

# LANDING STAR T4

LED landing light for UL aircraft, rectangular type



## Description:

LANDING STAR T4 LED light is intended to be used as landing light and to be installed in the wing, **behind the cover glass**. When used it illuminates the runway. It contains two types of lenses directing illumination to high and near distance. Power of the light is 12W. If the battery voltage fall under 9,5V for 2 seconds the brightness fall to ½ nominal power. Under 8,5V for 1 seconds the light switch to off. If the light device operates in high temperature (approx. over ambient temperature 45°C), it can slowly lowering power to protect to overheat. Total light illumination is about 1500lm.

A ferrite bead is also supplied with the product. This is usually mounted on the reflector when using WIG-WAG and is used to suppress unwanted interference that mainly penetrates the audio. It can always be installed as a precaution, but it is not necessary. It is installed by passing the power wires twice through the bead to 2-10 cm from the body of the reflector. Instructions for using the ferrite bead can be downloaded from [www.lambert-aerodevices.cz](http://www.lambert-aerodevices.cz).

## Usage:

Any non-certified aircraft with 12V (nominal) electrical system.

**THIS PRODUCT IS NOT APPROVED FOR INSTALLATION ON CERTIFIED AIRCRAFT.  
THIS IS NOT A TSO CERTIFIED LIGHT.**

## Electrical specification:

Parameters	min	type	max	unit	note
Supply voltage	9	12	15	V	
Current consumption	0,9	1	1,27	A	
Power	11,5	12*	13,5	W	*25°C
Efficiency	-	75	-	%	
Half power mode	5.5	6.5	7.5	W	
Switch to half power mode	-	Vin < 9,5	-	V	2 sec react time, return hysteresis 0,5V
Power-off voltage 1	-	Vin < 8,5	-	V	1 sec react time, return hysteresis 0,5V
Power-off voltage 2	-	Vin < 8.0	-	V	fast turn off the illumination
Temperature protection	-	75	-	°C	over this temperature, device is slowly lowering power
Over-current protection	-	3,5	-	A	The light device start blinking
Recommended fuse protection	-	5	-	A	for 1 device; for more devices is recommended separated fused
Polarity reversal protection	-	YES	-	-	
PWM frequency		20		kHz	
External WIG-WAG		YES			external wig-wag switch support

## Light Specification:

Parameters	min	type	max	unit	note
Total light illumination	-	1512	-	lm	(See Figure 4)
High distance illumination	-	840	-	lm	radiation angle 10° (5 lens)
Low distance illumination	-	672	-	lm	radiation angle 25° (4 lens)
CRI	70	-	-	-	
CTT	4700		7000	K	Light color cool white
Turn on ramp		YES			0,5 sec - from half to max power

**Mechanical specification:**

Parameters	Value	Unit	Note
Width	189	mm	See Figure 1 and 2: LED Light device and assembly dimension
Depth	16,7	mm	
High	51	mm	
Weight	150	g	
Cable length	500	mm	Power wires, AWG20
Assembly holes diametral	3,2	mm	4 recessed holes M3 (See Figure 2)

