

Intelligent Tunable White LED Driver (Constant Current)



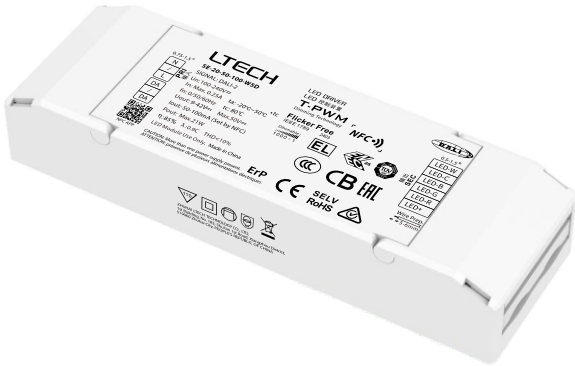
- Ultra-small, thin and light screwless end cap.
- The housing is made from V0 flame retardant PC materials from SAMSUNG/COVESTRO.
- Eight DT6/DT8 device types are integrated in one device, configurable via NFC Lighting APP. RGBCW, W, 2×CT (sync), and XY are single - address; 2×CT (async), XY+CT, RGB+CT, and XY+W are double - address.
- Change the output current, fade time and other parameters on the NFC programmer or via the App, and sync the parameters to the driver.
- The current gear step value can be set as low as 1mA, offering higher compatibility and finer precision.
- Soft-on and fade-in dimming function enhances your visual comfort.
- T-PWM Super depth dimming technology, dimming depth can reach 0.1%
- 0-100% full dimming without video flash, high frequency exemption assessment level
- Comply with the EU’ s ErP Directive, networked standby<0.5W.
- When there is no load, the output will be 0V to prevent damage to LEDs due to poor contact.
- Overheat, over voltage, overload, short circuit protection and automatic recovery.
- Suitable for Class I / II /III indoor light fixtures.
- Normal service life can reach 100,000 hours.
- 5-year warranty (Rubycon capacitor)



T-PWM
Dimming Technology

Flicker Free
IEEE 1789

Dimmable:
1000 : 1



The certification icon represents undergoing certification applications only, and final certification qualification subject to actual product.

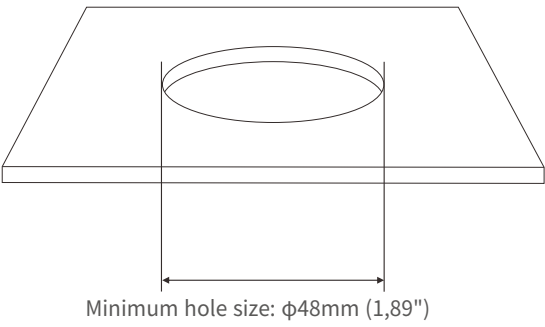
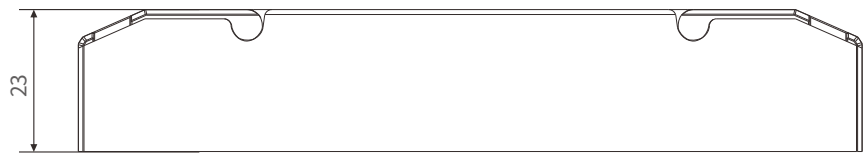
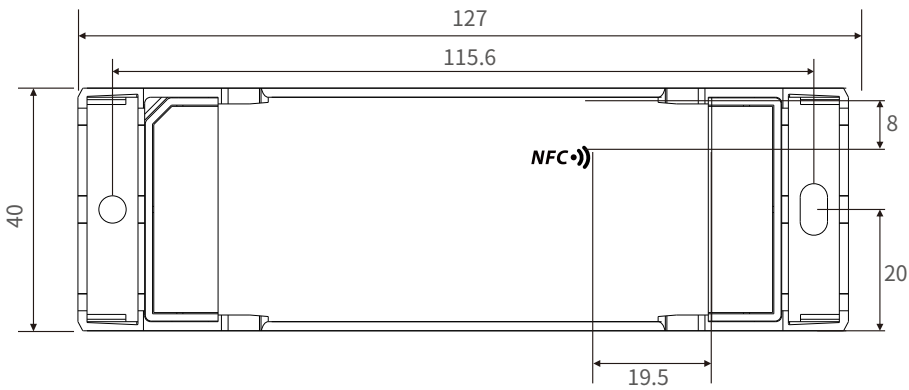


Technical Specs

Model		SE-20-50-100-W5D			
Features	Output Type	Constant current			
	Dimming Interface	DALI-2			
	Output Feature	Isolation			
	Protection Grade	IP20			
	Insulation Grade	Class II (Suitable for class I/ II /III light fixtures)			
OUTPUT	Output Voltage	9-42Vdc			
	Maximum output voltage	≤50Vdc			
	Output Current Range	50-100mA （Set this parameter using the NFC APP）			
	Output Power Range	0.45W-21W			
	Dimming Range	0.1~100%, down to 0.1%			
	LF Current Ripple	<5%(Maximum current for non dimming state)			
	Current Accuracy	±5%			
	PWM Frequency	≤3600Hz			
INPUT	DC Voltage Range	100-240Vdc			
	AC Voltage Range	100-240Vac			
	DC current range	0.09-0.25A			
	Emergency output coefficient	EoFi=98%			
	Input Voltage	115Vac/230Vac			
	Frequency	0/50/60Hz			
	Input Current	≤0.25A/115Vac, ≤0.13A/230Vac			
	Power Factor	PF>0.95/115Vac (at full load), PF>0.9C/230Vac (at full load)			
	THD	THD≤10%/230Vac(at full load)			
	Efficiency (Typ.)	85%(at full load)			
	Inrush Current	Cold start 15A(Test twidth=102us tested under 50% Ipeak)/230Vac			
	Anti Surge	L-N: 2KV			
	Leakage Current	Max. 0.24mA			
ENVIRONMENT	Working Temperature	ta: -20 ~ 50°C tc: 80°C			
	Working Humidity	20 ~ 95%RH, non-condensing			
	Storage Temperature/Humidity	-40 ~ 80°C/10~95%RH			
	Temperature Coefficient	±0.03%/°C(-20-50°C)			
	Vibration	10~500Hz, 2G 12min/1cycle, 72 min for X, Y and Z axes respectively			
PROTECTION	Overload Protection	Automatically protect the device when the load exceeds 102% of the rated power. Automatically recover once load is reduced.			
	Overheat Protection	The temperature returns to normal and the abnormality is eliminated.			
	Overvoltage Protection	Automatically protect the device when voltage exceeds the no-load voltage.			
	Short Circuit Protection	Enter hiccup mode if short circuit occurs, and recover automatically.			
SAFETY & EMC	Withstand Voltage	I/P-O/P: 3750Vac≤5mA/60S			
	Insulation Resistance	I/P-O/P: 100MΩ/500VDC/25°C/70%RH			
	Safety Standards	CCC	China	GB19510.1, GB19510.14	
		TUV	Germany	EN61347-1, EN61347-2-13, EN62493	
		CB	CB Member States	IEC61347-1, IEC61347-2-13	
		CE	European Union	EN61347-1, EN61347-2-13, EN62384	
		KC	Korea	KC61347-1, KC61347-2-13	
		EAC	Russia	IEC61347-1, IEC61347-2-13	
		RCM	Australia	AS 61347-1, AS 61347-2-13	
		ENEC	Europe	EN61347-1, EN61347-2-13, EN62384	
		UKCA	Britain	BS EN 61347-1, BS EN 61347-2-13, BS EN 62493	
		BIS	India	IS 15885 (PART 2/SEC 13)	
		CUL	Canada	CSA C22.2 NO.250.13	
		UL	America	UL 8750	
	EMC Emission	CCC	China	GB/T17743, GB17625.1	
		CE	European Union	EN55015, EN61000-3-2, EN61000-3-3, EN61547	
		KC	Korea	KSC 9815, KSC 9547	
		EAC	Russia	IEC62493, IEC61547, EH55015	
		RCM	Australia	EN55015, EN61000-3-2, EN61000-3-3, EN61547	
		UKCA	Britain	BS EN IEC 55015, BS EN IEC 61000-3-2, BS EN 61000-3-3, BS EN 61547	
		CUL	Canada	ICES-005	
		UL	America	FCC PART 15B	
	EMC Immunity	EN61000-4-2,3,4,5,6,8,11, EN61547			
ErP	Power Consumption	Networked standby	<0.5W (After shutdown by command)		
		No-load power consumption	<0.5W (When the lamp is not connected)		
	Flicker/Stroboscopic Effect	IEEE 1789	Meet IEEE 1789 standard/High frequency exemption level		
		CIE SVM	Pst LM≤1.0, SVM≤0.4		
	DF	Phase factor		DF≥0.9	
OTHERS	Weight(N.W.)	100g±10g			
	Dimensions	127×40×23mm(L×W×H)			

