



Module can be rack-mounted or used as a bench-top system
*with the included software - Control Panel

- Sustained output power
- No duty cycle limitations
- Precise triggering enables repeatable measurements
- Microsecond pulse rise times meet new light measurement standards
- Easy to use software for source and measure

OVERVIEW

SpikeSafe Series current sources provide sustained power with no duty cycle limitations. Other current sources have duty cycle and output power limitations. Often, these limitations are found in the fine print or are not known. Performance current sources are designed and optimized to support the high power needs of LED devices. The Performance Precision Pulsed Series includes DC and precision pulsed modes. With microsecond pulse rise times, reproducible light measurements for high power devices as defined by new testing standards are possible.

ACCURATE AND REPEATABLE PULSING - MICROSECOND RISE TIMES

For measurement accuracy, precision pulsing and digital triggering are foundation requirements that the SS400 PRF provides. Digital power enables the SS400 PRF to provide sustained power and highly accurate pulses at full power. Microsecond rise times and pulse widths from 10 μ s to 10s offer unparalleled flexibility. With the SpikeSafe 400 Performance Series, light measurement and other photometric measurement accuracy will be greatly improved enhancing your market position.

DIGITAL TRIGGER

Precision digital triggering dramatically reduces measurement variations due to triggering uncertainty.

LOAD TUNING ENSURES SQUARE PULSES

Programmable load tuning adjusts internal drive circuitry to maintain pulse fidelity and fast transition times to accommodate a variety of load conditions.

200V, 8A PERFORMANCE PRECISION PULSED CURRENT SOURCE

CONFIGURATION

1 source channel

DRIVE CAPABILITY

DC, SINGLE PULSE, CONTINUOUS PULSE,
DYNAMIC MODES

20mA to 8A

50V to 200V

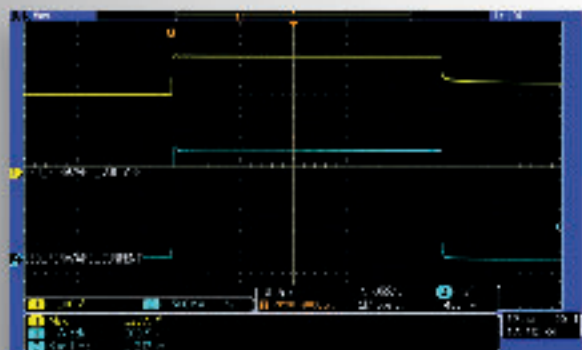


HIGH POWER DENSITY

SpikeSafe current sources provide sustained output power. Unlike other fixed impedance sources, the SpikeSafe Performance Current Sources can drive clean pulses over long cables (to 10m).

- DC and pulsed light measurement
- LED characterization
- Production and binning applications
- LM-80, LM-85, LM-79, CIE127
- Quantum efficiency measurement
- Thermal resistance and junction temperature measurements
- Other non-inductive test applications

200V, 8A PERFORMANCE PRECISION PULSE



COB array pulsed at 8A

Performance Pulsing Ensures Repeatable Measurements

The SpikeSafe 400 uses a 90 MHz timing system to provide precise pulses from 10 μ s to 10s. Dynamic pulse control allows the controlling application to change pulse width, duty cycle and amplitude while the output is running –essential for rapid characterization tests or sweeps. Rise times in the 1-5 μ s range reduce LED heating prior to measurements. Programmable load tuning adjusts internal drive circuitry to maintain pulse fidelity and fast transition times to accommodate a variety of load conditions. Unlike other fixed impedance sources, the SS400 can drive clean pulses over simple twisted pair cables as long as 10 meters.

SPIKESAFE PERFORMANCE MODEL NUMBER

MODEL	8A
50V	SS400-PRF-50-8-2U1
100V	SS400-PRF-100-8-2U1
200V	SS400-PRF-200-8-2U1

CURRENT SOURCE PERFORMANCE

Modes	DC, DC Dynamic, Continuous Pulse, Continuous Dynamic, Dynamic Pulse Width, and Dynamic Duty Cycle
Output Current	20mA to 8A
Maximum Compliance Voltage	50V, 100V, 200V
Sustained Output Power	240W with internal power; 1600W with external power
Setpoint Resolution	20mA to 400mA: 10 μ A; 401mA to 8A: 100 μ A
Output Current Accuracy	20mA to 400mA: 0.04% + 350 μ A; 401mA to 8A: 0.08% + 1mA
Calibration Interval	1 year after being put into service
Device Protection	Patented SpikeSafe technology rapidly shuts down power to devices when an anomaly is detected.
Output Current Ripple	0.3%, 100kHz at 4A

OUTPUT CONFIGURATION

Current Sources	One (1) source channel
Type	Differential drive (anode and cathode driven)

PHYSICAL AND ENVIRONMENTAL

Form Factor	2U chassis for benchtop/rackmount use; 24.5" x 19" x 3.5"
Operating Conditions	10 to 35C, 70%R.H., Air cooled
Input Power	Single phase/three phase
Particulate Level	Clean lab conditions

REMOTE CONTROL

Physical	Ethernet; TCP/IP protocol
Command Set	SCPI

TRIGGER OUTPUT

Trigger Output	TTL Signal aligned with output pulse.
Current Delay After Trigger	2 - 10 μ s
Trigger Polarity	Selectable
Trigger Jitter	<10ns typical

PULSE PERFORMANCE

Time Base Accuracy	+/- 50ppm
Pulse Width Range	10 μ s to 10s
Pulse Width Resolution	1 μ s
Pulse Width Accuracy	0.01% +2 μ s
Pulse Period Range	20 μ s – 20s
Duty Cycle Range	0 to 100%
Pulse Width Jitter	<30ns typical
Rise/Fall Time	1 μ s to 5 μ s