

01/05-05

Data sheet and connections

HKO High power constant-current source type: HKO1500 for Luxeon K2, for maximum light output



HKO1500 - HIGH-POWER CONSTANT-CURRENT SOURCE 1500 mA

for Luxeon K2 LEDs in white, green, blue, cyan, royal blue, red, red-orange, amber

High efficiency and very little heat are achieved by modern switching-technology. The use of special amplifiers guarantees precise and constant output current. Very small dimensions, low weight and high reliability through SMT-technology (surface mounted components). Every HKO is electronically tested.

Technical data 1500mA-version:

- Startup: ca. 5,1 Volts (for one red 3 watts LED) reverse polarity protection
- Startup: ca. 4,7 Volts (for one red 3-watts LED) without reverse polarity protection
- Drop: ca. 2 Volts
- Maximum input voltage: 35 Volts DC
- Output: short circuit proof
- Output current: 1500 mA constant
- Input: reverse polarity protected (connection without protection is possible)
- Tolerance < 3%
- Efficiency: between 75% and 90% depending on the number of LEDs and input voltage
- Thermal protection
- Working temperature range: -40°C to +85°C (degrees Centigrade)

For operating K2 LEDs with optimum light output. For optimal lifetime of K2 LEDs please choose HKO1000 modules (70% light output, lifetime typ. 50.000 hours.). Reduced lifetime when driving with 1500 mA, LED must be cooled, please refer to the specific datasheets of the manufacturer.

The circuits backside consists of tin-plated copper to support better heat management. It is connected with -IN, please take care when mounting. You can use Cooltape-pads or similar for isolation. If the constant current-source is getting very hot during operation, it is recommended to use Cooltape-pads and a SK452 heatsink, it is also possible, to mount it on a metal-surface etc..

Printed circuit board:

Dimensions: 30 mm x 31 mm, 7 mm high

Connection: soldering pads

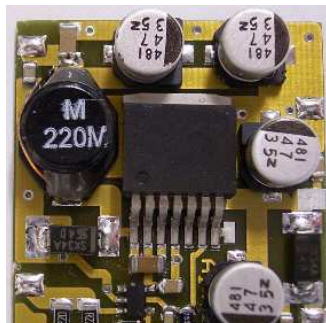
Weight: ca. 5 gram

Material: FR4, glass/epoxy

Backside: copper, tin-plated, connected with - IN

Connecting plan:

+ LED



- IN

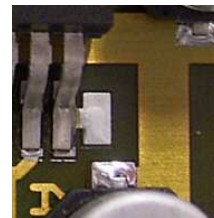
+ IN

without reverse polarity protection

- LED

+ IN with reverse polarity protection

Shutdown- Pin: At the shutdown-pin is a soldering pad that can be used for external controlling e.g. by using a fader or our "dimled" to control the brightness independent auf your power supply. (TTL-compatible)



connection of the shutdown-pin (optional)

Attention: NEVER connect „-IN“ and „-Led“!!! Do not switch output side, switch input side only.

Other available versions:

HKO100 (100mA), HKO150 (150mA), HKO350 (350mA), HKO385 (385mA), HKO400 (400mA), HKO500 (500mA), HKO700 (700mA), HKO750 (750mA), HKO1000 (1000mA), HKO1050 (1050mA), HKO1400 (1400 mA), HKO1500 (1500mA).

-date: 01/06-alterations preserved-

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