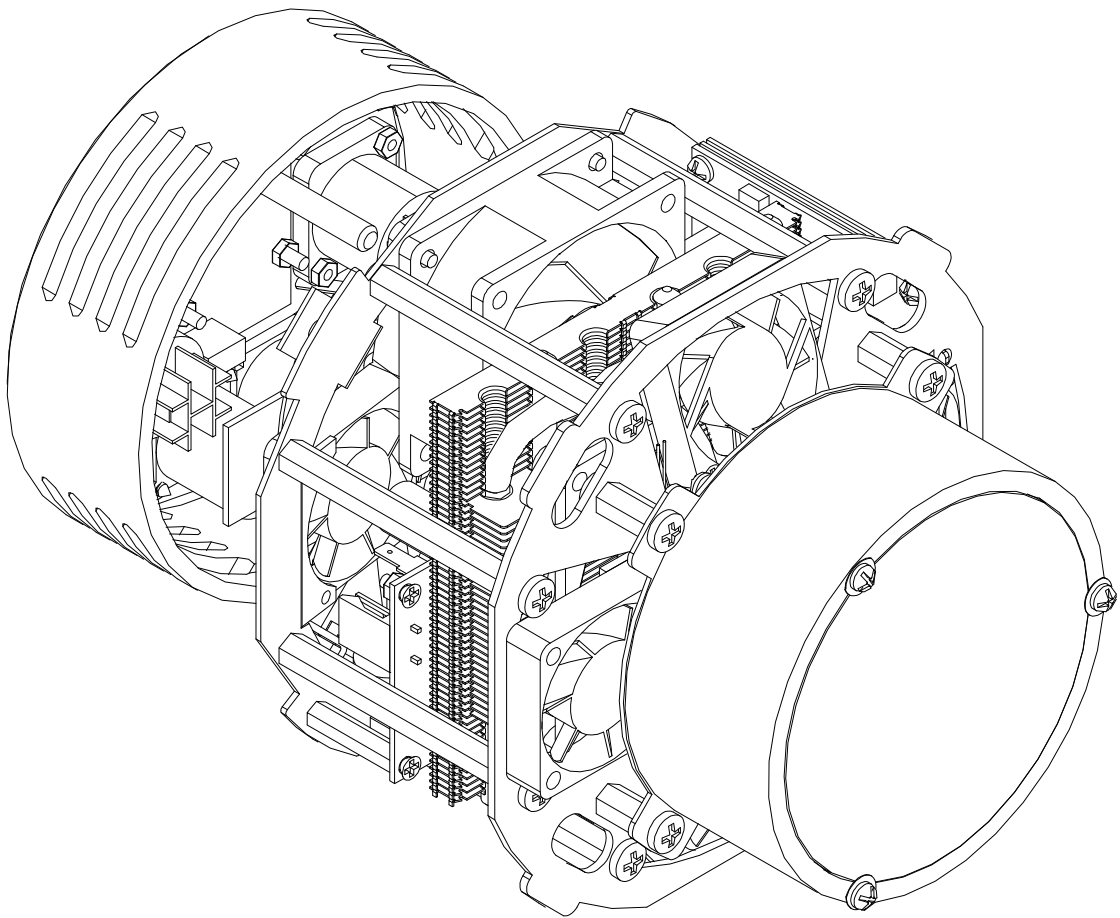


# **Lites**

## **HPLED T (tunable)**

### **Owner's and service manual**



**Read this manual totally and carefully follow all the instructions contained. File this manual for future use**

**It is essential to read all the information contained to ensure correct installation, service and full operation of the HPLED**

**All operations must be accomplished, handled and carried out by qualified personnel only**

**NOT COMPLYING WITH GIVEN NOTICE IT WILL VOID WARRANTY AND WILL FREE THE MANUFACTURER OF ANY KIND OF RESPONSABILITY AND LIABILITY.**

<http://www.litessrl.com/>

## Unpacking

Unpack the carton and gently remove HPLED T from the box. Ensure HPLED T is received in all its parts. In the event the HPLED shows any damage, do not use it and contact immediately your transporter as well as your seller

Items in the carton consist of:

- HPLED Module
- Rear metal cover with input connections
- Blue Neutrik PowerCon connector
- This owner's manual



### **Safety information for the use of the HPLED and periodical maintenance of unit.**

- Users must scrupulously comply with information/indications that follows
- HPLED must be installed on original " **ETC source 4**" fixture only. Any other use will void warranty and will free the manufacturer of any sort of responsibility and liability.  
Never utilise HPLED assembly alone as it must always be housed in original ETC Source 4 barrel.
- Minimum distance from any flammable source is of 0.25m.
- Minimum throw distance from illuminated surface: 0.5m.
- Installation of the unit(s), including external source4 body, must be secured with adequate clamps, safety cords, nuts and bolts to bear at least 4 times the weight of the whole unit(s)
- Always Power HPLED to safety circuit breakers
- Install HPLED in ventilated ambient which temperature must not exceed 35°C
- HPLED is NOT for domestic use. HPLED can only be used for professional applications
- Some outer parts of the ETC Source4 can reach temperatures of up to 60°C° when HPLED is operated
- HPLED must be fitted with protection shields (Lenses)
- On no account, directly or indirectly, LED must be touched as it may impair its use.
- An Essential and Periodically throughout cleaning of the HPLED is recommended. This practice avoids that layers of dust and other impurity jeopardise and reduce the correct operation of the unit. Lenses must be cleaned to remove layers of dust that may impede and or reduce the passage of the light through the lenses. The correct and periodically maintenance keeps also fans and vents clean thus keeping the HPLED in its best performance conditions. Never touch, directly or indirectly, the Yellow core of the LED nor use solvents that can damage the LED irremediably. Protection shields if battered/worn, must be replaced with new ones (Lenses)



### **Warning from electric shocks**

All operations must be accomplished, handled and carried out by qualified personnel only

- Warning High voltage hazard, always disconnect Power before any handling and any servicing of HPLED
- Do not and never handle HPLED with humid/wet hands or near to any water or any kind of moisture sources
- Always connect HPLED to mains fitted with safety device switch that cuts power off in case of danger
- **The HPLED does NOT and CAN NOT be operated via Phase control dimmer nor connected/operated in NON-DiM mode**
- HPLED is rated Class I
- **Earth connection is mandatory!**

## CE Approvals

The HPLED products to which this manual refers to, complies with European directive pursuant to:

2014/35/EU safety of electrical equipment supplied at low voltage (LVD)

2014/30/EU Electromagnetic compatibility (EMC)

2011/65/EU Restriction of the use of certain hazardous substances (RoHS)

## **WARRANTY!**

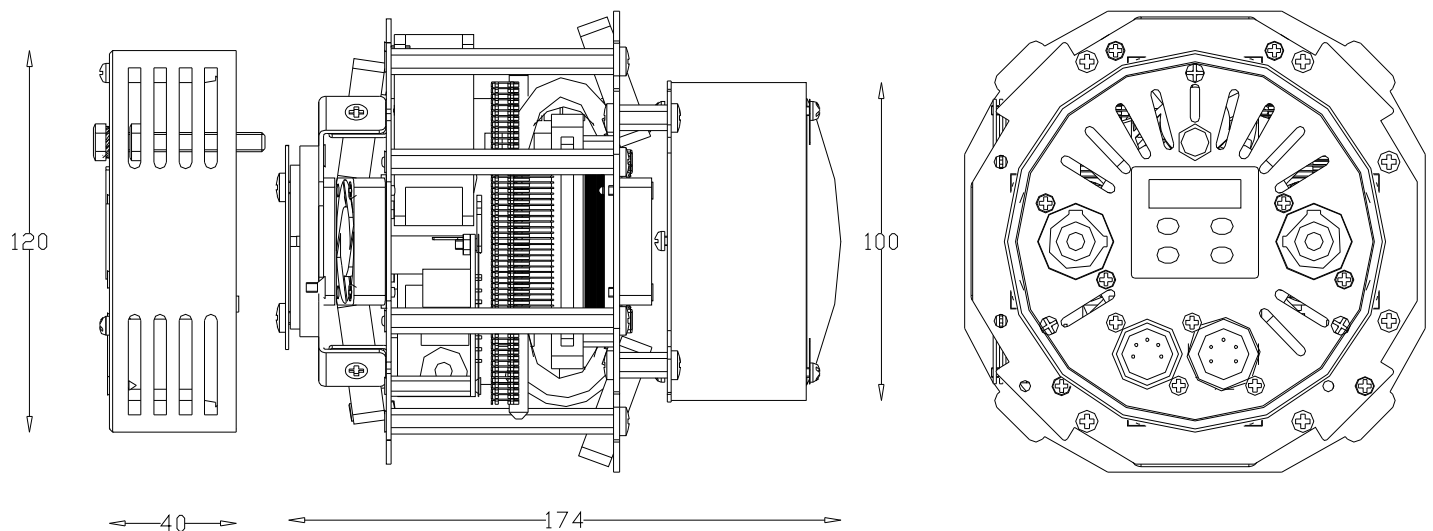
- A 12-month warranty is granted on the HPLED from purchase's date. Warranty covers fabrication defects only. Warranty is immediately voided if the HPLED has been handled by unqualified personnel. Any improper and unauthorised use, such modification(s) or misapplication of the HPLED will also void the warranty of the product(s). Silver colour label showing technical data and serial number, if removed or if data are impaired to render details illegible, it will immediately void the warranty