**Device dimension:**

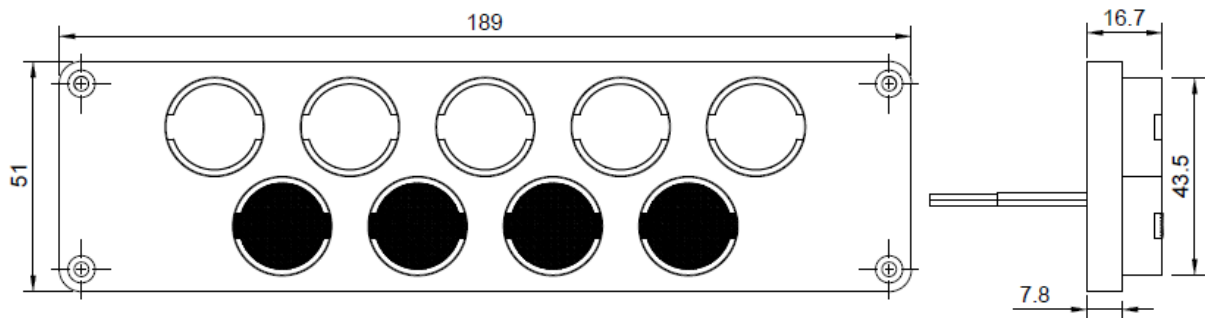


Figure 1: LED Light device dimension

**Assembly dimension:**

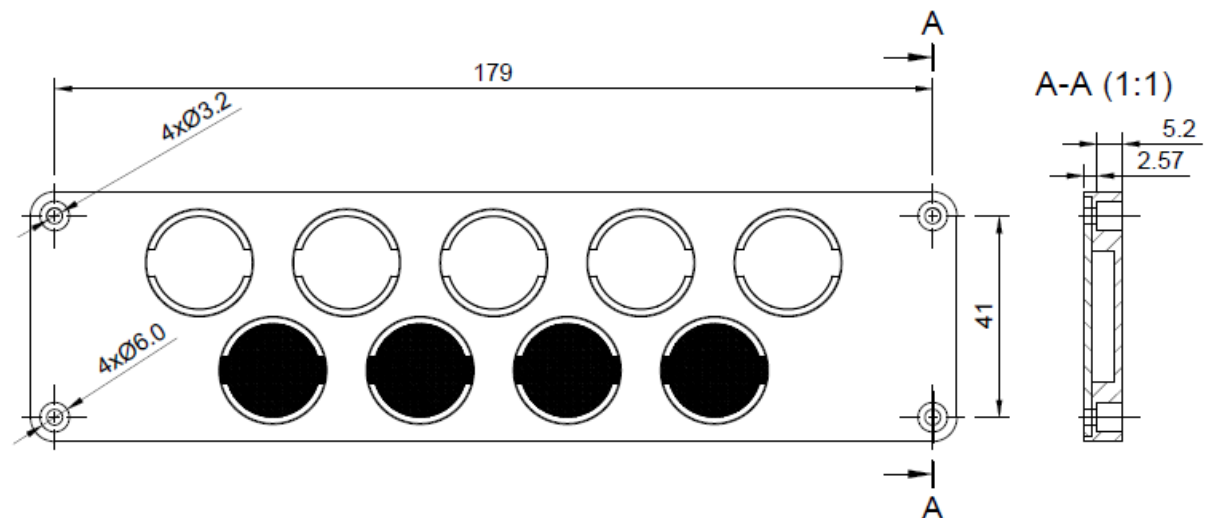


Figure 2: Fixing point of LED Light

### Conductors labeling and wiring:

Conductor label	Wire to	Note
+12V	+12V positive supply from battery	+ pole of the battery
GND	Ground	- pole of the battery
Shield	ground of floated	can be connected to ground (Aluminum cover)

\*See Figure 1: Simple wiring diagram  
\*\*anodized surfaces are electrically non-conductive

