

Dustproof beaming LED panel



User´s Manual



June 2015

INTRODUCTION

This guide provides information about how to use the product functions to illuminate with this equipment as well as warnings on his use.

The are products of professional use for exterior and interior locations or studio and must be operated only by qualified technical personnel.

To obtain the maximum features, please read the following operating instructions very carefully before using this fixture for the first time. Please keep these operating instructions for you and subsequent users to reference in the future.

THELIGHT Luminary for cine and TV, S.L.

Safety Precautions

For your own safety, please read and follow all safety instructions and warnings.

Exemption from Liability

THELIGHT Luminary for cinema and TV, S.L. does not assume any responsibility for lighting failures caused by malfunction of this product.

The manufacturer disclaims liability for any damage to persons or property caused by inappropriate operation, damage of this kind lies in the responsibility of the operator.

Warranty



This product is manufactured to local specifications and the warranty is valid within the country of purchase. Should the product fail or malfunction while you are abroad, the manufacturer assumes no responsibility for servicing the product locally or bearing the expenditure incurred thereof.

www.thelight.com.es

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SAFETY PRECAUTIONS


Various symbols are used throughout this instruction manual and on the product to prevent physical harm to you or other people and damage to property. The symbols and their meanings are explained below.


	Warning	Possible risk of injury or damage to equipment
	Danger	This symbol indicates the risk of electric shock or fire danger that could result in injury or damage to equipment.

This equipment has been checked and meets the requirements of general safety for electronic devices. These requirements are specified to provide a reasonable protection against electromagnetic interferences when the equipment is used in commercial environments.

This equipment generates, uses and can emit waves of radio frequency, and if not properly used following the instructions of this manual can produce interferences in radio communications. The use of this equipment in residential areas can produce interference, the user will be the only responsible of correcting them.

CAUTION: Though the light generated by LED does not produce any heat, for what his use turns out to be very comfortable for the actors, the lamp head acts as a heat sink through its back part. Surface can reach a temperature between the 20 °C and the 60 °C. Please use protective gloves if you touch the lamp head at the heat sink.

	Danger	<p>Do not attempt to open any of the device or component housings. To reduce the risk of electric shock, do not remove LED panel side covers or front plastic diffuser. No user-serviceable parts inside. Maintenance and repair work to be carried out only by THELIGHT Service Centre.</p> <p>Do not cover the aluminium lamp head heat sink while using it. Proper ventilation must be provided. Avoid exposing the lamp head to the heat radiation of other light fixtures.</p> <p>The lamp head is equipped with mid power LED. Due to their high light-output intensity don't stare directly into the light source.</p>
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	Warning	In order to protect against risk of electric shock, the installation should be properly grounded. Defeating the purpose of the grounding type plug will expose you to the risk of electric shock.
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Marking



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MAIN FEATURES

VELVET Power are LED panels housing best quality high power LED. They had been specially designed and their colorimetry calibrated for professional photography, cinematography and television industry use.

THELIGHT luminaries main innovative features are:

- Robust aluminum construction
- Variable Color Temperature
- High-power LED 50,000 hours life
- 95 CRI digitally calibrated light
- Professional and consistent color rendition
- Digital control and through DMX RDM
- Silent fan-free operation
- Flicker free up to 3,000 fps
- Long throw directional light
- Smooth dimming with no color shift

NOTE ABOUT MEASURING COLOUR TEMPERATURE (CCT)

VELVET Power incorporate the innovative THELIGHT technology based on high-power LED precise bin selection + custom Fresnel optics + CPU control software to obtain the wide range of calibrated colour temperatures combined with a high color rendering index CCT.

We must remark that color meters in use today are designed for a full spectrum source such as incandescent lights and therefore cannot be used to accurately read the correlated color temperature (CCT) of the light emitted by THELIGHT and other LED light fixtures.

The eventual diversions to green display as CC05M or CC10M in hand-held color meters are due to these unaccuracy on reading of the light emitted by LED and must not be considered.

THELIGHT guarantees pure white light with no green deviation and correct colorimetry of the light delivered by its VELVET LED luminaries which have been calibrated in laboratory according to CIE 13.3-1995 international standards for measurement of the CRI and chromatic coordinates (x, and CIE-1931).