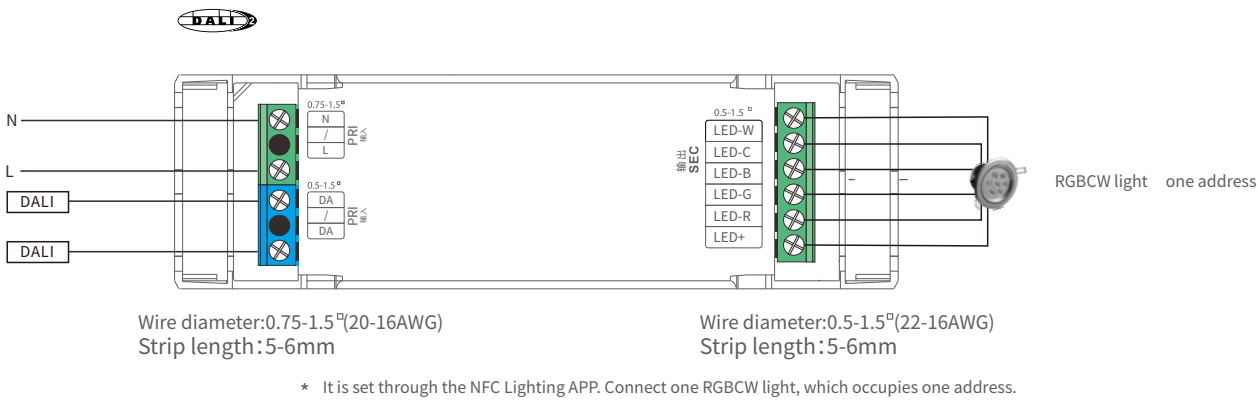
Product Size

Unit: mm

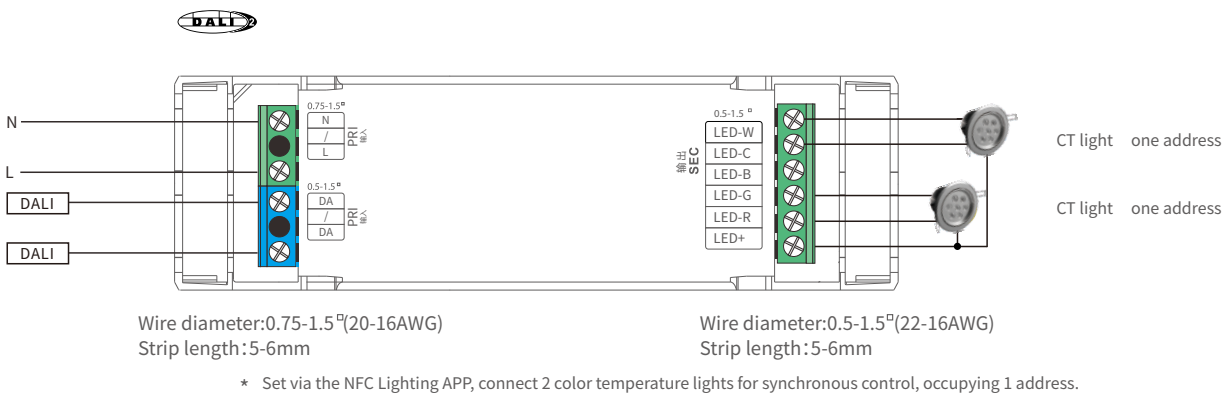


Wiring Diagram

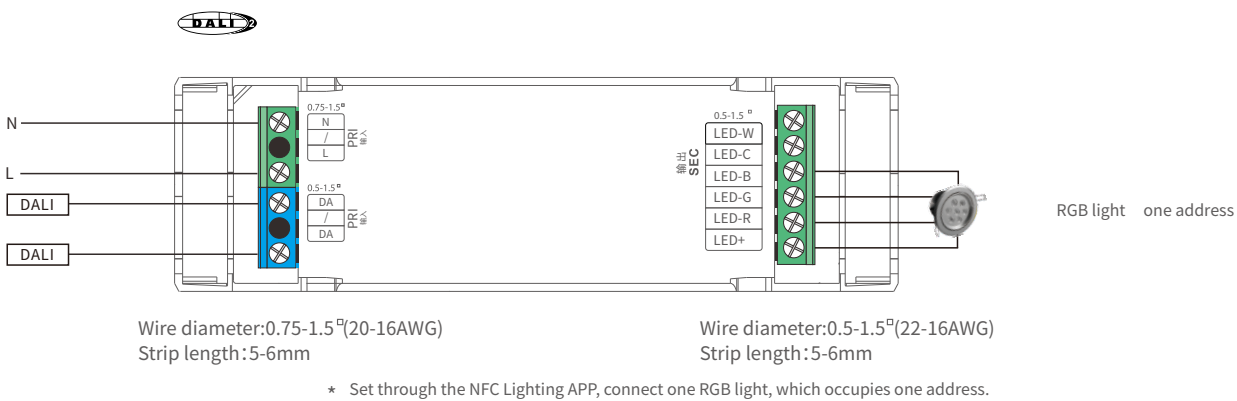
Single-address RGBCW wiring method



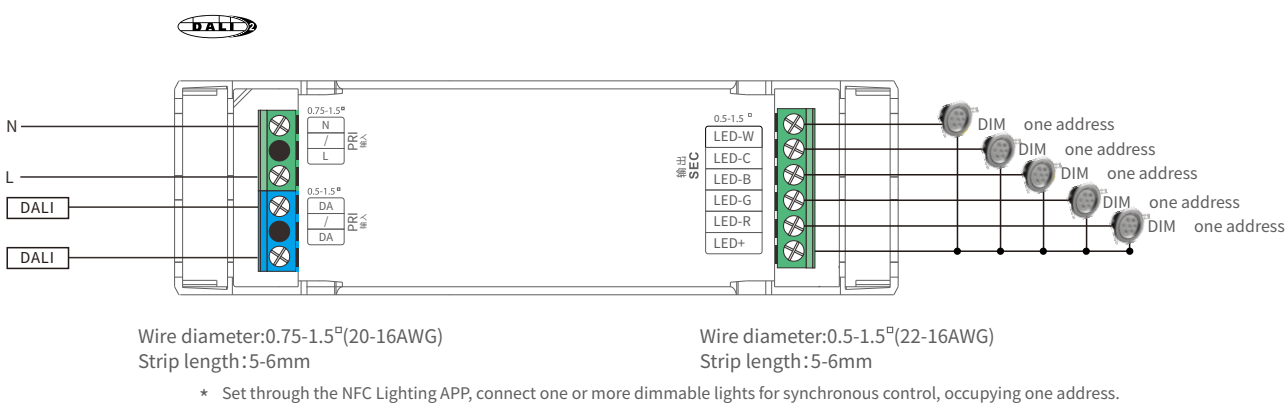
Single - address 2 - CT wiring method



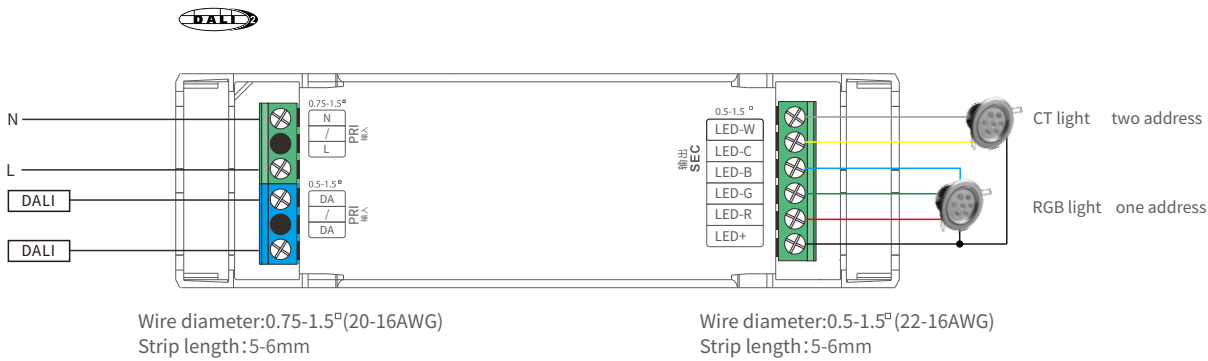
Single-address XY wiring method



Single-address W wiring method

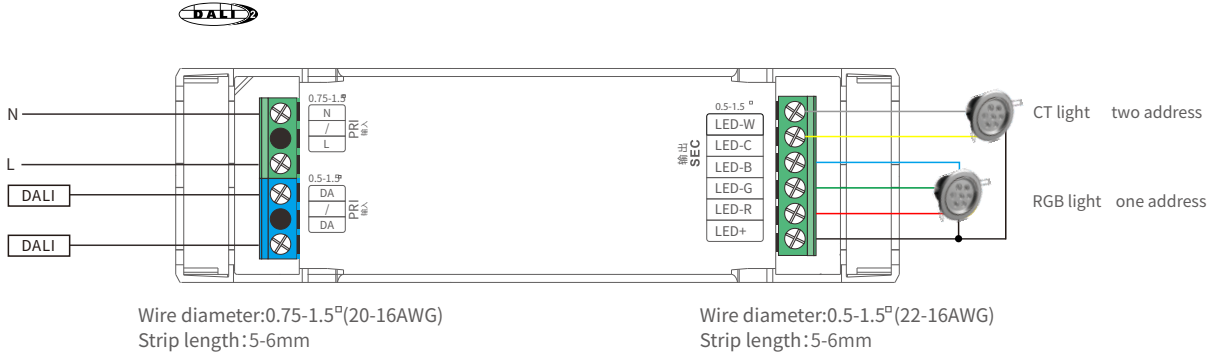


Multi-address RGB+CT wiring method



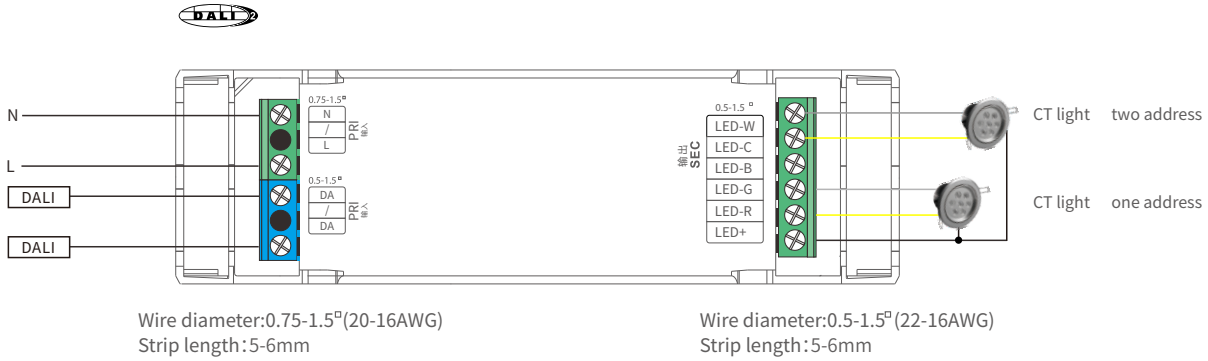
* Set through the NFC Lighting APP, connect one RGB light and one color temperature light for independent control, occupying 2 addresses.

Multi - address XY + CT wiring method



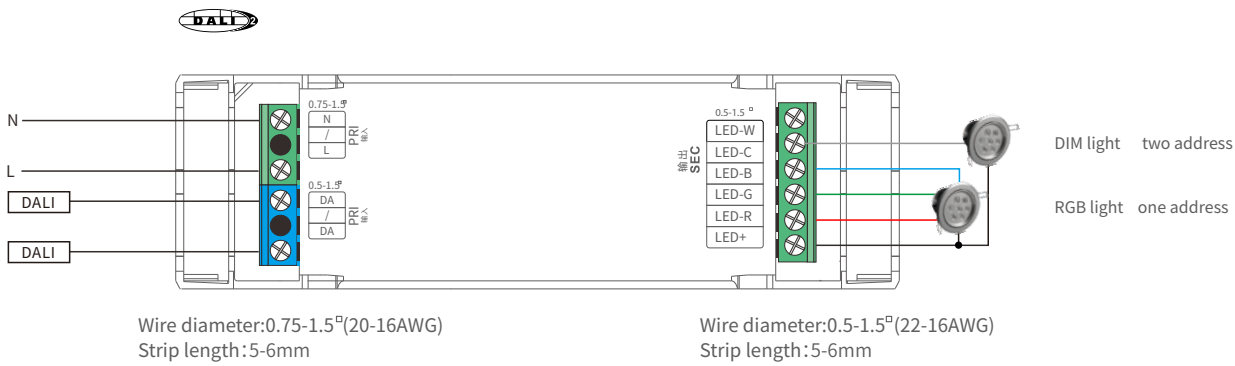
* Set through the NFC Lighting APP, connect one RGB light and one color temperature light for independent control, occupying two addresses.

Multi-address 2×CT Wiring Method



* Set two color temperature lights through the NFC Lighting APP for independent control, occupying two addresses.

Multi-address XY+W Wiring Method



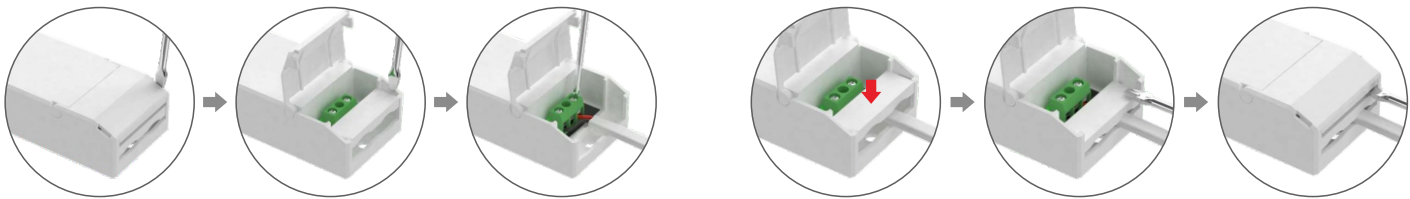
* Set one RGB light and one dimmable light through the NFC Lighting APP for independent control, occupying two addresses.

Table of Typical Corresponding Parameters for Current

The typical 4 current data sets below are for reference when selecting LED fixture models. More current levels can be set by NFC using mobile APP with 50-100mA adjustable in 1mA step

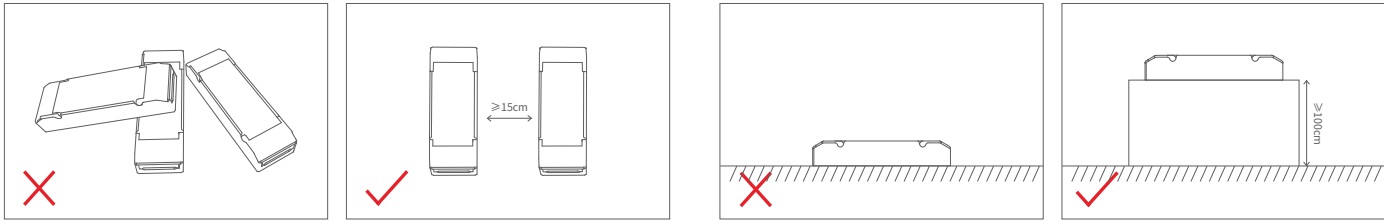
Output Current	50mA(1 Channel)	100mA(1 Channel)	50mA(5 Channels)	100mA(5 Channels)
Output Voltage	9-42Vdc	9-42Vdc	9-42Vdc	9-42Vdc
Output Power	0.45-2.1W	0.9-4.2W	2.25-10.5W	4.5-21W

Installation procedure



1. Put the head of a screwdriver on the side of the housing to pry up both the protective cover and wire fixing board. Then remove the wire fixing board and connect to the wires as wiring diagram shows.
