

TX-5050W40FC180-NUVENG-A03H90

PRODUCT SPECIFICATION

Features:

- ◆Excellent transiting heat from LED chip operating under 2.5A.
- ◆High luminous output.
- ◆No UV.
- ◆Encapsulated materials are environmentally certified and meet environmental requirements.

Chip Material:

- ◆ThinGaN

Emitting Color:

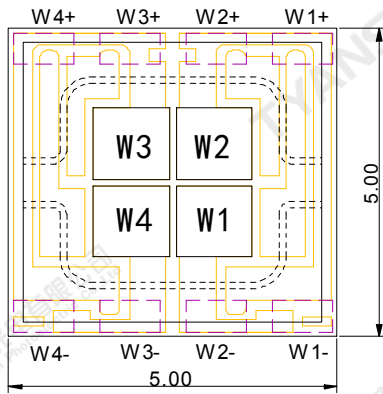
- ◆White

Applications:

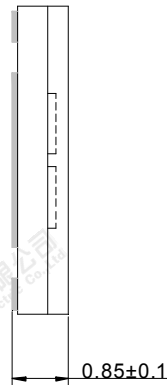
- ◆Auxiliary lighting
- ◆Ambient lighting
- ◆Architectural lighting

Part No.	TX-5050W40FC180-NUVENG-A03H90	Spec No.	WKF-BE0739	Page	1 of 9
----------	-------------------------------	----------	------------	------	--------

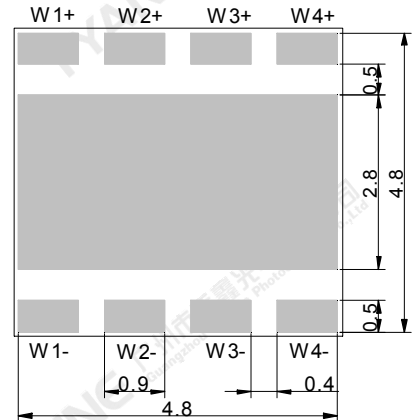
Package Dimensions:



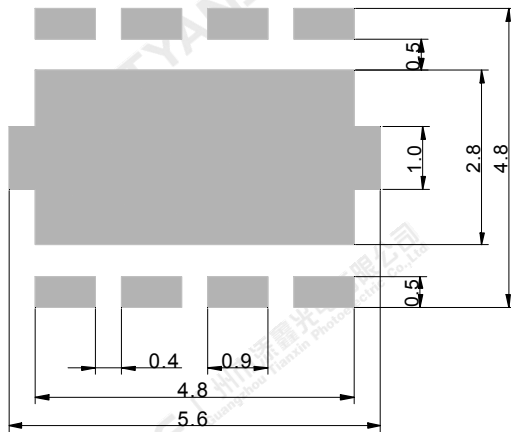
Top view



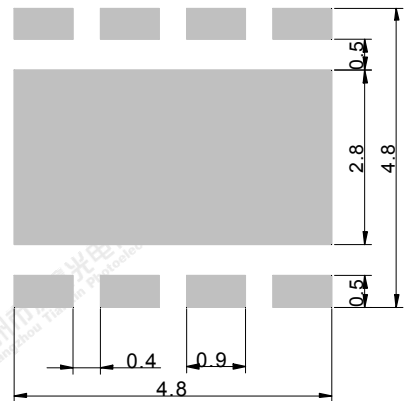
Side view



Bottom view



Recommended solder pad



Recommended stencil pattern

Notes:

- 1.All dimensions are in millimeters .
- 2.Tolerances unless otherwise mentioned are ± 0.1 mm .

Part No.	TX-5050W40FC180-NUVENG-A03H90	Spec No.	WKF-BE0739	Page	2 of 9
----------	-------------------------------	----------	------------	------	--------

Absolute Maximum Ratings (Tc=25°C)

Parameter	Symbol	Ratings	Unit
Forward Current	IF	2500	mA
Reverse Voltage	VR	Not designed for reverse operation	V
Power Dissipation	PD	37.5	W
Junction Temperature	Tj	150	°C
Electrostatic Discharge Threshold (ESD)	ESD	2000	V
Storage Temperature	Tstg	-20~+65	°C
Operation Temperature	Topr	-40~+100	

Notes:

- Specifications are subject to change without notice.
- Under the stipulated Characteristics parameters above, the life span of the LED is more than 50,000hours.
- The data on this specification is for reference only and the actual data is in accordance with the acknowledgment.
- Precautions for ESD:
STATIC SHIELD Electricity and surge damages the LED. It is recommended to use a wrist band or anti-electrostatic glove when handling the LED. All devices, equipment and machinery must be properly grounded.