### Connection schema:

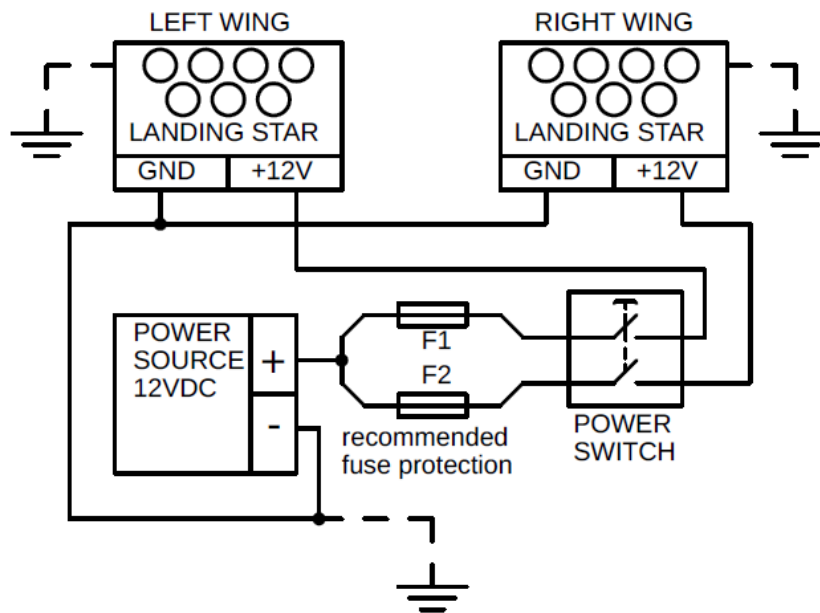


Figure 3: Simple wiring diagram

### Radiation characteristic:

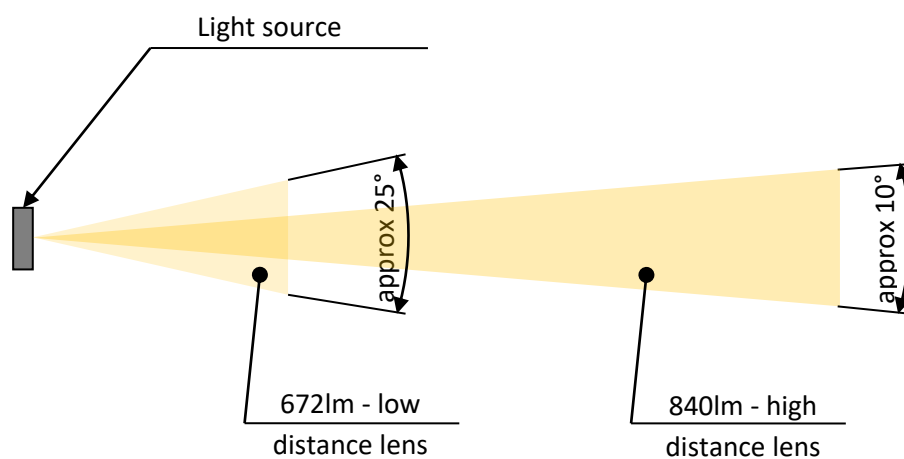


Figure 2: Light radiation characteristics

### Operating condition:

Parameters	Value	Unit	Note
Operating temperature	-30...+60	°C	
Humidity	10...90	%	
Atmospheric pressure	900...1120	hPa	
IP	IP20	-	light device must be protected from the weather
Assembly type	to surface	-	behind the cover glass
Working position	any	-	not specified

### Maintenance plan:

Maintenance step	Check	Note
After 50 hours of operation	Cleanliness check of optical components of product	Clean if needed
After 100 hours of operation	Mechanical integrity of product check	Replace in case the product is damaged
After 500 hours of operation	Mechanical integrity of product and wiring check	Repair bad wiring or replace product when damaged

