

# SLICE-QT

## Four-channel PID Temperature Controller

SLICE modules offer the high performance and high speed of analog control circuitry with the convenience and flexibility of a digital interface. With SLICE, you can drive, lock, and temperature control your diode lasers, semiconductor optical amplifiers, and tapered amplifiers. Each SLICE works independently with one functionality, but will seamlessly integrate with other SLICES for complete control of your laser system. Communicate with a SLICE through the front-panel touch-sensitive display screen, a GUI, or serial commands to easily obtain the level of control and flexibility you need. And for critical timing, the user can upload “timed events” which are executed with low jitter and low delay with respect to a TTL trigger.



*SLICE-QT temperature control module*

The SLICE-QT features four independent PID temperature controllers for controlling TECs or heater blocks. The loops can be nested or control four separate systems.

With fully adjustable poles and auto tuning, it is possible to stabilize the temperature of a diode or doubling crystal with sub-millikelvin temperature resolution.

The Vescent Photonics SLICES of precision laser control. Individually or working together, SLICE provides the performance you need.

*Preliminary*

*Control SLICE through the front panel, a GUI, or serial commands*



### Features:

- Four PID temperature control loops
- 40 W user-routable capacity
- Programmable front-panel I/O
- Auto tuning function
- GUI, serial, or touch screen control

### Applications:

- Diode lasers, tapered amplifiers, SOAs
- Nonlinear & photonic crystals, PICs
- Chemical reactions

# SLICE-QT Performance Specifications

Performance	
Channels	4
Loop Filter	PID
Control Range	+10 to +50°C
Compatible Sensor	10 kΩ thermistor
Temperature Stability <sup>1</sup>	±0.1 mK over 1 hr
Precision	~0.05°C
Accuracy	TBD
Capacity <sup>2</sup>	40 W
Auto Tune	Yes
Interface	
Control	Front-panel touch screen, GUI, API
Connections	Host control: USB Type B
Power Input	100 - 240 VAC; 50, 60 Hz

All specifications subject to change without notice.

<sup>1</sup>Plant dependent; value specified for Vescent D2-100 laser head

<sup>2</sup>User-distributable over four channels



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Vescent Photonics, Inc.  
 6770 W. 52nd Ave., Suite B  
 Arvada, CO 80002  
 USA  
 +1 (303) 296-6766  
[www.vescent.com](http://www.vescent.com)