2. Install the wire fixing board and press it down. Then snap on the protective cover while pressing the wire fixing board with a small flat-head screwdriver

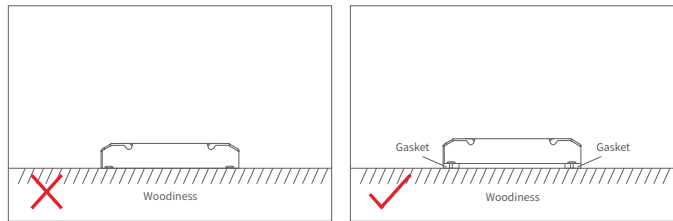
Installation Precautions



Please do not stack the products. The distance between two products should be $\geq 15\text{cm}$ so as not to affect heat dissipation and the lifespan of the products.

Please do not place the products on the floor. The distance between the product and the floor should be $\geq 100\text{cm}$ so as to avoid signal interference.

Note: The installation should be in line with the environmental operating temperature of the product. Do not install it inside the lamp to avoid exceeding the environmental operating temperature of the product, which may affect the product's lifespan.



Do not fix the product screws tightly against the wooden board. Instead, add a washer with a thickness of $\geq 7\text{mm}$ under the fixing screws. Leaving some gaps can effectively dissipate heat, preventing any impact on the product's heat dissipation performance and service life.

Use the NFC Lighting APP

Scan the QR code below with your mobile phone and follow the prompts to complete the APP installation (According to performance requirements, you need to use a NFC-capable Android phone, or an iPhone 8 and later that are compatible with iOS 13 or higher).



* Before you begin setting the parameters of the driver on the NFC programmer or via the APP, please make sure the driver is powered off.

Read/Write the LED driver

Use your NFC-capable phone to read the driver parameters, then set the output current, fade time, power-on status, other parameters. Save your settings and hold your phone close to the driver again, so the parameters can be easily written to the driver.

1. Read the LED driver

On the APP home page, click [Read/Write LED driver], then keep the programmer's sensing area close to the NFC logo of the driver to read the driver parameters.