## Technical specifications

Power Supply	100-240	V~ 50/60Hz
Maximum power consumption	170W	
cos Ø	0,98	
Stand-by power consumption	5W	
Minimum ambient temperature	-10°C	
Maximum ambient temperature	35°C	
LED Colour Temperature:	3000°K-5700°K	
LED CRI	cri 90	
LED Life	(see Manufacturers ' specifications)	
Weight	2,03 Kg	
IP Rating	To be housed into original ETC Source four fixture only	
Working position	Any	
Power connectors	IN & OUT Neutrik PowerCon	
Data connectors	IN & OUT XRL5	
Data protocols	DMX 512; RDM ready	
User interface	4-digit display and 4 buttons	
Manual operation:	Users must operate via buttons provided on the display	
Fan control:	Fan speed adjustment	
Control of LED frequency:	Selection of LED frequency refresh	
2 Dimming curves control:	Selection of two dimming curves control	

**CE** compliant

Dimensions (see picture)



## HPLED T installation

HPLED T has been designed to be installed in any original "ETC source 4" fixtures. Some parts of the existing "ETC Source 4" fixture must be removed to lodge the module in

Course of actions:

1. **Disconnect any kind of power/source from any item being handled, that could cause electric shock**
2. Loosen knobs that hold front lens assembly, remove it and place it aside in a safe place
3. Locate rear section of the Source 4 fixture, then start loosening knob that holds the round plate in place until it is totally separated from the main body. You may either store or scrap this part. **HOWEVER LOCK-WASHER AND THE M4 SCREW USED TO HOLD THE GROUND CORD ON THE ETC SOURCE4 BODY MUST BE SECURED ASIDE AS THEY WILL BE USED FOR THE NEW GROUND CORD PROVIDED WITH THE HPLED T FIXTURE.**
4. **As of now onwards for your own safety we recommend you must wear protection gloves and safety transparent eye protection goggles.**
  5. Locate the Source 4 inner reflector and start removing it (use the optional Lever if ordered with HPLED) from its housing as shown in the Source four assembly guide
6. Place HPLED T on working bench and start loosening the 3 M4 screws that hold the metal ring (marked by red arrow in figure 2).
7. Accommodate the HPLED in the Source4 body. Ensure the correct inward direction is followed as remarked by the 2-red-round ring references. Make also sure to follow the red arrow direction as shown in figure 3. During such operation make sure that the 3 connecting cables (i.e. power cable, DMX cable and display cable) are not squeezed, while being lead through loop-holes during reassembling of the unit.
8. Remount the metal ring to its former position; tighten now the 3 provided M4x6 screws to their full extent. Do not exceed nor force tightening.
9. Connect the 3 lead-cables to the rear metal cover provided, ensure that connectors are inserted in the correct side. Special attention must be paid to the **flat cable** as it must be handled with extreme care while connecting its ends. (if flat cable is squeezed or impaired it can cause malfunctionings to the product)
10. Ensure that all cable connections are neatly and clearly set to their positions avoiding any contact, interference, interconnections, interpositions with fans and other interfering components that might collide, squeeze hamper the correct operations and eventually damage the product.
11. Remount the rear metal cover to the Source 4 body using any 11mm spanner; tighten the screw to its full extent. Do not exceed nor force tightening.
12. The lock washer and the M4 screw used for holding the eyelet-cord to ground the fixture as expressed in point 3, must be now used to secure the new provided eyelet-cord to ground/earth the fixture as shown in fig.6

