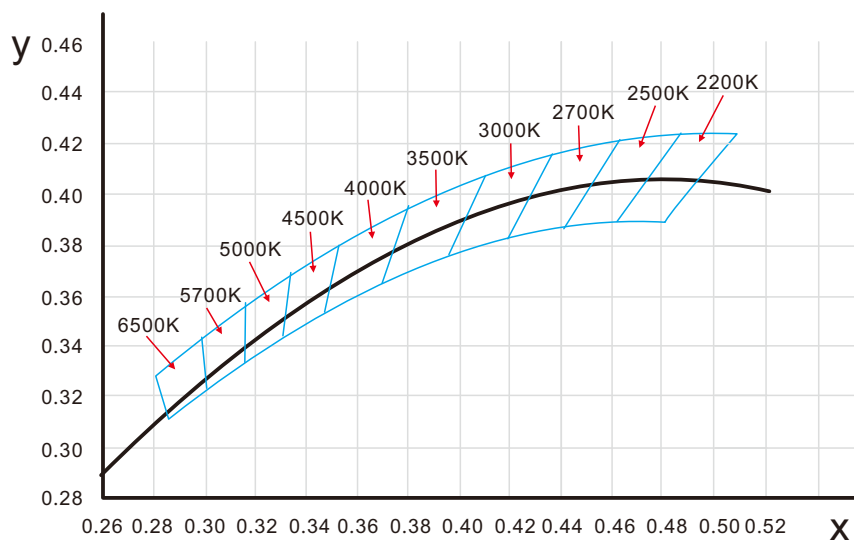
## 6.4 Figures of Typical Characteristics

—■— NE-SL-VB  
—■— NE-SL-HB



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## 6.5 (X,Y) Chromaticity Diagram



## 6.6 Correlated Colour

### Temperature ANSI STANDARD

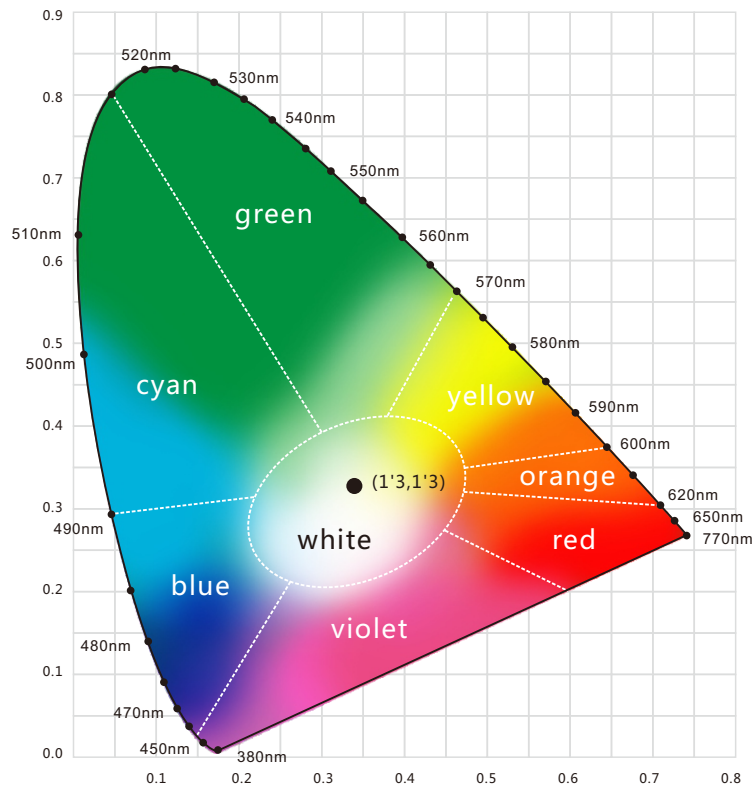
#### Nominal CCT Categories

Nominal CCT	Target CCT and tolerance(K)	Target $D_{uv}$	$D_{uv}$ Tolerance Range
2200K	2238 ±102	0.0000	$T_x$ : CCT of the source
2500K	2460 ±120	0.0000	For $T_x < 2870K$
2700K	2725 ±145	0.0000	0.000 ±0.0060
3000K	3045 ±175	0.0001	For $T_x \geq 2870K$
3500K	3465 ±245	0.0005	$D_{uv}(T_x) \pm 0.0060$
4000K	3985 ±275	0.0010	where
4500K	4503 ±243	0.0015	$D_{uv}(T_x) = 57700 \times (1/T_x)^2$
5000K	5029 ±283	0.0020	$-44.6 \times (1/T_x)$
5700K	5667 ±355	0.0025	$+0.00854$
6500K	6532 ±510	0.0031	
Flexible CCT (2200-6500K)	$T_F^{(1)} \pm \Delta T^{(2)}$	$D_{uv} T_F^{(3)}$	




#### Remark:

- 1)  $T_F$  is chosen to be at 100K steps (2300, 2400, ..., 6400K), excluding the ten nominal CCTs listed in Table 1.
- 2)  $\Delta T = 1.1900 \times 10^8 \times T^{-3} - 1.5434 \times 10^8 \times T^{-2} + 0.7168 \times T - 902.55$
- 3) Same as in the  $D_{uv}$  Tolerance Range.



## 6.7 Wavelength of Colour Light



#### Light Color

	<b>Red</b> 620-630nm
	<b>Green</b> 520-530nm
	<b>Blue</b> 465-475nm

## 6.8 Loading Chart

Type.	Rated Power /mtr	Power Supply						
		35w	60w	60w	75w	80w	100w	120w
NE-SL	4.5w	6m	10m	11m	13m	14m	15m	20m
Energizing way		DC input  01/02			DC input  01 02 DC input			

Note : 1. These are the light maximum recommended running length subject to selected power supply.  
 2. For example: It is recommended to use one 80W power supply loading maximum 13m light by energizing the light one end or use one 150W power supply loading maximum 24m by energizing the light both ends.