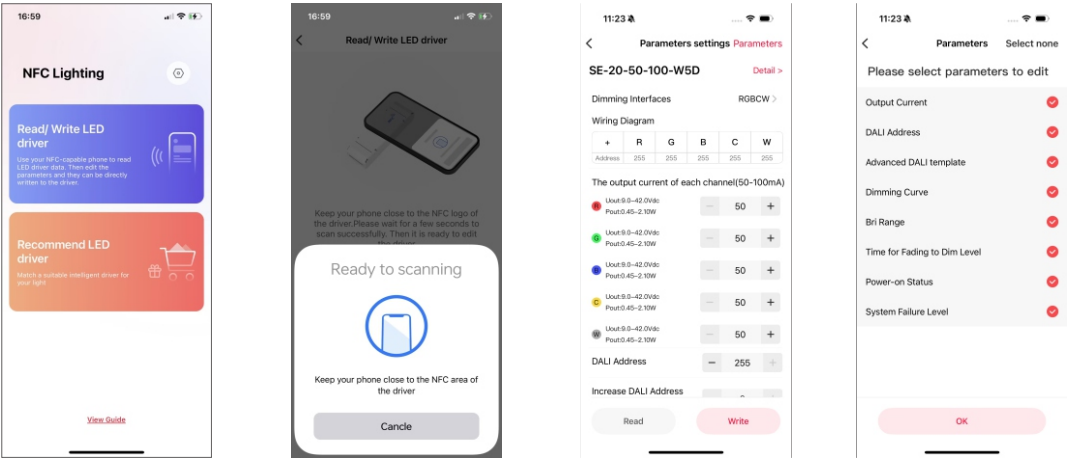


2. Edit the parameters

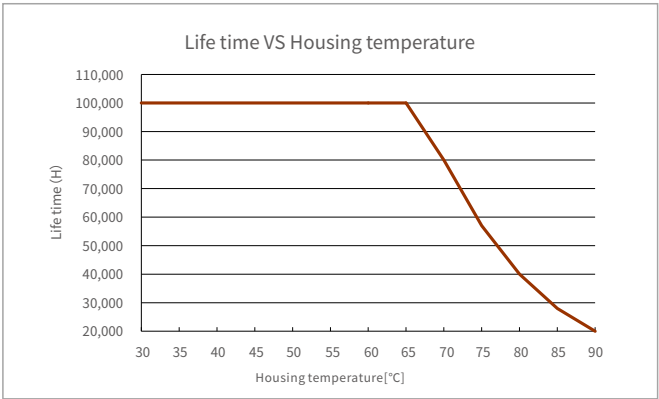
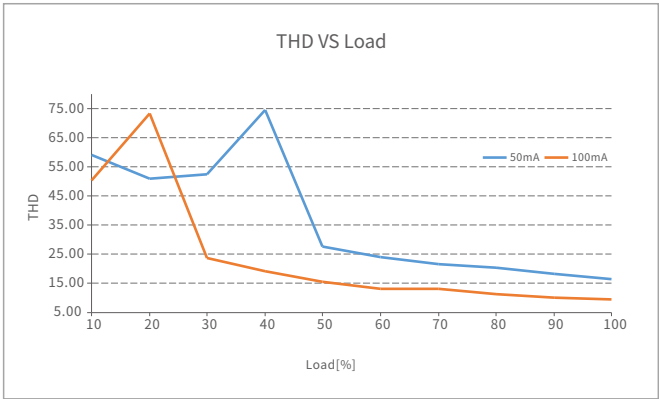
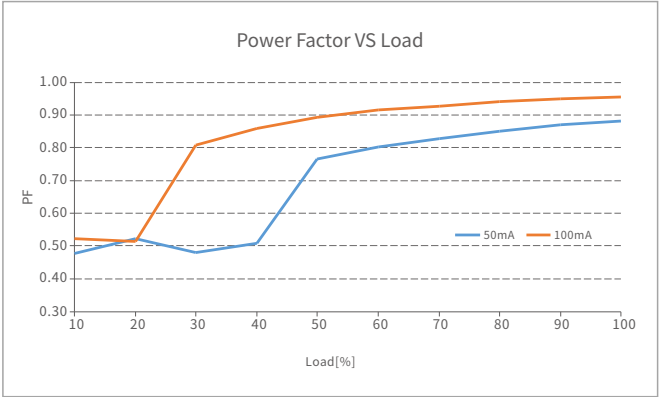
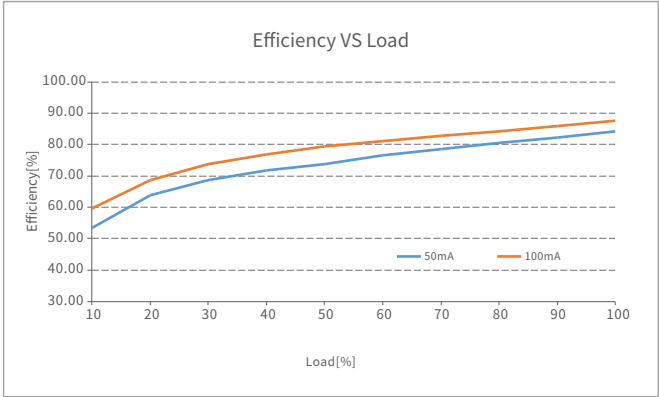
Click [Parameter settings] to edit more advanced parameters such as output current, DALI address, dimming curve, and DALI advanced template.

3. Write to the driver

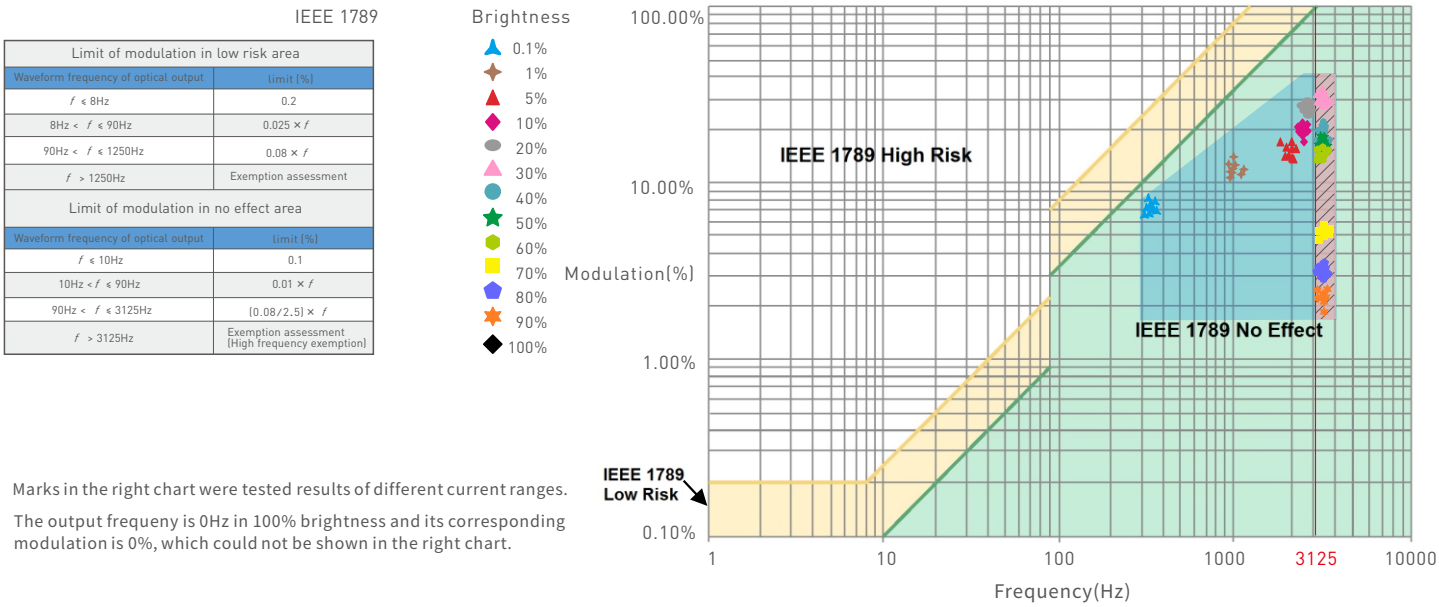
After completing the parameter editing, click [Write] in the upper right corner, bring the phone's sensing area close to the NFC identification point of the driver, and the driver parameters can be successfully written.



Relationship Diagrams



Flicker Test Sheet



Packaging Specifications

Model	SE-20-50-100-W5D
Carton Dimensions	290×275×106mm(L×W×H)
Quantity	20 PCS/Layer; 2 Layers/Carton; 40 PCS/Carton
Weight	0.11 kg/PC; 52 kg±5%/Carton

Packaging Image



Inner Packaging Box



Carton Packaging

Transportation and Storage

1. Transportation
- Products can be shipped via vehicles, boats and planes.
- During transportation, products should be protected from rain and sun. Please avoid severe shock and vibration during the loading and unloading process.
2. Storage
- The storage conditions should comply with the Class I Environmental Standards. The products that have been stored for more than six months are recommended to be re-inspected and can be used only after they have been qualified.

Attentions

- This product must be installed and adjusted by a qualified professional.
 - LTECH products are and not lightningproof non-waterproof (special models excepted). Please avoid the sun and rain. When installed outdoors, please ensure they are mounted in a water proof enclosure or in an area equipped with lightning protection devices .
 - Good heat dissipation will extend the life the product. Please install the product in a environment with good ventilation.
 - When you install this product, please avoid being near a large area of metal objects or stacking them to prevent signal interference.
 - Please keep the product away from a intense magnetic field, a high pressure area or a place where lightning is easy to occur.
 - Please check whether the working voltage used complies with the parameter requirements of the product.
 - Before you power on the product, please make sure all the wiring is correct in case of incorrect connection that may cause a short circuit and damage the components, or trigger a accident.
- If a fault occurs, please do not attempt to fix the product by yourself. If you have any question, please contact the supplier.
- ✧ This manual is subject to changes without further notice. Product functions depend on the goods. Please feel free to contact our official distributors if you have any question.

Warranty Agreement

- Warranty periods from the date of delivery: 5 years.
- Free repair or replacement services for quality problems are provided within warranty periods.

- Warranty exclusions below:
- Beyond warranty periods.
 - Any artificial damage caused by high voltage, overload, or improper operations.
 - Products with severe physical damage.
 - Damage caused by natural disasters and force majeure.
 - Warranty labels and barcodes have been damaged.
 - No any contract signed by LTECH.