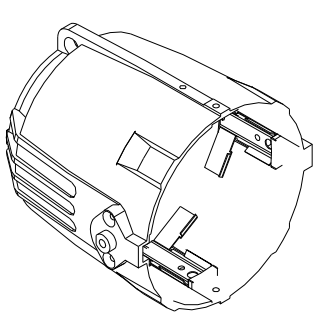


Fig.1

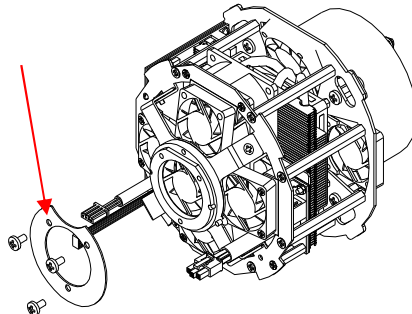


Fig.2

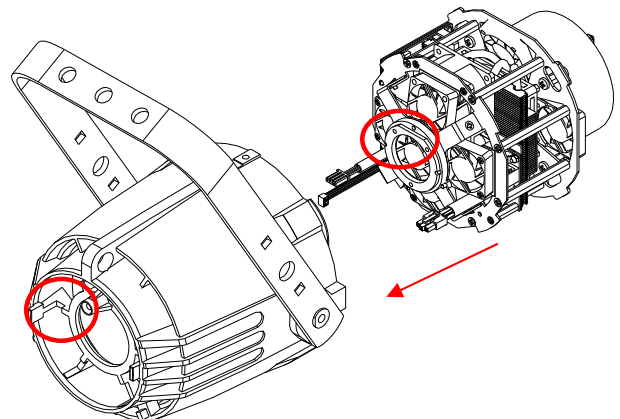


Fig.3

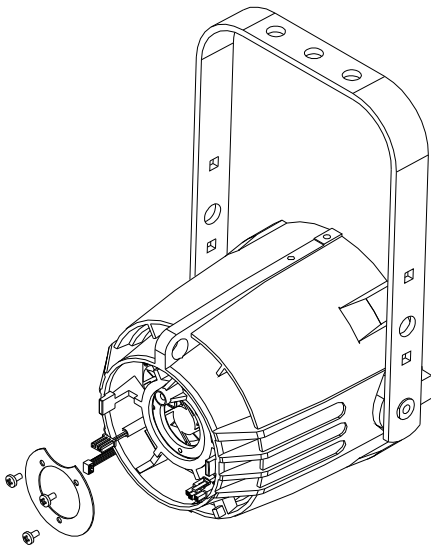


Fig.4

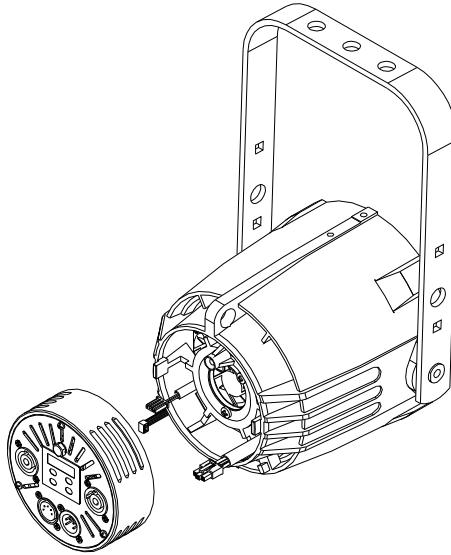


Fig.5

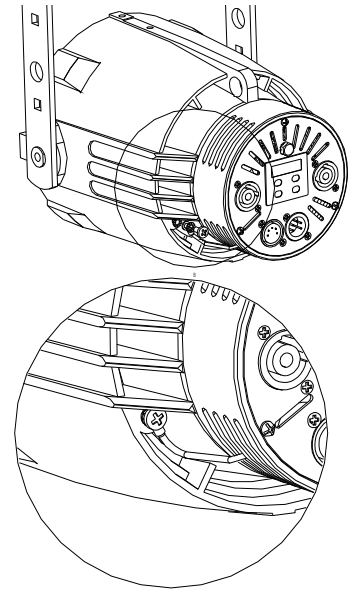


Fig.6

### **⚠ Connection to mains**

**WARNING ! Installation(s) must be accomplished, handled and carried out by qualified personnel only and must comply with all norms in force in the installation's country**

HPLED T is supplied with a free-Blue Neutrik PowerCon plug that must be wired using a 3x1.5mm<sup>2</sup> lead which additional specifications include:

- Operating Voltage: 300/500V
- Test Voltage: 2KV