The reliability of this digital equipment is supported by the calibration THELIGHT has made in laboratory by spectrophotometer, which precision is half-yearly calibrated according to the National Institute of Standards (NIST) of the United States and of the Physikalisch-Technische Bundesanstalt (PTB) of Germany.

In order that the advanced THELIGHT luminaries could be used together with other light sources, THELIGHT has accurately calibrated both the CCT and the chromatic coordinates to match them with traditional light sources following tungsten and daylight standards.

MODELS

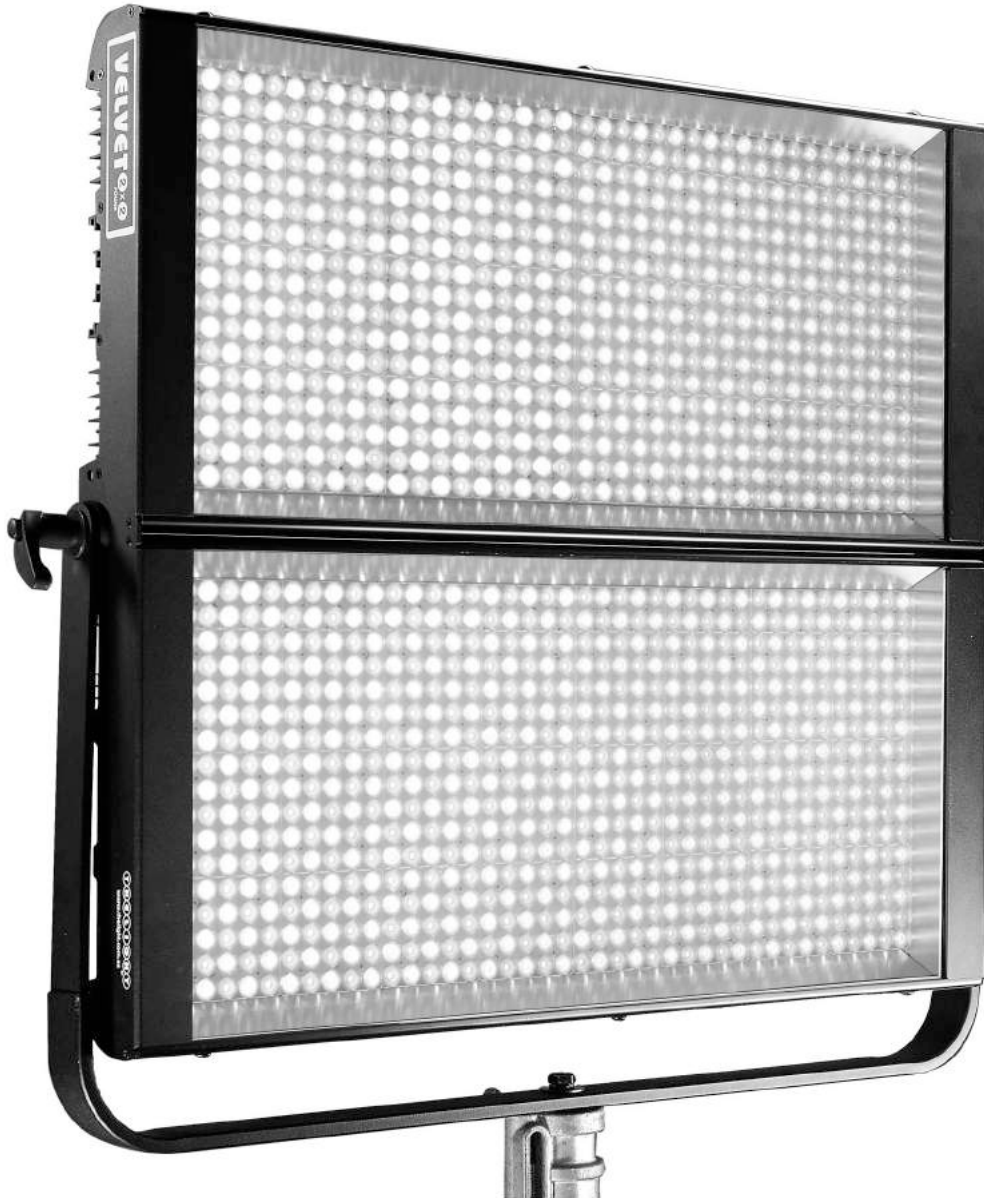
Every VELVET Power panel include a digital control on board.