1. Repair or replacement provided is the only remedy for customers. LTECH is not liable for any incidental or consequential damage unless it is within the law.
2. LTECH has the right to amend or adjust the terms of this warranty, and release in written form shall prevail.

LED智能色温驱动器(恒流型)

- 超小体积、轻薄、免螺丝端盖设计；
- 外壳采用科思创/三星PC阻燃V0级原料；
- 8种DT6,DT8设备类型集成在一个设备中, 可通过NFC Lighting APP 设置;其中 RGBCW、W、2°CT(同步)、XY为单地址, 2°CT(异步)、XY+CT、RGB+CT、XY+W为双地址；
- 通过手机APP可更改输出电流、通电渐变时间等参数, 实现驱动器数据交互功能；
- 电流档位步进值设置低至1mA, 兼容性更高更精细；
- 带软启动渐亮功能, 让人眼视觉更舒服
- T-PWM 超深度调光技术, 调光深度可达0.1%；
- 0-100%全程调光无可视频闪,高频豁免考核级别；
- 欧盟ERP空载功耗、网络待机功耗<0.5W；
- 空载保护, 防止接触不良损坏LED灯具；
- 过温、过载、短路保护, 可自动恢复；
- 适合室内 I、II、III类灯具应用；
- 常规使用下寿命可达10万小时；
- 5年保修期 (采用红宝石电容)。

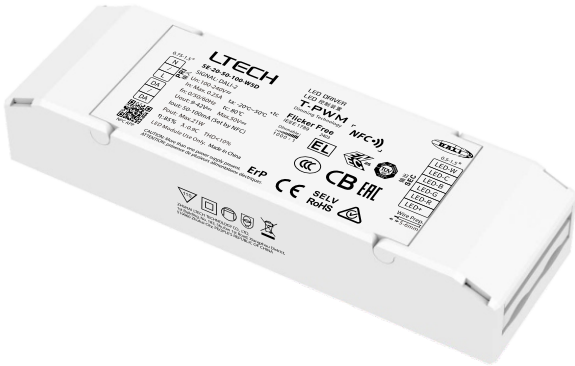


T-PWM
超深度调光技术

无频闪
IEEE1789
高频豁免考核级别



1000 : 1

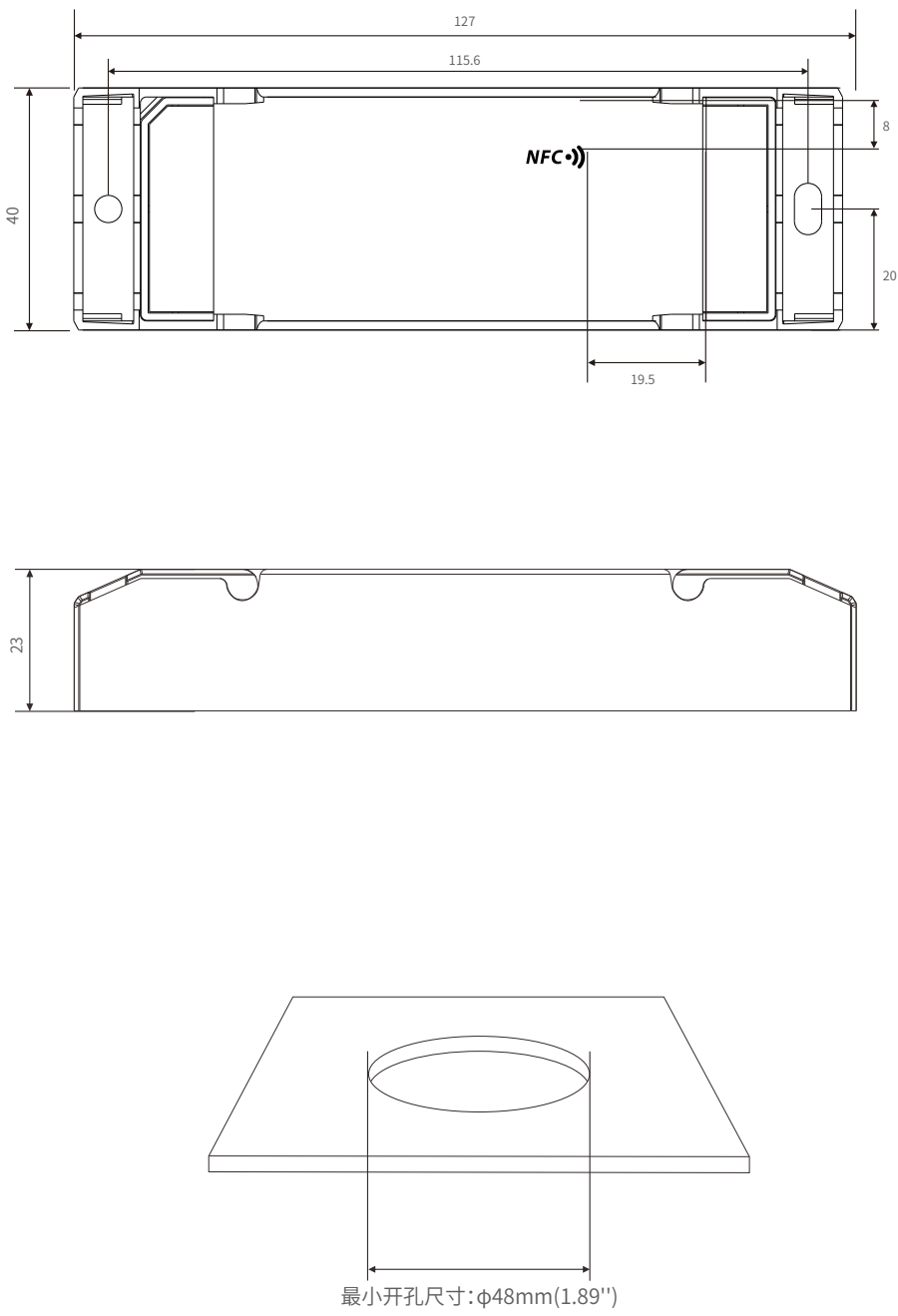


技术参数

型号		SE-20-50-100-W5D	
特征	输出类型	恒流	
	调光接口	DALI-2	
	输出特征	隔离	
	防护等级	IP20	
	绝缘等级	II类(适用于室内 I、II、III类灯具)	
输出	输出电压	9-42Vdc	
	最大输出电压(空载)	≤50Vdc	
	工作电流范围	50-100mA (通过NFC APP设置)	
	负载功率范围	0.45W-21W	
	调光范围	0.1~100%, 调光深度:0.1%	
	电流纹波	<5%(输出最大电流非调光状态)	
	电流精度	±5%	
输入	PWM频率	≤3600Hz	
	直流电压范围	100-240Vdc	
	交流电压范围	100-240Vac	
	直流电流范围	0.09-0.25A	
	应急输出系数	EoF _i =98%	
	额定电压	115Vac/230Vac	
	频率范围	0/50/60Hz	
	输入电流	≤0.25A/115Vac, ≤0.13A/230Vac	
	功率因数	PF>0.95/115Vac(满载), PF>0.9/230Vac(满载)	
	谐波THD	THD≤10%/230Vac(满载)	
	效率(Typ.)	85%(满载)	
	浪涌电流	冷启动,15A(在50%I _{peak} 下测t _{width} =102us)/230Vac	
	抗浪涌	L-N:2KV	
	漏电流	Max.0.24mA	
环境	工作温度	ta:-20~50℃ tc:80℃	
	工作湿度	20~95%RH,无冷凝	
	储存温度/湿度	-40~80℃/10~95%RH	
	温度系数	±0.03%/℃(-20-50℃)	
	耐振动	10-500HZ,2G12分钟/周期, X,Y,Z轴各72分钟	
保护	过载保护	负载超过额定功率≥1.02倍时自动保护, 异常排除自动恢复	
	过温保护	温度恢复到正常值异常排除	
	过压保护	超过空载电压值进入保护	
	短路保护	短路关闭输出, 检测正常后自动恢复	
安规和电磁规格	耐压	输入对输出: 3750Vac≤5mA/60S	
	绝缘阻抗	输入对输出: 100MΩ/500VDC/25℃/70%RH	
	安全规范	CCC	中国 GB19510.1, GB19510.14
		TUV	德国 EN61347-1, EN61347-2-13, EN62493
		CB	CB成员国 IEC61347-1, IEC61347-2-13
		CE	欧盟 EN61347-1, EN61347-2-13, EN62384
		KC	韩国 KC61347-1, KC61347-2-13
		EAC	俄罗斯 IEC61347-1, IEC61347-2-13
		RCM	澳洲 AS61347-1, AS61347-2-13
		ENEC	欧洲 EN61347-1, EN61347-2-13, EN62384
		UKCA	英国 BSEN61347-1, BSEN61347-2-13, BSEN62493
		BIS	印度 IS15885(PART2/SEC13)
		CUL	加拿大 CSAC22.2No.250.13
		UL	美国 UL8750
	电磁兼容发射	CCC	中国 GB/T17743, GB17625.1
		CE	欧盟 EN55015, EN61000-3-2, EN61000-3-3, EN61547
		KC	韩国 KSC9815, KSC9547
		EAC	俄罗斯 IEC62493, IEC61547, EH55015
		RCM	澳洲 EN55015, EN61000-3-2, EN61000-3-3, EN61547
		UKCA	英国 BSENIEC55015, BSENIEC61000-3-2, BSEN61000-3-3, BSEN61547
		CUL	加拿大 ICES-005
		UL	美国 FCCpart15B
	电磁兼容抗扰度	EN61000-4-2,3,4,5,6,8,11,EN61547	
ErP	功耗	网络待机功耗	<0.5W (通过指令开关后)
		空载功耗	<0.5W (不接灯具时)
	频闪/频闪效应	IEEE1789	满足无影响/高频豁免考核级别
		CIESVM	PstLM≤1.0, SVM≤0.4
	DF	相位因素	DF≥0.9
其他	产品重量	100g±10g	
	产品尺寸	127×40×23mm(L×W×H)	