Electrical Optical Characteristics (Tc=25°C)

Parameter	Symbol	Condition	Emitting color	Min.	Typ.	Max.	Units
Luminous Flux	ϕ_v	If=2.5A	W	1400	1600	1800	lm
Forward Voltage	V_f		W	12	13.5	15	V
Viewing Angle at 50% IV	$2\theta_{1/2}$		W	—	120	—	Deg
Correlated Colour Temperature	CCT	If=1.0A	W	6500	6750	7000	K
		If=2.5A	W	6900	7250	7500	
Color Rendering Index	Ra	If=2.5A	W	90	92.5	—	—
Reverse Current	I_R	—	W	—	—	—	μA
Thermal Resistance Junction to Case	$R\theta_{J-C}$	—	W	—	3.4	—	K/W
Temperature Coefficient of Voltage	$V\Delta F/T$	If=2.5A	W	—	-2.1	—	mV/°C

White light Color coordinate filing (IF=1.0A)

Region	CCT Range		X1	Y1	X2	Y2	X3	Y3	X4	Y4
	Min	Max								
E112	6500K	6750K	0.3137	0.3225	0.3127	0.3299	0.3088	0.3260	0.3100	0.3186
E111	6750K	7000K	0.3100	0.3186	0.3088	0.3260	0.3059	0.3230	0.3073	0.3159
D112	7000K	7250K	0.3078	0.3135	0.3065	0.3199	0.3027	0.3157	0.3041	0.3094
D111	7250K	7500K	0.3041	0.3094	0.3027	0.3157	0.2998	0.3125	0.3014	0.3063

Notes:

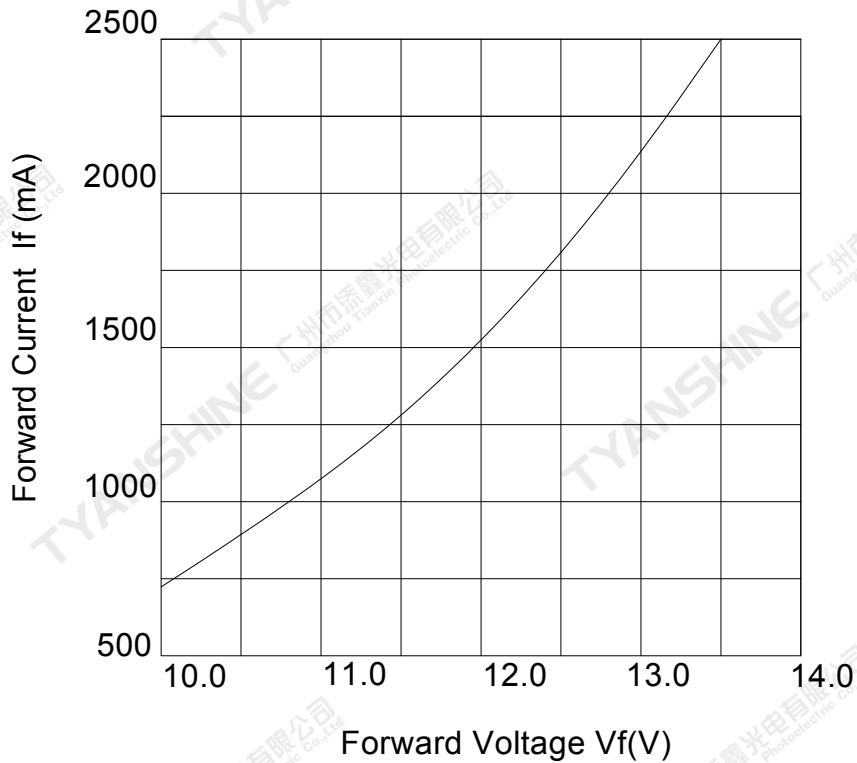
- 1.Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
- 3.Luminous flux measurement tolerance:±15%.
- 4.Forward voltage measurement tolerance:±0.15V.