VELVET Power 2x2

Square 2x2 feet, dustproof LED panel made of aluminum housing 1360 high-power LED with 30° THELIGHT Fresnel optics.

Power draw: 340W

ref. VL2x2-Power



ACCESSORIES

VELVET Remote control

VELVET products remote control with XLR-5 female connector

ref. VL-RC



Foldable Snapgrid 40°

Foldable Snapgrid 40° for VELVET 2x2 panel

ref. VL2x2-SGrid



Foldable Snapbag

Snapbag Softbox for Velvet 2x2 panel including transport bag, diffusion, 2 baffles

ref. VL2x2-Power-Sbag



Power supply +sliding mount

VELVET Power 2x2 power supply with XLR-3 connector and 3m power cable with Schuko male connector + sliding mount

ref. VL2x2-Power-PSU



Battery cable

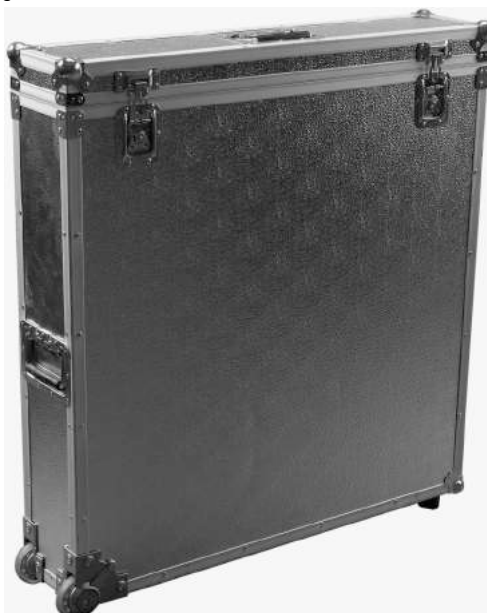
Battery cable 4m to feed VELVET Power 2x2 with XLR3 male connector from a VDC power station ref. THE-PSU320-VL4