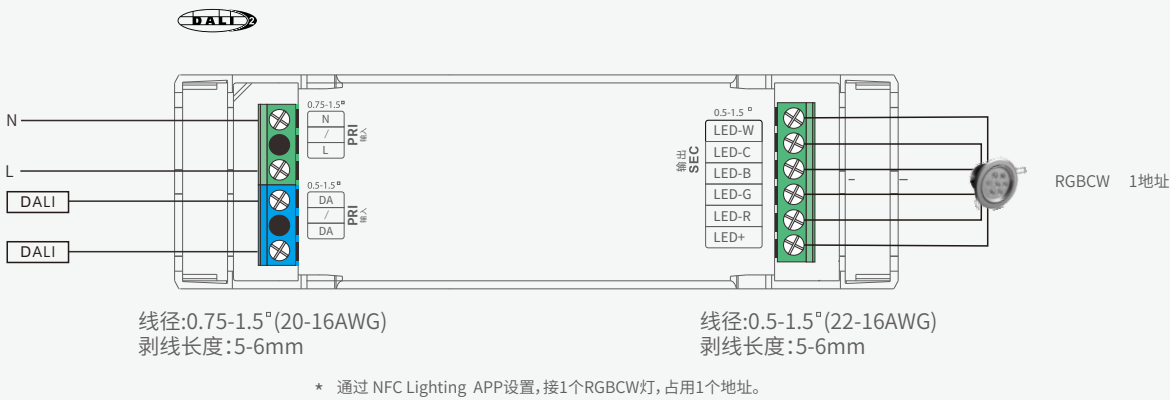
尺寸图

单位:mm

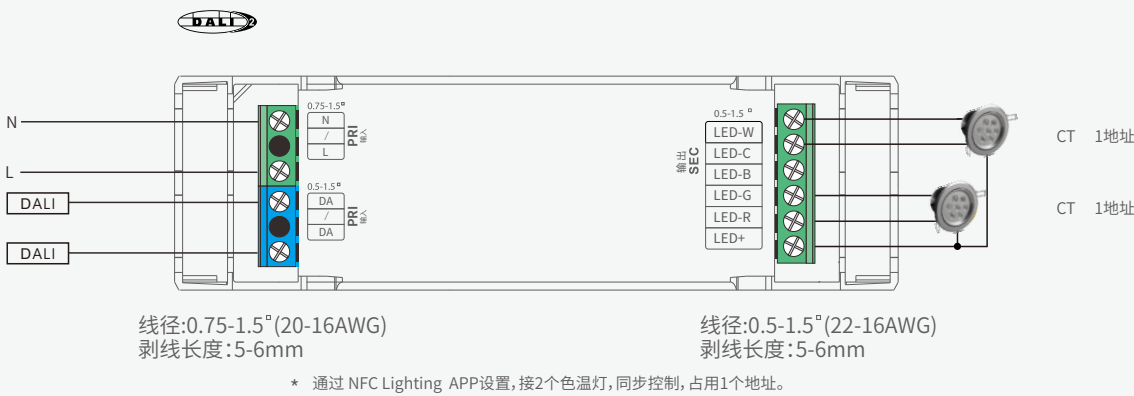


连接应用图

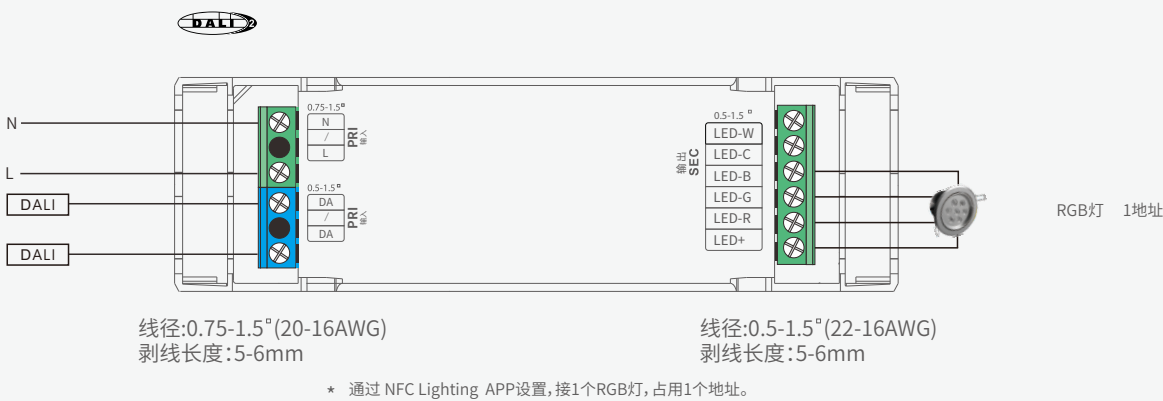
单地址RGBCW接线方式



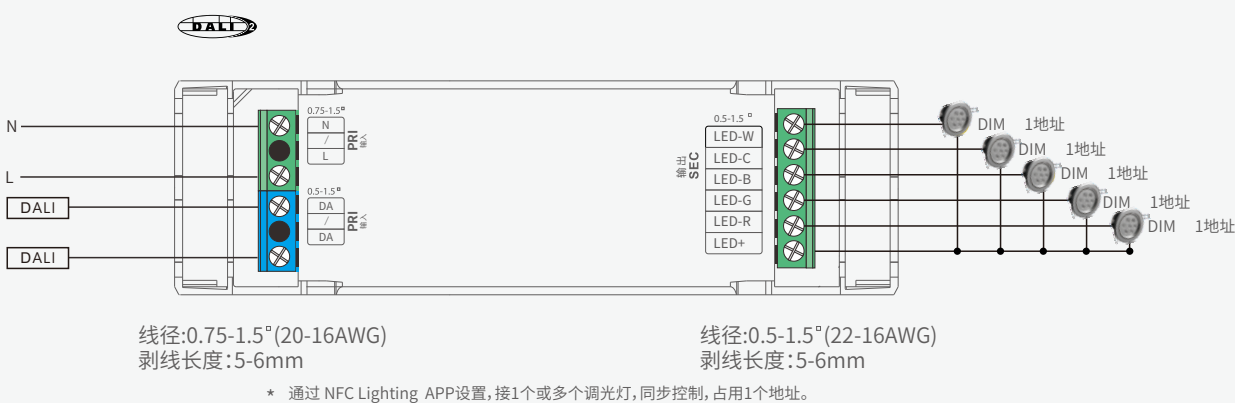
单地址2*CT接线方式



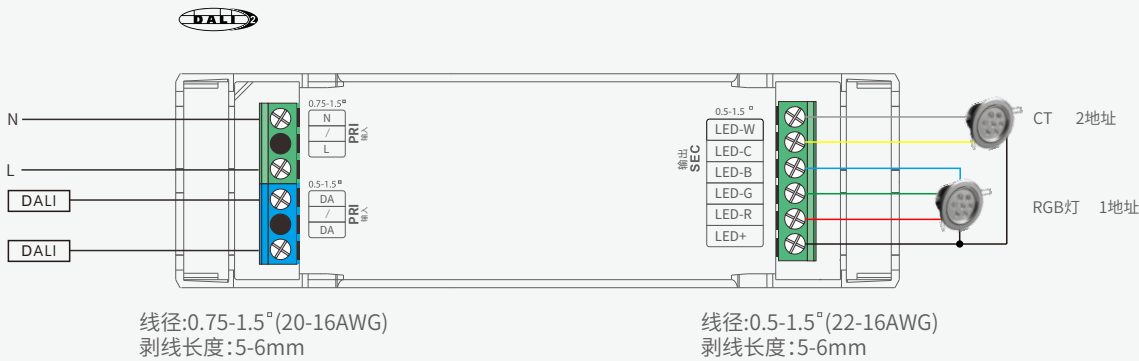
单地址XY接线方式



单地址W接线方式

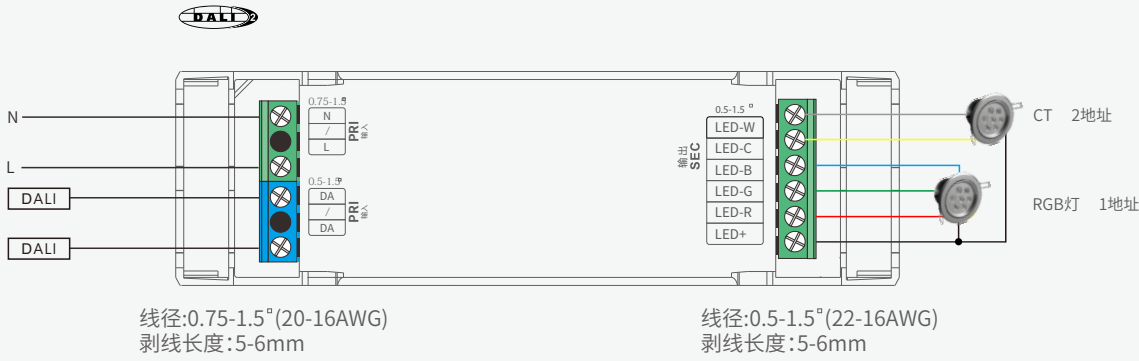


多地址RGB+CT接线方式



* 通过 NFC Lighting APP设置,接1个RGB灯和1个色温灯,独立控制,占用2个地址。

多地址XY+CT接线方式



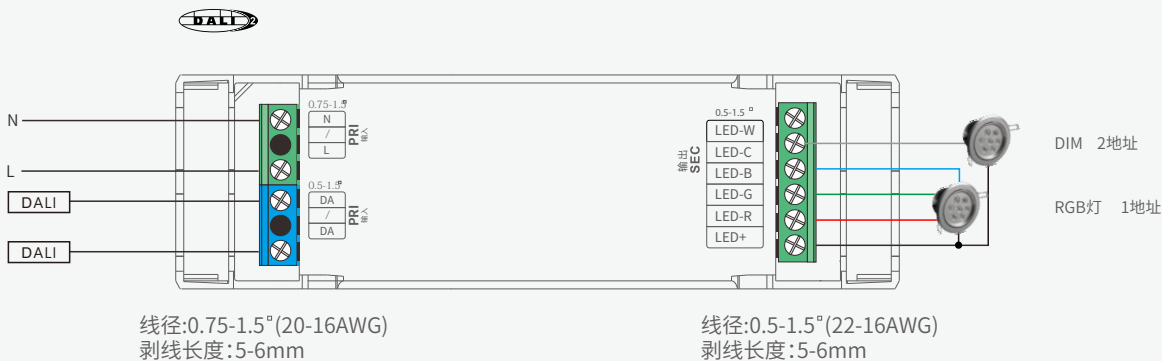
* 通过 NFC Lighting APP设置,接1个RGB灯和1个色温灯,独立控制,占用2个地址。

多地址2*CT接线方式



* 通过 NFC Lighting APP设置,接2个色温灯,独立控制,占用2个地址。

多地址XY+W接线方式



* 通过 NFC Lighting APP设置,接1个RGB灯和1个调光灯,独立控制,占用2个地址。

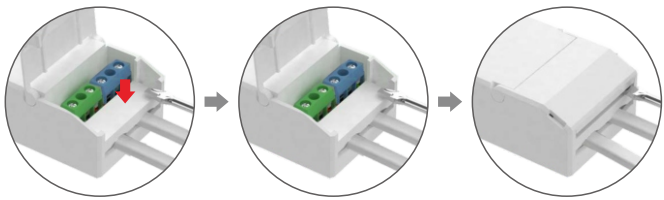
典型电流对应参数表

下图典型4组电流数据供选型参考, 均可通过手机APPNFC设置更多电流, 可设置范围在50-100mA, 电流步进值低至1mA				
输出电流	50mA (单路)	100mA (单路)	50mA (5路)	100mA (5路)
输出电压	9-42Vdc	9-42Vdc	9-42Vdc	9-42Vdc