Part No.	TX-5050W40FC180-NUVENG-A03H90	Spec No.	WKF-BE0739	Page	4 of 9
----------	-------------------------------	----------	------------	------	--------

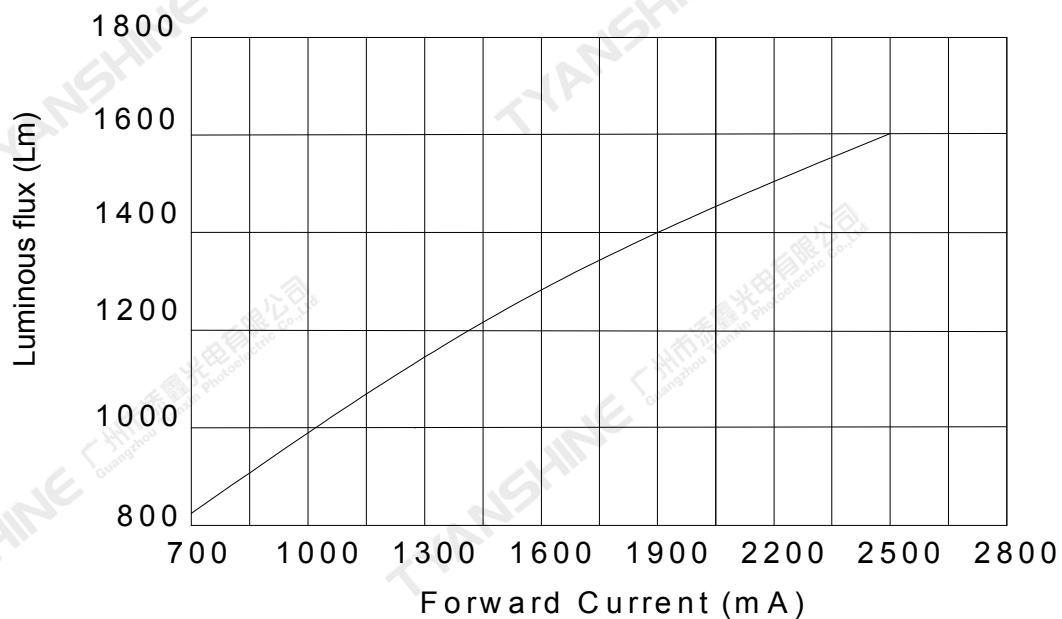
Typical Electrical/Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)