Flight case

Flight case for 1x VELVET 2x2 kit

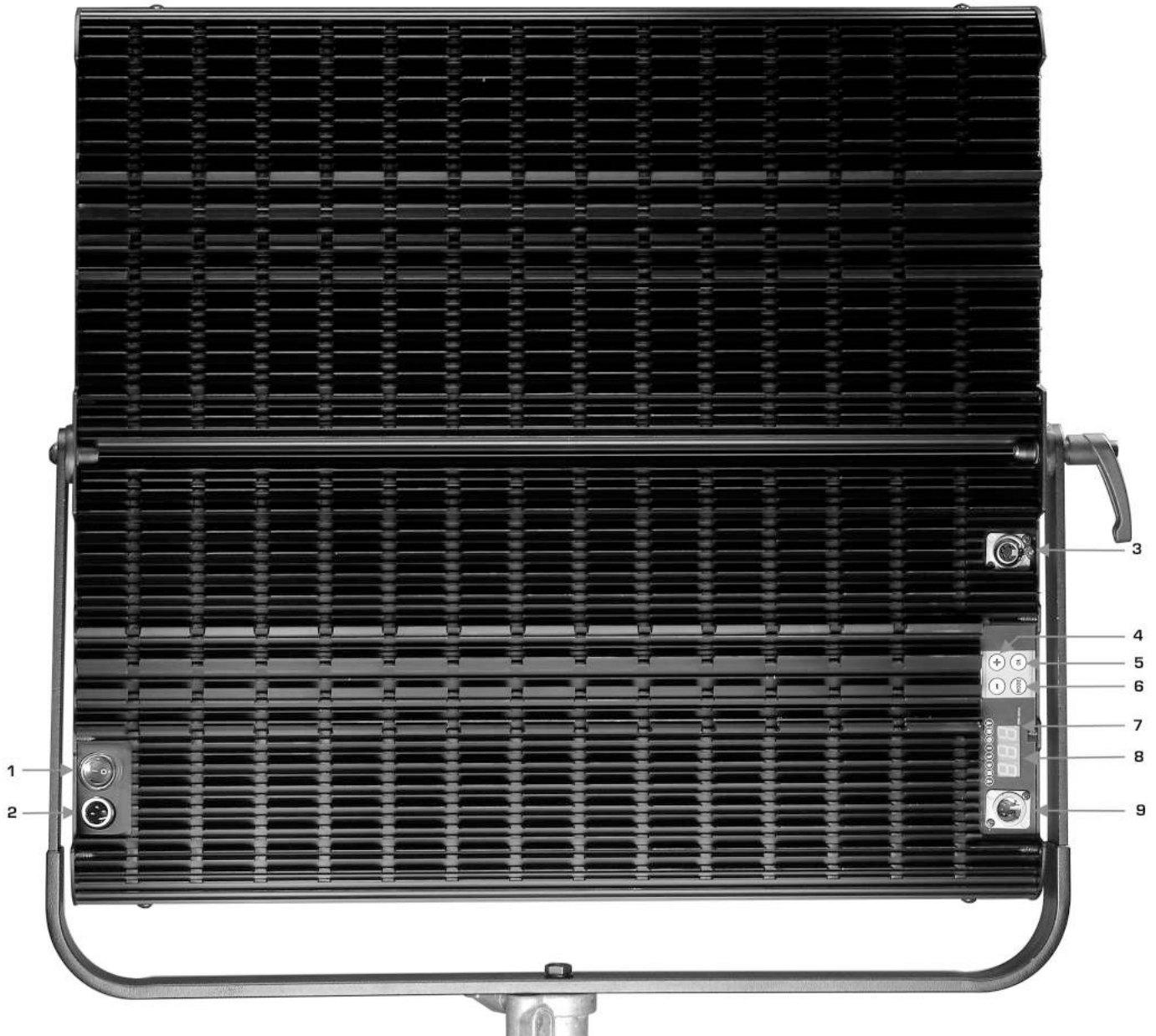
ref. VL2x2-Case



NAMES AND PARTS

VELVET Power 2x2 LED panel

Rear view



- 1 Power switch
- 2 XLR-3 DC in
- 3 XLR-5 DMX out
- 4 + / - adjustment buttons
- 5 OK button for DMX channel assignment
- 6 Mode selection button (dimmer / colour temperature)
- 7 DMX status indicator
- 8 Digital display
- 9 XLR-5 DMX in

PLACING INTO OPERATION

Mounting options

VELVET Power 2x2 has been designed to easily install it in many different ways through the adjustable yoke, swivel ball head, pole operated yoke, multipanel yokes.

Any special rigging is possible by using the adjustable 1/4-20" threads and bolts located on both top and bottom of any VELVET Power panel.

On each corner of any VELVET Power fixture there is a hole specially designed to insert snaps for security cables or any special rigging.



Security cables

The LED panel is provided with several holes specially design to insert one o more 5mm snaps and their safety cable.



Warning


When a VELVET panel and any other component is mounted in a hanging position it must be secured with a safety cable rated at a minimum of ten times the weight of the light fixture including its accessories.

POWER Options

VELVET Power 2x2 allow two different power options through XLR-3:

1. Battery power 24 VDC


Connect a power station with stabilized voltage of 24V DC on the DC IN receptacle located under the power switch.

	<p>When powering VELVET Power 2x2 from an external power station through the DC IN connector check the proper polarity as shown in the picture at the side of the panel. To ensure maximum performance of the equipment use only high-load capacity batteries with a high continuous draw meaning a Discharge Current of at least 7A.</p>
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2. AC power 90 to 264 VAC


Insert the VELVET 320W Power supply plate by sliding it into the slot located at the back of the panel.

Insert and extract the plate from the right hand of the panel where the digital display is located.

	Warning	Secure the Power supply plate by turning the locking knob anti clockwise
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Connect the XLR3 to the receptacle located under the power switch.

Connect the power cable to the plug located in the side of the power supply and the power plug with a mains power outlet.

	Danger	To avoid electric shocks and/or damages in the equipment the power switch located at the back of the LED panel must be off before connecting or disconnecting cables.
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DIGITAL ADJUSTMENTS

Turning the Power On/Off

Turn on the equipment by switching on the power button. The light settings always remain stored when the digital control is powered off.

The digital control enables to adjust the following light parameters through its programmed CPU:

- Calibrated Color Temperature variation
- Stable colour dimming

By pushing the MODE button you can select either Color temperature or Dimmer adjustment.

COLOR TEMPERATURE variation

Color temperature can be easily increased or reduced through the +/– buttons located at the digital control panel. The display indicates either the selected color temperature or the dimming value.