输出功率	0.45-2.1W	0.9-4.2W	2.25-10.5W	4.5-21W

安装步骤

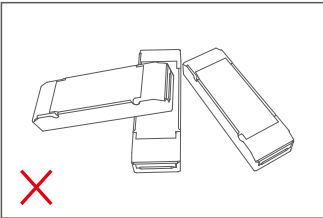


1.在侧板处使用螺丝批撬起保护盖, 并撬起压线板将其拆下后, 按照接线图进行接线。

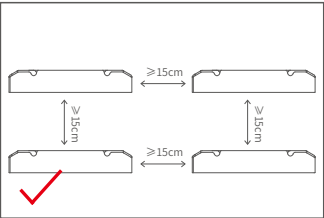


2.装上压线板并向下按压, 使用小一字螺丝批按住压线板的同时, 将保护盖向下扣合即可。

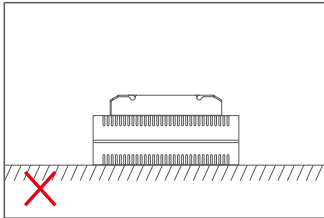
安装注意事项



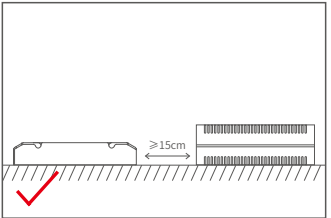
请勿将产品堆叠摆放, 产品与产品间隔距离应 $\geq 15\text{cm}$, 避免影响产品散热和使用寿命。



$\geq 15\text{cm}$

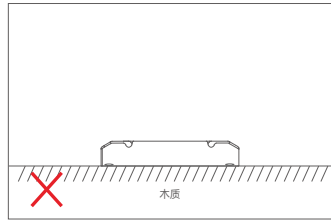


请勿将产品置于电源上方, 与电源间隔距离应 $\geq 15\text{cm}$, 避免影响产品散热而减少使用寿命。

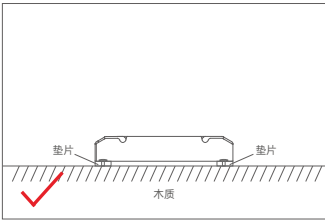


$\geq 15\text{cm}$

注：安装需符合产品的环境工作温度，切勿安装到灯具内部，以免超出产品环境工作温度影响产品寿命。



木质



垫片 木质

请勿将产品螺丝固定紧贴于木板，应在固定螺丝下增加 $\geq 7\text{mm}$ 的垫片，留点空隙可以有效散热，避免影响产品散热和使用寿命。

搭配NFCLightingAPP使用

通过手机扫描下方二维码, 按提示完成APP安装。(因性能需求, 要求手机型号苹果:iPhone8及以上、且操作系统iOS13及以上; 安卓: 具备NFC功能机型)