- Operating Temperature: -10°C / +90°C

Connect blue wire to N terminal, brown wire to L terminal and Yellow/Green wire to earth terminal. Ensure the use of safety circuit breaker at all times. Daisy chain of up to 10 units is permitted when connected to 230VAC. Daisy chain of up to 5 units is permitted when connected to 110VAC. Maximum daisy chain length: 20m.

**⚠ WARNING:NEVER CONNECT HP LED C5 ENGINE TO ANGLE PHASE DIMMER PACK NOR TO NON-DIM MODE**

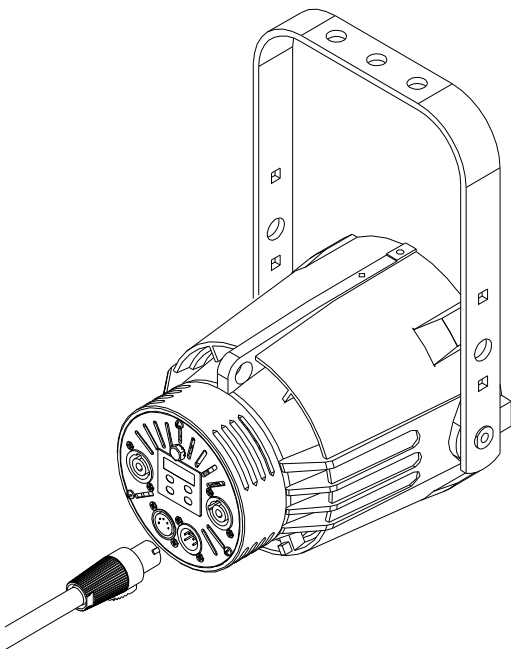


Fig.7

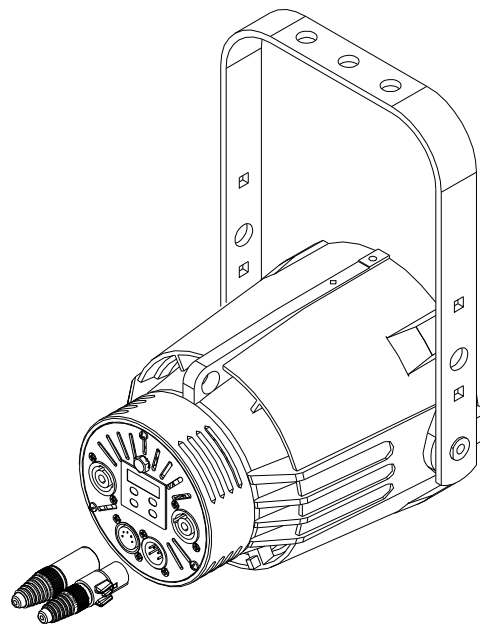


Fig.8

## Signal control connection

HPLED T can be operated via either DMX512A and or RDM ready Protocols. For Daisy chain DMX line use a-2 lead wire plus shield.