When Color temperature is selected a dot “.” appears between the two digits value. The value 3.2 corresponds to 3200K and the value 3.3 to 3300K and so on.



Push the “+” button to increase color temperature or push the “–” button to decrease it. If you keep pushed any of the buttons you will get a fast continuous variation.

NOTE: Every push on the buttons will increase or decrease the color temperature in increments of 100 Kelvin.

DIMMER light intensity variation

The dimmer is totally digital and guarantees the regulation of light intensity with minimal changes in the selected color temperature.

Light intensity can be easily increased or reduced through the +/– buttons located at the digital control panel. The display indicates the selected dimmer value from 1 to 100.

Push the + button to increase light intensity or push the – button to decrease it. If you keep pushed any of the buttons the you will get a fast continuous variation.



MASTER-SLAVE function

The integrated Master-slave function allows to link an array of any VELVET products together and operate them all without a controller.

The first VELVET fixture will be the Master acting as the controller and all the others will react and copy the color temperature and dimmer values.

Use DMX XLR-5 in&out splitter cables (ref. THE-VL-DMXinout) to daisy chain several VELVET panels.

NOTE: VELVET Power and any VELVET Light panel can be mixed in the same chain because they are fully compatible.

To make the first unit as the Master follow this steps:

1. Switch off the power button
2. Push “+” and “-” buttons at the same time and then switch on the power button
3. Now the unit is in DMX mode and any DMX channel can be addressed
4. Push the “-” button until “n n t” will be shown in the display



5. Push “OK” button to confirm the MASTER mode
6. A dot will permanently blink on the display reminding that the panel is set as MASTER

NOTE: Every time you switch off the power button the VELVET panels are automatically set to SLAVE mode.



Warning

Only the first VELVET panel on the chain can be the Master. Every other VELVET panels must be set on standard Slave mode and address at channel 001.



Warning

The VELVET panel set as MASTER cannot control any other lighting fixture out of VELVET Light or VELVET Power not even other THELIGHT products.

DMX RDM Control

VELVET fixtures have been designed for a full bi-directional DMX RDM control from the 5-pin DMX port located at the back of the fixture.

Once the DMX controller is powered a dot "." appears in the right down corner of the digital display as DMX operation status reminder.



Use DMX XLR-5 in&out splitter cables (ref. THE-VL-DMXinout) to daisy chain several VELVET panels or mix them within any DMX line of different fixtures.

Addressing channels

To address the DMX channel on any VELVET panel follow this steps:

1. Switch off the power button
2. Push "+" and "-" buttons at the same time and then switch on the power button
3. Now the unit is in DMX mode and any DMX channel can be addressed
4. Push the "+" or "-" buttons to increase or decrease the first fixture address.
5. Once you have chosen the desired address number push the "OK" button to save the selection.

Keep in mind the following points regarding DMX control:

- THELIGHT VELVET DMX protocol uses 2 channels per fixture
- After the DMX address is entered the fixture will automatically assign the following channel.
- If you wish to control several THELIGHT fixtures at the same values you will have to set them to the same address.
- If you wish to control several THELIGHT fixtures independently you will have to offset their address by 2 channels. Example:
fixture1 address 001 – fixture2 address 003 – fixture3 address 005

DMX Channels

When you connect your console to VELVET you will be able to control the fixtures through 2 channels:

- **Channel 1** (start address) **COLOUR TEMPERATURE**
From 3.0 to 6.0 (from 3000Kelvin to 6000Kelvin)
Fader at 0 3.0 means 3000Kelvin
Fader at 100 6.0 means 6000Kelvin
- **Channel 2** (start address + 1) **DIMMER**

NOTE:

Do not use microphone cables or other general purpose two-core cables designed for audio or signal use. They are not suitable for DMX 512. Problems due to wrong cabling may not be immediately perceptible. Microphone cables may appear to work fine, but systems built with such cables may fail or be susceptible to random errors. Cable must comply with RS-485 DMX protocol (EIA485).

NOTE:

A DMX terminator should be plugged into the final, empty, OUT connector of the last slave on the daisy chain. A terminator is a stand-alone male connector with a built-in 120 Ω resistor, matching the cable characteristic impedance, connected across the primary data signal pair.

