

01/05-05

Data sheet and connections

## HKO High power constant-current source type: HKO1400 for 3 watts Luxeon Stars red, amber and red/orange



### HKO1400 - HIGH-POWER CONSTANT-CURRENT SOURCE 1400 mA

for safe operation of 3 Watts Luxeon LEDs in red, amber, red/orange and other  
3 Watts LEDs with 1400 mA, for optimum light-power

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 1400mA-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: 1400 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)

The circuit can drive with constant current up to 10 High-Power Leds in white, blue or green, or up to 16 High-Power Leds in red, amber or orange, depending on input voltage.

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

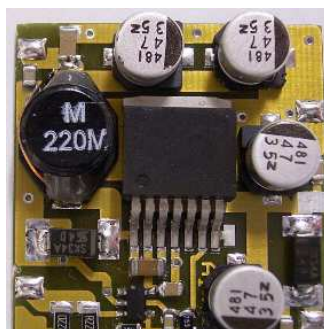
Weight: ca. 5 gram

Material: FR4, glass/epoxy

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

Connecting plan:

+ LED



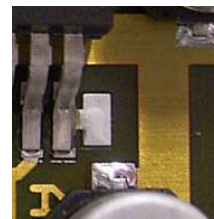
- LED

- IN

+ IN  
without reverse  
polarity protection

+ 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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