Red led blinks when DMX Input is available. DMX off line when led is off

DMX XLR 5 Pin As sigment	
pin	Description
1	GND
2	DMX-
3	DMX+
4	Not connected
5	Not connected

## RDM – Remote Device Management

RDM Controller allows for remote standard operations

RDM default options include:

Discovery mode: RDM is engaged when controller incepts this mode, the device reports itself by giving a flash of light (Controller sets the device in a listing to

read: settings, DMX address, personality settings, (Read all DMX mode including all DMX channels above)

ON/OFF "Identify": This mode is used to identify the manufacturer's device (Lites srl). It gives a flash of light from the LED

Model information (HPLED-dU)

Software version information (HPLED-dU v.x.xx)

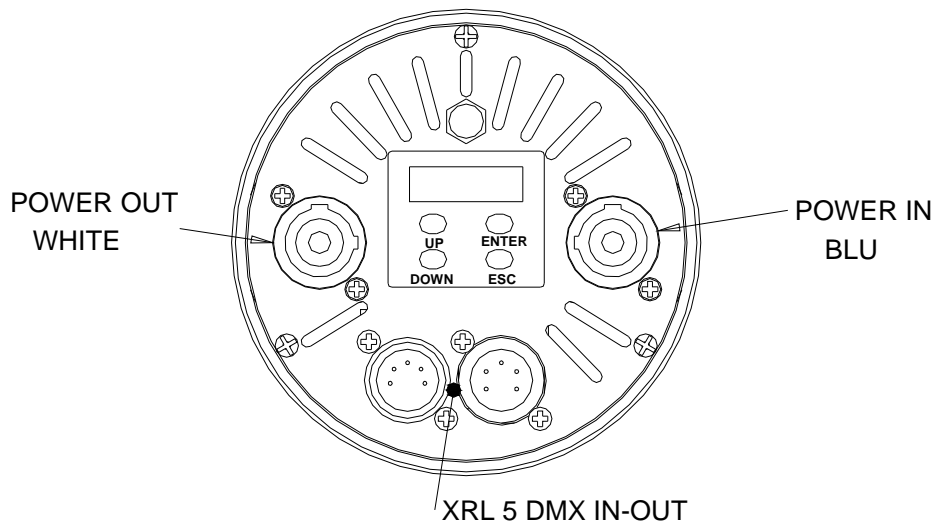
Mode to reveal temperatures of the LED and of the driver

Mode to reveal hour-meters of the LED and of the device

## Power HPLED T ON

**WARNING ! Before powering HPLED T ensure that all installation(s) procedure(s) have(s) been properly set and accomplished.**

When HPLED T is powered the setup display will show the software release version. The UP, DOWN, ENTER and ESC buttons will allow for the operations of HPLED menu. UP and DOWN buttons allow to browse through menu options, the ENTER button is to confirm selection. The ESC button is to return to the previous menu or to quit previous setting(s).



## Menu items

Displayed Message	Allowed or displayed values	Function
Addr	001..512	Set Up DMX Address

Auto (Automatic mode)	co01 co02 co03 co04 co05 co06 co07 co08 co09 co10 co11 co12	Preset 1 White 3000°k Preset 2 White ..... Preset 3 White ..... Preset 4 White ..... Preset 5 White ..... Preset 6 White ..... Preset 7 White ..... Preset 8 White ..... Preset 9 White ..... Preset 10 White..... Preset 11 White ..... Preset 12 White 5700°k	Values between co001 through co12 allow for fixed white set-up without DMX 512 protocol signal. When fixture is turned, the last selected preset will be held
	Pr01 Pr02	Program 1: auto Program 2 : auto	Automatic mode without DMX 512 Protocol signal. Program selections run between Pr01 through Pr 02  Both programs can be modified. To change program select Enter then view (Scn0...Scn9; max scenes of each program). Clicking on enter once more it shows P.00.0 (time) followed by F.00.0 (speed) and ultimately the last view shows 1c.01... though c12 (colour to be assigned to each scene) The use of UP/Down keys allow for setting values. When selections are completed press enter to confirm
MaSL		Master Mode The Master Mode uses the same settings as the Auto Menu. The only exception is that when all fixtures are connected to DMX 001 in daisy-chain, they perform the same presets and or the same presets selected on the Master fixture	
Mode	2 ch	3000/5700 °K	Dmx mode (view next page)
	2 ch (D)	3000/5700°K -dimmer (default)	
	3 ch	3000/5700°k-dimmer- strobo	
	4 ch	3000/5700°k-dimmer16(bit) strobe	
drUt	..°C	Shows driver operating temperature	
LEdt	..°C	Shows leds operating temperature	
PUM	0..100%	Shows current led power (0-100%)	
SMOO	FAST MED SLOW	DMX data Speed adjustment	
GAMM	LInE qUAd	Dimmer profile selection: - LinE for linear dimming regulation - qUAd for tungsten lamp emulation	
FREQ	1K 2K 3K 4K 5K 6K 7K 8K 9K 10K	LED operation frequency	
booS	Off on	When OFF, LED max flux : 90% When ON, LED max flux : 100%	
FAn	Aut MEDH MEDL LOW	4 fan operating modes i.e atuomatic, medium fast, medium slow, slow speed. Fan speed adjujstments (fan-sound) reflect on self-correct output LED brightness and other factors as room-temperature, number of engaged channels	
PoS	AA VV	Display orientation selection: AA = normal VV = inverted	
StbY	Off on	Standby display activity: off = display always switched on = display switched off after few seconds of buttons inactivity (only the right side dot will be lighted to indicate DMX availability)	
dEF	Off on	ON Will restore the default factory values	
TiML	..h ..	Shows LED life	
TiMU	..h ..	Shows HPLed life	
SoFt		Shows Software version	