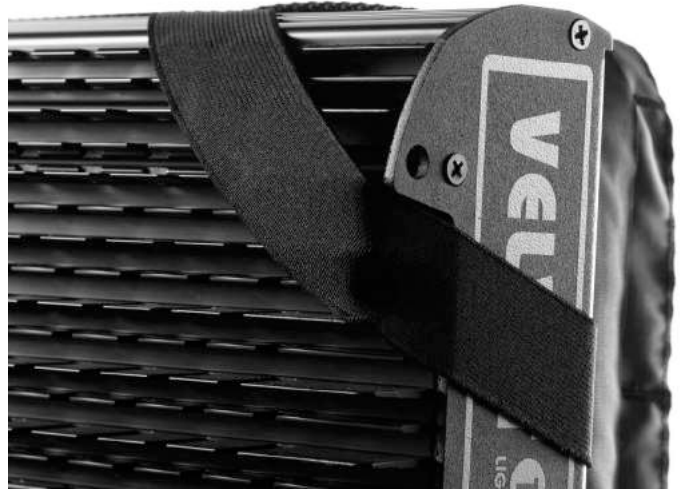
ACCESSORIES INSTALLATION

Snapgrid installation

Position the VELVET panel with the light pointing up.

Unfold the Snapgrid, place it over the VELVET diffuser and flip the elastics over the panel corners to secure it.

The side covers prevent emitting of spill light.
The Snapgrid produce a 40° beam angle.



SNAPGRID CLOTH FLAMEPROOF RATING

The Snapgrid has been manufactured with black cloth which meets the flameproof standards UNE EN 1101 and EN 13772

SnapBag installation

Position the VELVET panel with the light pointing up.

Unfold the SnapBag, place it over the VELVET panel and flip the elastics over the panel corners to secure it.

The side covers prevent emitting of spill light.

If you want a softer light beam replace the inner SnapBag baffle with a thicker one or use two baffles.

If you want a harder light beam remove the inner baffle.



SNAPBAG CLOTH FLAMEPROOF RATING

The Snapgrid has been manufactured with black cloth which meets the flameproof standards UNE EN 1101 and EN 13772

