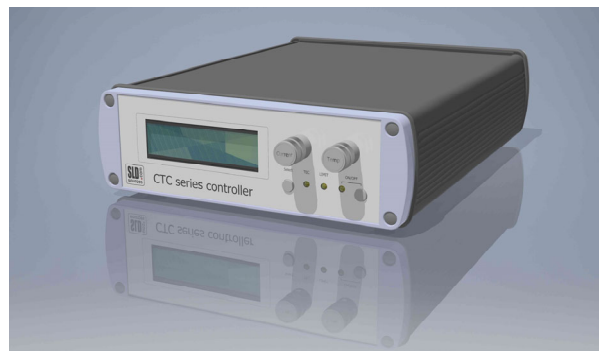




SLD/LD Controllers CTC series



A CTC series controller combines a high precision injection current driver and a temperature controller within a single unit. The CTC controllers are specifically designed to supply power to TEC-cooled diode modules, such as SLDs and LDs. The advantage of using CTC controllers is that the device under test (DUT) is not permanently assembled with the controller, allowing different DUTs to be easily replaced on the supplementary mount.

CTC controllers provide more advanced control of driving parameters than ready-to-use OEM light sources: in addition to controlling the injection current and current limiting, CTC controllers also allow control of the TEC temperature via the front panel console of the device.

CTC controllers have necessary protections built in, such as:

- factory-set current limit
- soft-start current
- open circuit and short circuit protection on the thermistor input
- temperature window ($\pm 1^\circ\text{C}$ at $+25^\circ\text{C}$)
- TEC overheating protection

The injection current driver in use in CTC controllers was specifically optimized for low noise. CTC drivers operate in CW; they can be factory preset to Constant Current [CC] mode (default factory setting, if not specified otherwise), or to Constant Power [CP] mode (on request). CTC controllers are AC powered units.

CTC series controllers are the ideal choice for laboratory applications, and for functional inspections of TEC-cooled fiber-pigtailed and free-space modules.

The front panel controls and LCD display provide an easy-to-use interface for operating the controller and accessing all its features.

Features

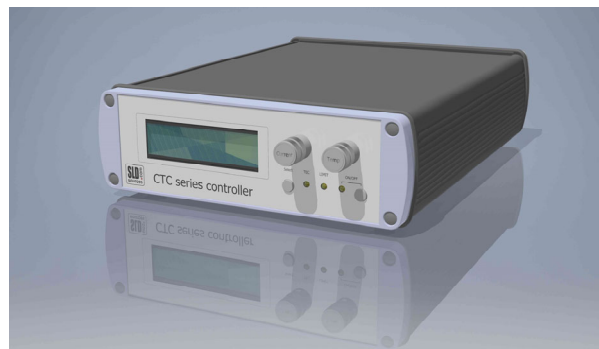
- Current driver and temperature controller combined in a single unit
- Up to 1A injection current
- $+10^\circ\text{C}$... $+80^\circ\text{C}$ stabilization temperature setting range
- Low-noise and high-precision current driver
- Built-in protection from overcurrent, spikes and overheating
- Operation in either Constant Current [CC] or Constant Power [CP] modes
- Optimized for 24/7 applications
- Compact and easy-to-operate
- Cost-optimized, entry-level SLD/LD driver

Applications

- Laboratory measurements and characterization
- Incoming inspection and testing
- Lifetime testing



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Specifications

Drive current control	
Number of channels	Single <i>(the 8-channel model is available on request – please contact us to obtain more detailed information)</i>
Mode of current control	Constant Current [CC] <i>or Constant Power [CP] upon request</i>
Mode of operation	CW
Injection current range, mA	10 – 1000
Injection current setpoint resolution, mA	0.1
Injection current setpoint accuracy, %	±0.05
Current limit, mA	500 or 1000
Current limit resolution, mA	0.1
Compliance voltage, V	1 – 4
Long-term stability (24h, +25 °C), µA	< 25
Thermal drift, ppm/°C	< 250
RIN (<i>beyond 1/f, 10kHz to 2MHz range</i>), dB/Hz	< -130
PD monitor reverse bias, V	5
PD monitor current range, mA	0.05 – 20
Temperature control	
TEC current range, A	-1.8...+1.8
TEC voltage range, V	-4.5...+4.5
Control range (thermistor input), kOhm	1.2 – 20 <i>(for 10 kOhm NTC thermistor in use)</i>
Setpoint resolution (thermistor input), Ohm	1
Setpoint accuracy (thermistor input), Ohm	±10
Long-term stability (24h, +25 °C environment), °C	< 0.1
Power specifications	
Power	100 – 240 V AC, 50/60 Hz
Fuse	1 A
Mechanical specifications	
Connector for device under test	DB9-F
Dimensions (L × W × H), mm	260 × 170 × 55
Weight, kg	1.3

