

Pear Advanced Research

Customer Satisfaction is our Number One Priority

Pear Mini V1 Constant Current Source

This small, embeddable constant current source gives low drift accuracy, protection, and filtering to ensure that the device under test (or D.U.T.) such as semiconductors, diodes, LEDs, sensor excitation, IC, and other loads can be characterized or calibrated with high accuracy. The constant current source can be set from 0 mA to 100 mA to a variable equivalent load of up to 90 ohms.

Benefits of the CCS

- Low drift (< 1.5%)
- Lower drift (< 1% in a cool environment)
- Up to 100 mA set current
- Stable, repeatable current delivery
- 14-24 VDC input
- Short circuit protection
- Reverse voltage protection
- ESD protection
- Turns off when overheating
- Small size
- Easy integration

The constant current source is designed to deliver stable and reliable performance once it reaches thermal equilibrium, providing consistent output that engineers can depend on during extended operation. It restabilizes to consistent behavior even when the constant current source is moved by hand. The system exhibits natural self-correction, returning to its steady operating point after disturbances, reducing long-term drift and minimizing the need for frequent recalibration. Its repeatable performance ensures that the same conditions produce the same results, which is critical for validation, testing, and quality assurance

processes. Over several hours, the current output remains smooth and predictable, supporting applications that require continuous operation without instability or unexpected large variation. The constant current source gives low drift to (D.U.T.) such as semiconductors, diodes, LEDs, sensor excitation, IC and other loads. Additionally, the design works effectively with simple and practical cooling fan, allowing for straightforward integration into existing systems. *To achieve lower drift below 1%, the constant current source needs to be in a (mini) refrigerator for stable temperature.



To the best of our knowledge, the referenced product in this datasheet is RoHS compliant per the component manufacturers' documentation.

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