SPECIFICATIONS

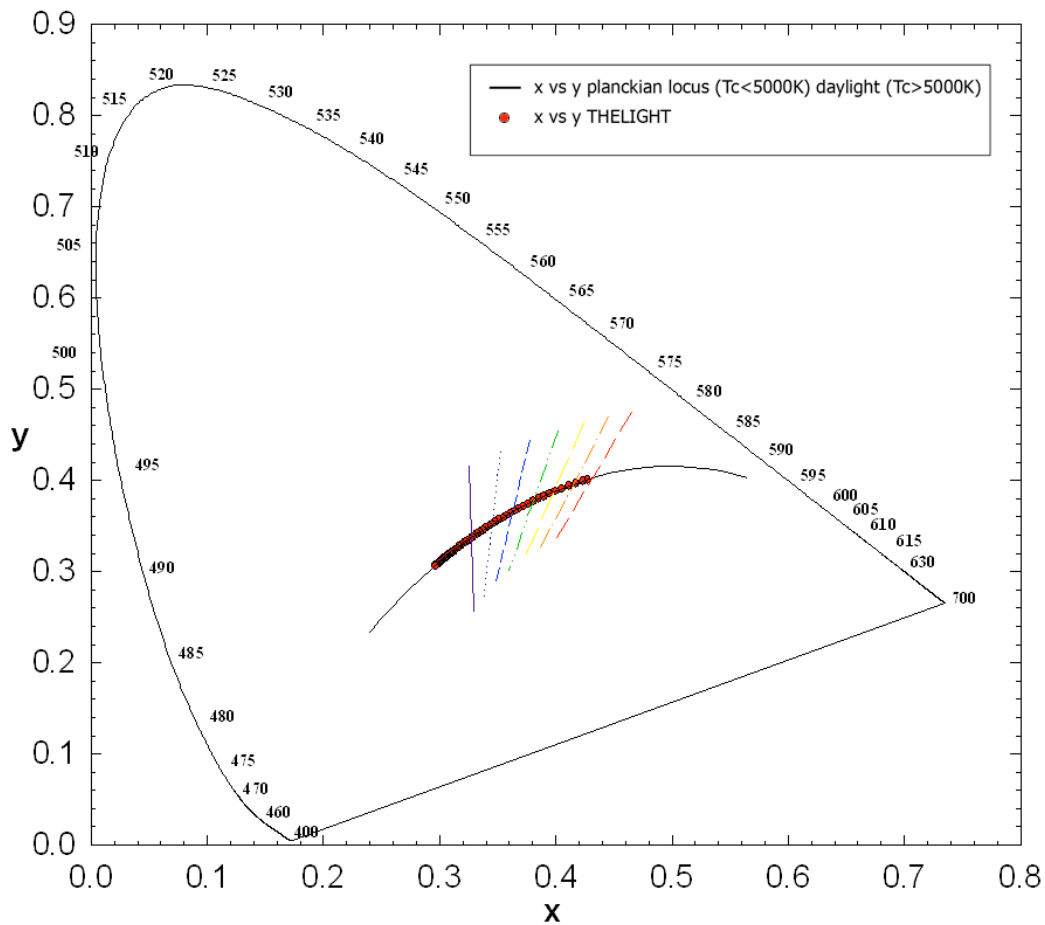
VELVET Power 2x2

COLOUR TEMPERATURE	adjustable from 2700K a 6500K (100K increments)
LIGHT INTENSITY	dimnable 0 to 100 (smooth and flicker-free)
COLOR RENDERING INDEX	95 CRI
DIMENSIONS	690 x 620 x 68 mm (panel) 770 x 750 x 125mm (panel + yoke + PSU)
WEIGHT	14 kgs (panel) 16 kgs (panel + yoke) 20 kgs (panel+ yoke + PSU)
POWER DRAW	340 W
POWER SUPPLY	24 VDC 90-264 VAC 50/60Hz
BEAM ANGLE	100°
PHOTOMETRICS	40.000 lux / 3.700 fc at 1m / 3 feet 8.000 lux / 740 fc at 3m / 10 feet 2.000 lux / 185 fc at 6m / 20 feet
LED RATED LIFE	more than 50.000 hours L70 more than 35.000 hours L80
POWER CONNECTION	Neutrik XLR-3 DC in connector
DMX	DMX-RDM with XLR-5 in&out connectors
OUTPUT FREQUENCY	16KHz flicker-free up to 3000fps
OPERATION TEMPERATURE	from -20°C to +40°C
COOLING	no-noise, fan-free passive cooling
PROTECTION	IP51 dustproof
VELVET LED TECHNOLOGY	OSRAM selected BIN LED core unit + optic diffuser + CPU software control
RIGGING OPTIONS	aluminum yoke with 28 pin, pole operated yoke, multipanels yokes
QUICK MOUNTING ACCESSORIES	AC power supply, foldable Snapgrid, 40° and 20°, Snapbag, removable barn doors, hard case
CONSTRUCTION & FINISH	Black anodized extruded aluminum and black powder coated sheet aluminum

CHROMATICITY COORDINATES DIAGRAM



[x, y CIE-1931]



Shown on the diagram are the THELIGHT lamp head chromaticity coordinates [x, y CIE-1931] feed and digitally controlled by its Control Unit and they are compared with the reference illuminants. These reference illuminants are the Planckian locus radiator set below 5000K and the CIE daylight reference is set over 5000K. The Planckian locus radiator references the chromaticity for several tungsten lamps colour temperatures while the daylight locus typify daylight type D illuminants.

The diagram evidence the light emanated by THELIGHT luminary at every colour temperature entirely matches with the described locus reference so that the colour of the light produced is essentially the same as incandescent and daylight. It is also remarkable the minimum green/magenta deviation over the locus reference along the range of colour temperatures (means minimal difference between THELIGHT chromaticity coordinates and the ideal reference line).

CALIBRATION

The Instrument Systems scanning spectrometer, model Spectro 320, serial number 30932004, with its accessory TOP-100 has been calibrated according to the United States National Institute of Standards (NIST) and the german Physikalisch-Technische Bundesanstalt (PTB) standard references.

ACCURACY

The Instrument Systems scanning spectrometer, model Spectro 320, serial number 30932004, with its accessory TOP-100 has an imprecision over the spectral radiometric results delivered lower than 1%.

Specifications subject to change without notice. THELIGHT technology is protected under Spanish license laws with international patents pending.