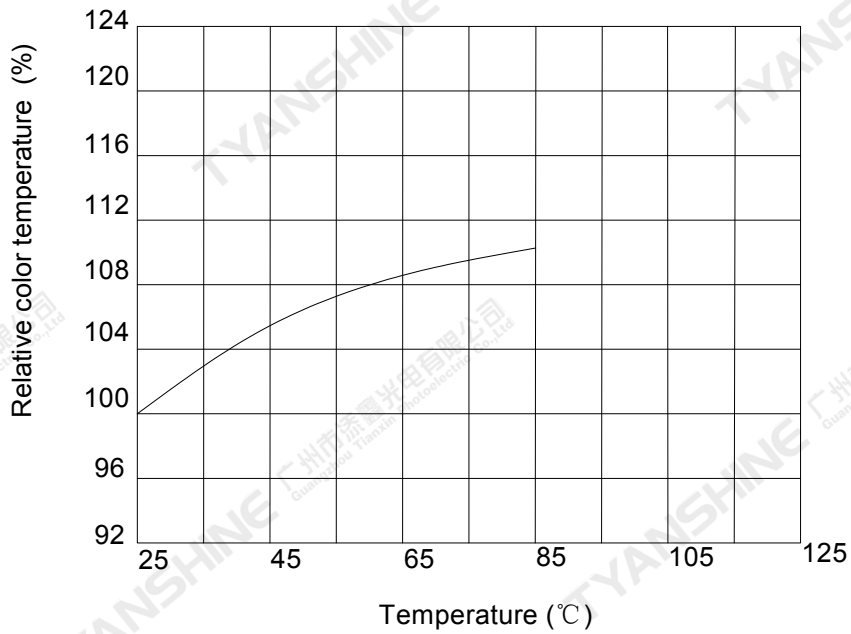
Forward Current VS. Forward Voltage



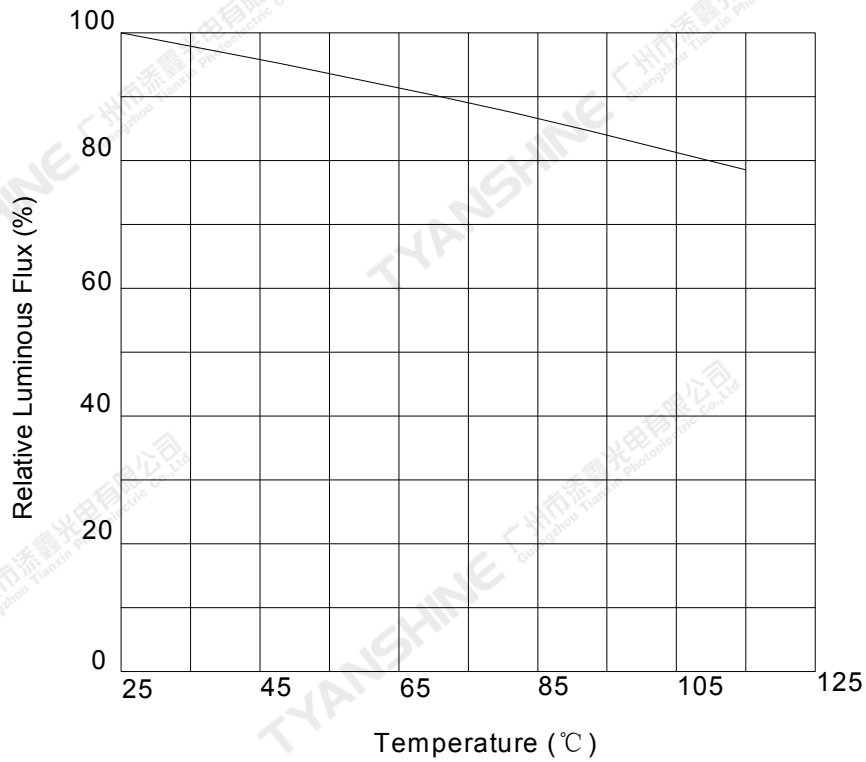
Forward Current VS. Luminous flux



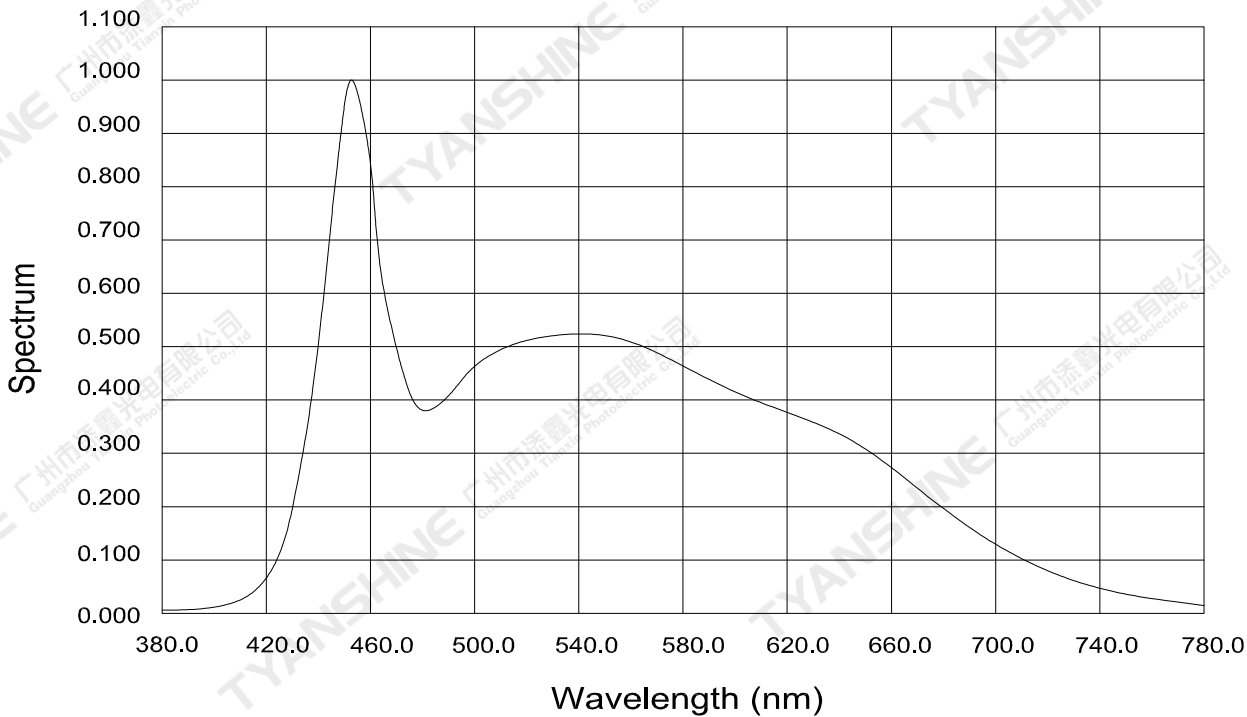
Temperature VS. Relative color temperature (IF=2500mA)