### Product photos:



Figure 3: Product photo 1

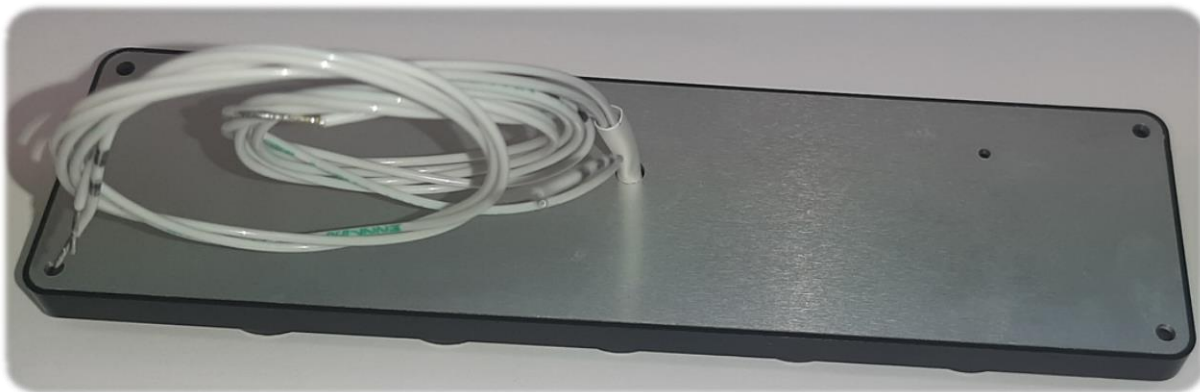


Figure 4: Product photo 2

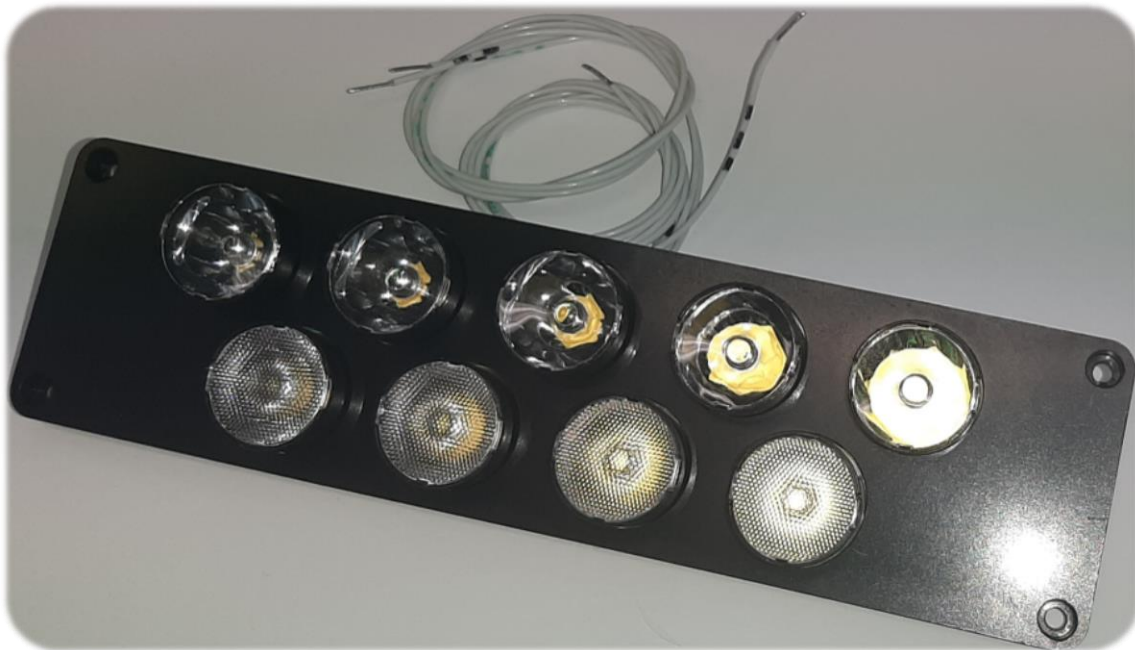


Figure 5: Product photo 3

### Important notice and warnings:

Thank you for purchasing LANDING STAR T4 LED lighting source. For a comfortable and safe use of this product, please pay attention to THE ENTIRE MANUAL, especially the notes and warnings below.

- Although the LANDING STAR T4 light device has been thoroughly tested to ensure maximum safety in all conceivable situations, THE RIGHT FUNCTIONALITY DEPENDS ON THE RIGHT INSTALLATION AND SETTINGS.
- Therefore, it is **NECESSARY to READ CAREFULLY and UNDERSTAND THIS MANUAL COMPLETELY.**
- Keep this manual printed in an airplane for cases of emergency or change of ownership.
- THIS PRODUCT IS NOT APPROVED FOR INSTALLING IN CERTIFIED AIRPLANES.
- The pilot **MUST UNDERSTAND** the control of this product before the first flight. **DO NOT** use the product unless you are sure how it works!
- Do not allow unauthorized persons to handle the installed product.
- After installing the product, before the first flight, turn on ALL possible sources of electromagnetic interference on board the aircraft and ensure that the instrument is functioning properly.

- Use of the device in conflict with this manual, with bad wiring, outside the allowed operating conditions, etc., may cause the device to malfunction or damage and endanger flight safety.
- If the product repeatedly indicates an error, do not use it and turn off the power!
- AVOID contact with liquids and chemicals
- Before installation, check the mechanical integrity of the device and its accessories
- DO NOT disassemble the device!
- After installation, carefully check the functionality of the device and its installation
- The responsibility for the installation is entirely with the installer.
- Responsibility for performed control actions based on information indicated by the product is fully with the operator (pilot). The operator must be able to evaluate an incorrect indication even if the product does not indicate an error.
- Ensure regular maintenance of the aircraft main battery
- If you do not agree to the notes and warnings above, do not use this product.

Company LAMBERT AERODEVICES s.r.o reserves the right to change or improve the product or manual without prior or subsequent notice.

### Document history:

<i>Date (DMY)</i>	<i># Rel</i>	<i>Description</i>	<i>Author</i>
29.03.2022	0	Initial version	NEPOR
18.08.2022	1	LA, graphical correction	NEPOR
22.02.2023	2	Change introductory image	NEPOR
20.09.2023	3	Ferite bead using	NEPOR



[www.lambert-aerodevices.cz](http://www.lambert-aerodevices.cz)