* 设置驱动器参数时, 必须在驱动器断电情况下进行操作。

读/写智能电源

使用手机, 通过NFC读取驱动器信息, 根据需求设置参数后, 可直接写入驱动器。

1.读取驱动器

在APP“ 首页” 点击【读/写智能电源】, 将手机感应区域靠近驱动器NFC标识点, 读取驱动器参数。

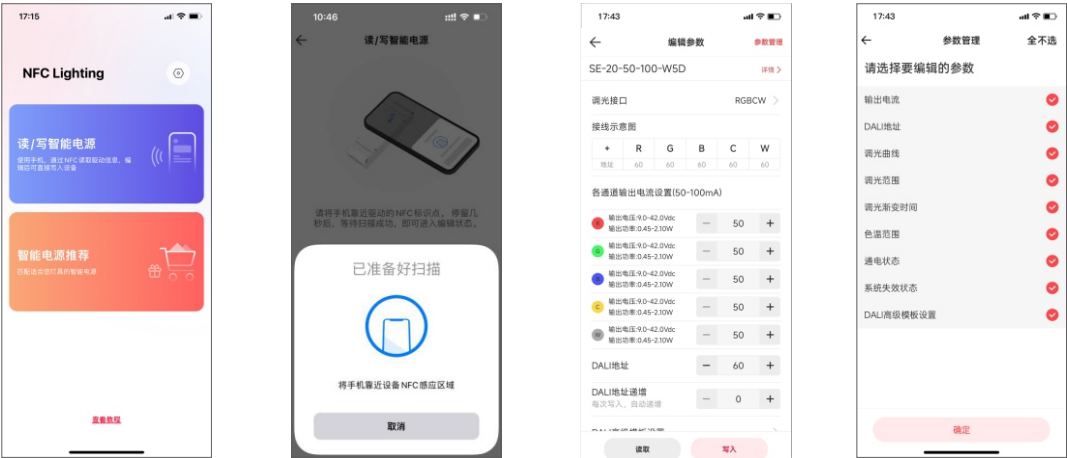


2. 编辑参数

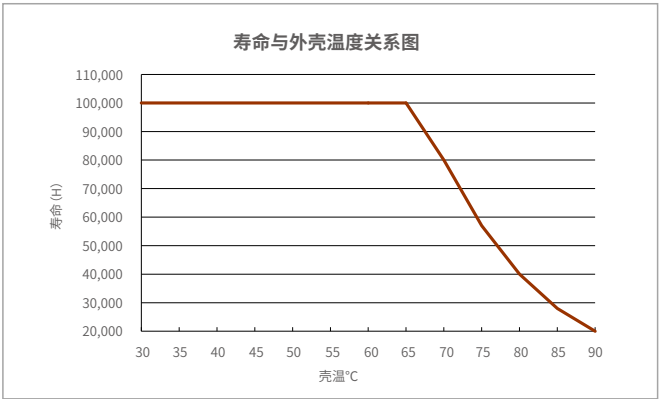
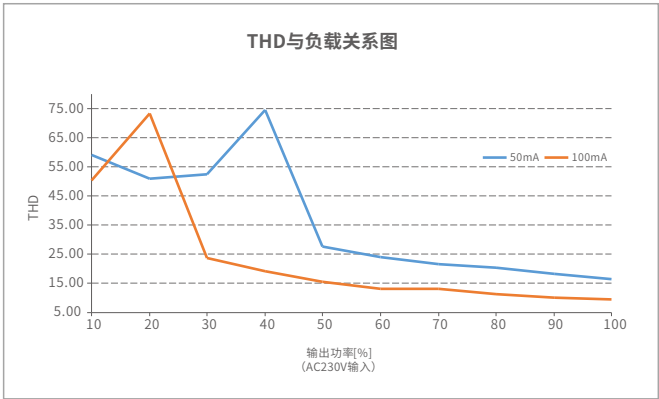
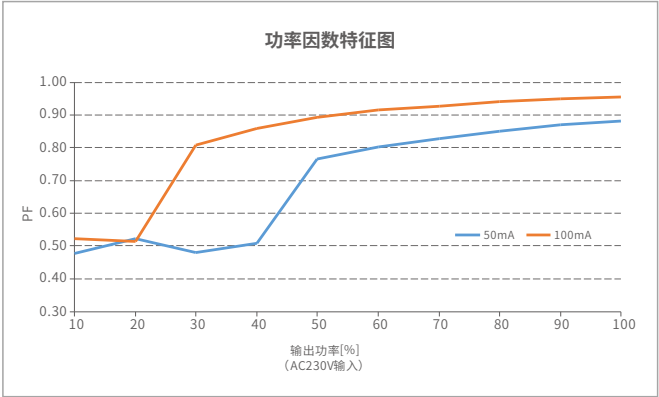
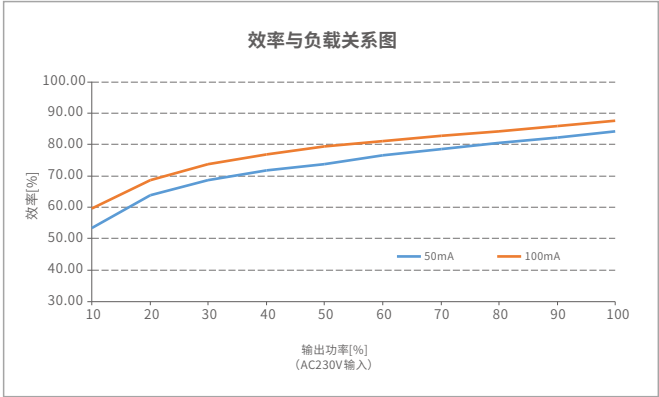
点击【参数管理】可编辑输出电流、DALI地址、调光曲线、DALI高级模板等更多高级参数。

3. 写入驱动器

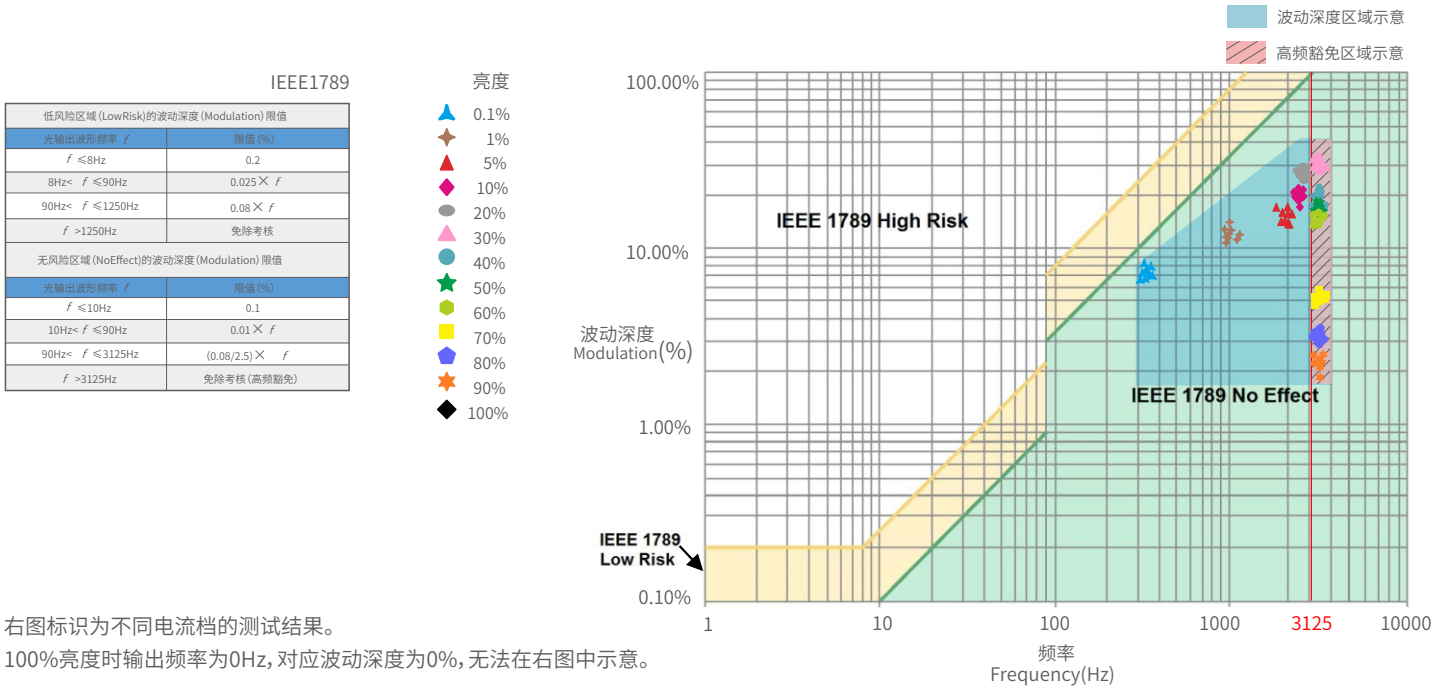
参数编辑完成后，点击右上角【写入】，将手机感应区域靠近驱动器NFC标识点，即可成功写入驱动器参数。



关系图表



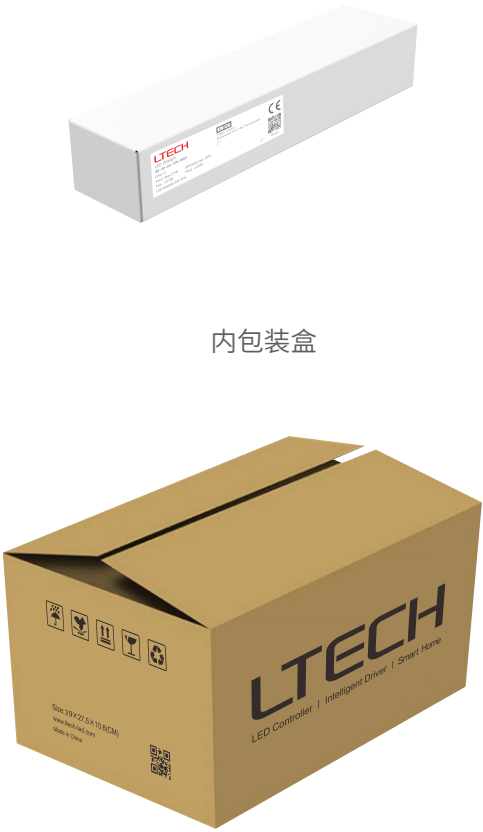
频闪测试表



包装规格

型号	SE-20-50-100-W5D
包装箱尺寸	290×275×106mm(L×W×H)
数量	20PCS/层; 2层/箱; 40PCS/箱
重量	0.11kg/PC; 52 kg±5%/箱

包装样式图



运输和贮存

- 1.运输
- 产品适用车、船、飞机交通运输工具运输。
- 在运输中, 应使用遮蓬进行防雨和防晒, 并保持文明装卸, 不应有剧烈振动、撞击等。
- 2.贮存
- 贮存符合I类环境的规定。贮存期限超过6个月的产品建议重新检验, 合格后方可使用。

注意事项

- 本产品请由具有专业资格的人员进行调试安装；
 - 雷特产品(专有型号除外) 不能防水防雷, 需避免日晒雨淋, 如安装在户外, 请用防水箱和防雷装置；
 - 良好的散热条件会延长产品的使用寿命, 请把产品安装在通风良好的环境；
 - 请检查使用的工作电压是否符合产品的参数要求；
 - 通电调试前, 确保所有接线正确且牢固, 以免短路损坏部件, 触发事故；
 - 如果发生故障, 请勿私自维修; 如有疑问, 请联系供应商。
- ※ 本说明书的内容如有变更, 恕不另行通知。若内容与您使用的功能有所不同, 则以实物为准。如有疑问, 欢迎向我司授权的经销商咨询。

保修条例

- 自出厂之日起保修服务期为5年。
- 在保修服务期内出现产品质量问题雷特将给予免费修理或更换服务。

非保修条例:
属下列情况不在免费保修或更换服务范围之内:

- 已经超出保修服务期;
- 过高电压、超负载、操作不当等人为造成的损坏;
- 产品外形严重损坏或变形;
- 自然灾害以及人力不可抗拒原因造成的损坏;
- 产品保修标签和产品唯一条形码损坏;
- 无雷特签订的合同或发票凭证。

- 1.修理或更换是雷特对客户的最唯一补救措施。雷特不承担任何附带引起的损害赔偿任,除非在适用法律范围之内。
- 2.雷特享有修正或调整本保修条款的权利,并以书面形式发布为准。