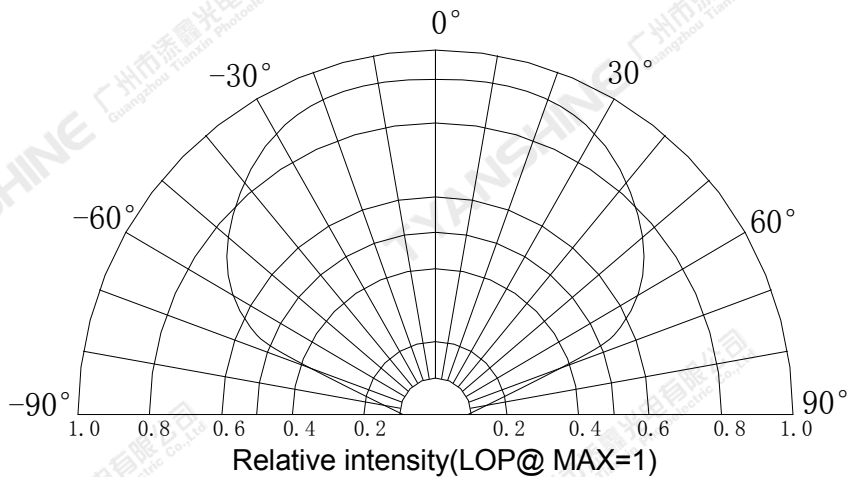
Temperature VS. Relative Luminous Flux (IF=2500mA)



Relative Spectral Distribution



Beam Pattern



Notes:

1. $2\theta_{1/2}$ is the off axis angle from lamp centerline where the luminous intensity is 1/2 of the peak value.
2. View angle tolerance is $\pm 5^\circ$.

Usage Precautions

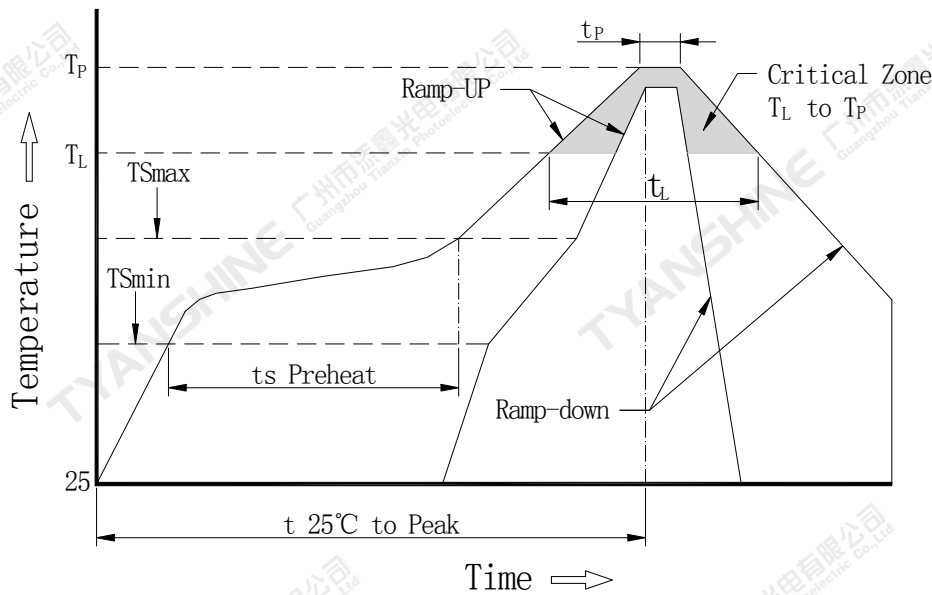
Storage Environment Condition

Temperature: 5°C ~ 30°C (41°F ~ 86°F)

Humidity: 60% RH Max.