## DMX Operating Modes (Mode)

Selecting 1 of the 4 available modes it enables the number of channels required, and its relevant modes, needed to operate HPLED T

### mode U2 ch white independenti

Ch	Function	dmx levels	
1	3000°k White	0..255	From 0 to max 255
2	5700°k White	0..255	From 0 to max 255

### mode 2 ch (default)

Ch	Function	dmx levels	
1	3000°k-5700°k	0..255	When set to level 0 = 3000°k – When set to level 255 = to 5700°k
2	dimmer	0..255	From 0 to max 255

### mode 3 ch dimmer

Ch	Function	dmx levels	
1	3000°k-5700°k	0..255	When set to level 0 = 3000°k – When set to level 255 = to 5700°k
2	dimmer	0..255	From 0 to max 255
3	shutter	0-15	Strobe disengaged
		16..255	Strobe from slow (16) to fast (255)

### mode 4 ch dimmer 16 bit

Ch	Function	dmx levels	
1	3000°k-5700°k	0..255	When set to level 0 = 3000°k – When set to level 255 = to 5700°k
2	dimmer	0..255	From 0 to max 255
3	Dimmer fine	0..255	From 0 to max 255
4	shutter	0-15	Strobe disengaged
		16..255	Strobe from slow (16) to fast (255)

## Error messages

In case of malfunction, the following messages can be shown:

- HP Fan Error: means problems on 80x80x10 fan
- Temperature Error: LED sensor might be defective and or temperature has trespass threshold limit

Should any of the above given messages occur, the LED will automatically switch off. Refrain and halt the use of the HPLED and promptly contact any authorized service centre.

## Periodical maintenance

To ensure the correct HPLED operation, we suggest the following periodical maintenance operations:

- Remove dust or any kind of other dirt from the fans and loop-holes, this operation ensures the correct air flow
- Remove dust from lenses using a clean cloth. This will ensure the maximum light efficiency
- Replace damaged protection screen and lenses when necessary

## **Do not touch nor clean the LEDs nor the surrounding area with solvent**

## Device disposal information

At the end of its life, HPLED T must be disposed to an appropriate electrical and electronic equipment waste collection centre. Eco-friendly disposal, helps to avoid possible negative impact on the environment and human health and promotes the reuse and/or recycling of the materials making up the product. Illegal disposal involves administrative sanctions provided by laws enacted.



Manufacture declines any sort of personal/corporate responsibility/liability for damages caused by people that are not scrupulously following indications given in this manual as for the inadequacy or for misuse of the product they do, as well as if the product has been handled by unqualified personnel. Not complying with security norms/periodical maintenance and all information contained and as expressed in the owner's/service manual will also totally free personal/corporate responsibility/liability. Text, wordings, drawings, specifications, modifications and other changes of this manual may apply anytime without notice. The specifications are not binding.