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REGULATIONS

This equipment is designed to meet the following regulations and safety standards for battery powered technology equipment:

ENVIRONMENTAL

THELIGHT VELVET Power 1 devices are certified and intended for indoor or outdoor use (IP54)
LAMP HEAD OPERATION TEMPERATURE from -20° to +40° C
OPERATING HUMIDITY from 30 to 90% RH non condensing

DECLARATION OF CONFORMITY TO EMC DIRECTIVE 2004/108 EC

MANUFACTURER'S NAME: Thelight luminary for cine and tv, S.L.
MANUFACTURER'S ADDRESS: Gorcs Lladó 1, nave 2
08210 Barberá del Vallés
BARCELONA- SPAIN
info@thelight.com.es
www.thelight.com.es

declares that the products

MODELS: VELVET Power 2x2 LED panel

MANUFACTURED BY: Thelight luminary for cine and tv, S.L.
MANUFACTURED IN: Barberá del Vallés (BARCELONA) SPAIN
MARK: THELIGHT

COMPLY WITH THE CE DIRECTIVES:

GENERAL SECURITY:
2001/95/CE EN 60598-1:2003+A1:2006 Luminaries: general requirements

DIRECTIVE:
2004/108/CE Electromagnetic Compatibility (E.M.C.)

ELECTROMAGNETIC COMPATIBILITY:
THELIGHT is intended to Electromagnetic Environment E2 (Commercial and light industrial).

STANDARD:
IEC 60598-1 Luminaires Part 1: General requirements and test
IEC 60598-2-17 Luminaires Part 2: Particular requirements section seventeen – luminaries for stage lighting, television and film studios (outdoor and indoor)
IEC 62031 LED modules for general lighting – Safety specifications
EN61547 Equipment for general lighting purposes – EMC immunity requirements
EN 61000-6-1:2005 Electromagnetic Compatibility, Generic immunity standard. Residential and light industry.
EN 61000-6-3:2005 Electromagnetic Compatibility, Generic EMI standard. Residential and light industry.
IEC EN61000-6-4:2005. Generic. Industrial environments emission (radiated)
EN 301489-1 v1.8.1(2008-02) Radio Electric Spectrum (1 – 6 GHz Band)
UNE-EN 55015:2007+A1:2008+A2:2009 EMI of electrical lighting and similar equipment (CISPR 15:2005)
EN 55015-1:2006 Lighting and similar equipment radioelectric radiation (conducted emissions, radiated current)

Barberá del Vallés, 7th January 2015



A handwritten signature in black ink, appearing to read "Javier Fdez. De Valderrama".

Javier Fdez. De Valderrama
Authorized Administrator

WARRANTY

THELIGHT LED light equipments are guaranteed to be free from defects in workmanship and parts in a warranty period of two (2) years from the date of purchase. Defects that occur within this warranty period, under normal use and care will be repaired or replaced at THELIGHT discretion, solely at our option with no charge for parts or labour.

In the event of the equipment malfunction, contact the dealer from which you purchased the product. Please note that you will be not be reimbursed for the cost of bringing the equipment to the THELIGHT Repair Centre.

THELIGHT reserves the right to replace the product or relevant part with the same or equivalent product or part, rather than repair it. Where a replacement is provided the products or part replaced becomes the property of THELIGHT. THELIGHT may replace parts with refurbished parts. Replacement of the product or a part does not extend or restart the Warranty period.

Returns or exchanges from the customers will be accepted within 15 days of delivery and will not include the actual shipping costs. Item(s) must be in original packaging and condition, must not be assembled, and must include its original user manual.

This warranty does not cover any damage resulting from:

- Failure to follow the instructions in the instruction manual
- Improper DMX and power line installation not following DMX standards and regulations
- Repair, modification or overhaul not conducted by any authorized THELIGHT personnel.
- Fire, natural disaster, act of God, lightning, abnormal voltage, etc;
- Submergence in water (flooding), exposure to alcohol or other beverages, infiltration of sand or mud, physical shock, or dropping of the equipment and other unnatural causes.

This warranty only applies to the LED panel and not to the accessories, such as barn doors or mounts.

Any consequential damages arising from failure of the equipment, such as expenses incurred in taking pictures or recording images or loss of expected profit, will not be reimbursed whether they occur during the warranty period or not.

Parts essential to the servicing of the light equipment (that is, components required to maintain the functions and quality of the fixture) will be available for a period of five years after the product is discontinued.

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