Soldering Condition

Use the conditions shown to the under figure.



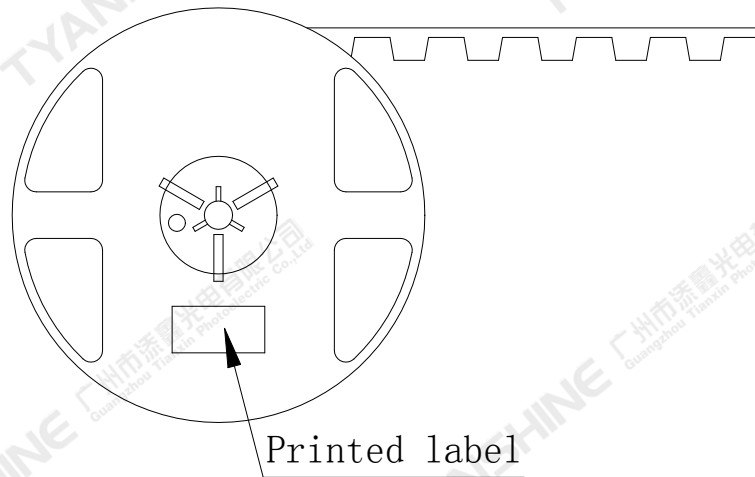
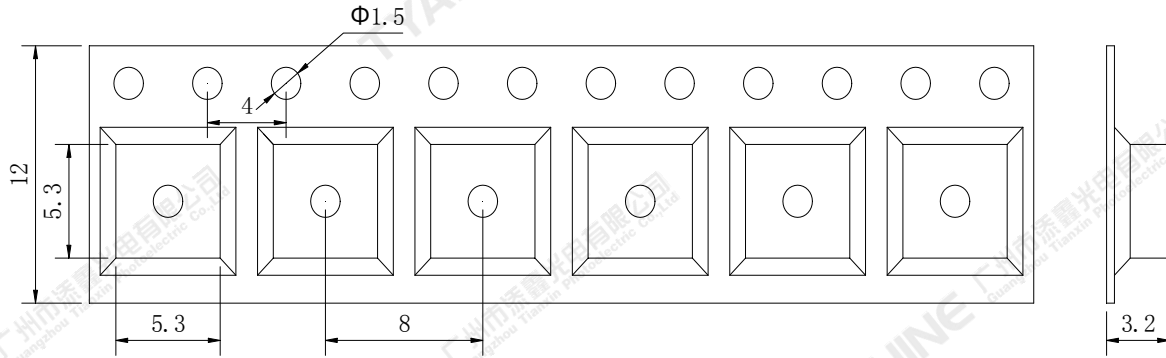
Profile Feature	Lead-Based Solder
Average Ramp-Up Rate (T_{Smax} to T_P)	3°C/second max.
Preheat: Temperature Min (T_{Smin})	100°C
Preheat: Temperature Max (T_{Smax})	150°C
Preheat: Time (T_{Smin} to T_{Smax})	60-120 seconds
Time Maintained Above: Temperature (T_L)	183°C
Time Maintained Above: Time (T_L)	60-150 seconds
Peak/Classification Temperature (T_P)	225°C
Time Within 5°C of Actual Peak Temperature (T_P)	10-30 seconds
Ramp-Down Rate	6°C/second max.
Time 25°C to Peak Temperature	6 minutes max.

Note:

All temperatures refer to topside of the package, measured on the package body surface.

Dimensions For Cannulation And Packaging

Quantity:500PCS



Notes:

1. All dimensions are in millimeters.
2. Tolerances are ± 2.0 mm unless otherwise noted.
3. The products are packaged together with silica gel, Transport, not to the weight of welding LED light-emitting area, As a result of the weight of LED light-emitting zone in the quality of, Irresponsible of the Company.

Part No.	TX-5050W40FC180-NUVENG-A03H90	Spec No.	WKF-BE0739	Page	9 of 9
----------	-------------------------------	----------	------------	------	--------