



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

400V, 2A 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
6.4KW
50V, 100V, 200V, 300V, AND 400V
5.9mA to 2A



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 a SS400 can power 900 3W 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.

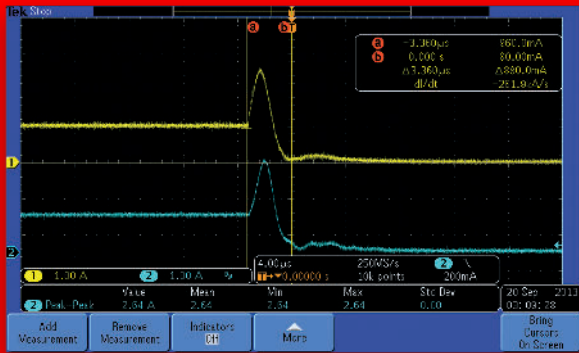
COMPATIBLE FORM FACTOR

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, 2A MULTI-CHANNEL DC CURRENT SOURCE



SpikeSafe 4µs 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 | 2A |
|--------|-------------------|
| 400V | SS400-DC-400-2-M8 |
| 300V | SS400-DC-300-2-M8 |
| 200V | SS400-DC-200-2-M8 |
| 100V | SS400-DC-100-2-M8 |
| 50V | SS400-DC-50-2-M8 |

CURRENT SOURCE PERFORMANCE

| | |
|----------------------------|--|
| Mode | DC Constant Current |
| Output Current | 5.9mA – 2A |
| Maximum Compliance Voltage | Models to: 50V, 100V, 200V, 300V and 400V |
| Output Power | 6.4kW/module; 800W/channel |
| Setpoint Resolution | 5.9mA to 200mA: 5µA; 201mA - 2A: 50µA |
| Output Current Accuracy | 5.9mA to 200mA: 0.04% + 175µA 201mA - 2A: 0.08% + 0.5mA |
| 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 | < 1A: 0.03% + 300µA, > 1A: 0.06% |

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 1 and 4 channels also available |
| 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 | 5.9mA to 200mA: 0.4% + 5mA 201mA - 2A: 0.4% + 5mA |

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