8 Channel module that can be rack-mounted,
or used as a bench-top system. Comes with easy-to-use Control Panel.

400V, 500mA MULTI-CHANNEL DC CURRENT SOURCE

- Reliable, Accurate Current
- 8 Independent Programmable Source Channels
- 96% Efficiency; reduces lifetime electricity costs
- Scalable; easily add to existing SpikeSafe-based systems or build up a new one
- 2nd Generation Patented SpikeSafe LED Protection
- One Module; appropriate for low, mid and high power devices

CONFIGURATION

8 CHANNEL/MODULE

DRIVE CAPABILITY

DC CONSTANT CURRENT
1.6KW
50V, 100V, 200V, 300V, AND 400V
339μA to 500mA

CE CERTIFICATION

OVERVIEW

The SS400 DC is a high quality and reliable current source developed and optimized for LED reliability stress applications; it provides a flexible, scalable foundation that meets stringent LED test protocols. The SS400 DC is the first SpikeSafe™ module to offer dual current ranges providing high accuracy at both high and low currents.

HIGH POWER DENSITY

The SpikeSafe Series offers the highest power density in the industry. Each SS400 DC sources up to 8kW. With 400V compliance, the SS400 is ideal for driving series LED circuits, for example an SS400 can power 900 3.5V LEDs. Available packaging options include a single module bench-top chassis or a freestanding cabinet that holds up to 32 modules.

INDEPENDENT PROGRAMMABLE SOURCE CHANNELS

The SS400 DC provides 8 independent source channels. Source channels are software controlled with individual settings for current, compliance voltage and SpikeSafe protection parameters. This flexibility allows one SS400 to drive a wide variety of LEDs from low voltage single emitters to high voltage chip-on-board arrays.

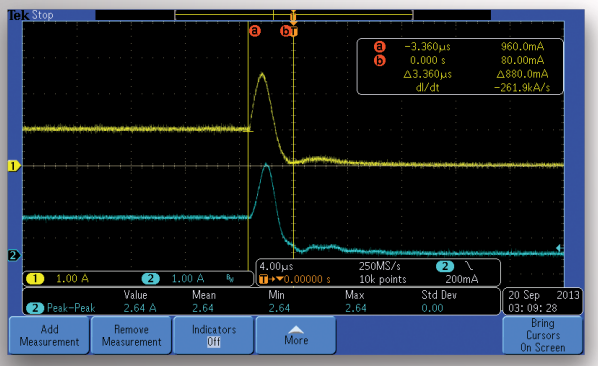
COMPATIBLE FORM FACTOR

The SS400 DC is pin compatible with the industry-standard SS200 and it includes a digitally-controlled regulator to step up bulk voltage. This feature allows the SS400 DC to be installed in existing SS200 reliability systems to drive high voltage LEDs without any other system hardware changes.

APPLICATIONS

- LED Reliability, Burn-in
- LM-80
- LM-85, LM-79, CIE127
- DC Light Measurement
- Multichannel Binning
- Other Semiconductor and Non-Inductive Test Applications

400V, 500mA MULTI-CHANNEL DC CURRENT SOURCE



SpikeSafe 4uS shutdown in 10 LED circuit due to single LED failure

2nd Generation SpikeSafe™ LED Protection

SpikeSafe proprietary protection algorithms continuously monitor voltage and current on all source channels for anomalies. If an anomaly is detected, drive to the affected source channel is immediately terminated. This rapid shutdown preserves the individual device for failure analysis, and it ensures other devices in the circuit are not damaged, ultimately improving overall reliability.

SPIKESAFE 400 DC MODEL NUMBERS

MODELS	500mA
400V	SS400-DC-400-05-M8
300V	SS400-DC-300-05-M8
200V	SS400-DC-200-05-M8
100V	SS400-DC-100-05-M8
50V	SS400-DC-50-05-M8

CURRENT SOURCE PERFORMANCE

Mode	DC Constant Current
Output Current	339µA - 500mA
Maximum Compliance Voltage	Models to: 50V, 100V, 200V, 300V, and 400V
Output Power	1.6KW/module, 200W/channel
Setpoint Resolution	339µA to 40mA: 1µA 40.1mA - 500mA: 10µA
Output Current Accuracy	339µA to 40mA: 0.05% + 10µA; 40.1mA - 500mA: 0.05% + 75µA
Calibration Interval	2 years after put into use
Device Protection	2nd generation SpikeSafe protection including high speed over current shut down, slow start up, leakage detection and other protection algorithms.
Nominal Current Ripple	0.01% + 160µA

PHYSICAL AND ENVIRONMENTAL

Available Packages	Chassis suitable for benchtop or rackmount; Integrated system of 8 to 256 source channels; Circuit card module compatible with Vektrex Systems
Operating Conditions	10 to 35C, 70% R.H. , Air cooled, <2000m altitude
Storage	-25°C to 65°C
Input Power	Selectable; single and three phase available; 50-60HZ
Particulate Level	Clean lab conditions

OUTPUT CONFIGURATION

Current Sources	8 independent source channels
Type	Differential drive (anode and cathode driven)

REMOTE CONTROL

Physical	Ethernet
Protocol	TCP/IP
Command Set	SCPI

MONITORING SYSTEM

Type	Built-in data acquisition system monitors voltage, current and fault conditions.
Voltage Measure Accuracy	3% + 1V
Current Measure Accuracy	339µA to 40mA: 0.7% + 200µA 40.1mA - 500mA: 0.2% + 1mA

ISOLATED CONTROL INPUTS

Remote Pause	Optoisolated input, pauses output, selectable polarity
Remote Disable	Optoisolated input, halts output, selectable polarity

The SpikeSafe 400 is easy to use with included Control Panel software

VEKTREX™