

**ds11-t127-series**
**Tabletop High Power Laser Current Source + TEC Controller**


The product series ds11-t127 of table top drivers has all features of the ds-series. It is powered by an input voltage of 98~230VAC with power factor correction. The power ranges from 300W to 1200W. The laser diode current ranges up to 120A and voltage up to 48V.

As in all DS devices an RS232 interface for controlling and monitoring is integrated. CW or pulse modes are available. An pulse generator is integrated. External digital or analog modulation is supported.

The typical rise time is 25 $\mu$ s. Rise times below 5 $\mu$ s are achievable. Optionally, up to 2 TEC circuits are possible.

If your type is not among the listed types please request!

**PRECISION CURRENT SOURCE:**

- Current: 0 – I<sub>max</sub> (CW and pulsed)
- Accuracy:  $\pm 0.5\%$
- Voltage: 0 – V<sub>max</sub>, Volts Compliance Voltage Range
- Setpoint Resolution: 12Bit (I<sub>max</sub>/4096)
- Noise and Ripple: < 1% full scale (rms)
- trise-tfall typical ~ 25 $\mu$ s (opt. < 5 $\mu$ s)

**INTEGRATED PROTECTION FEATURES:**

- Slow-start circuitry
- Voltage and current limits
- Transient protection and shut-down
- Open circuit shut-down
- Over temperature shut-down
- Interlock shut-down

**PRECISION TEMPERATURE CONTROLLER:**

- TEC Control Power up to 300W  
4A-14V, 8A-14V, 12A-18V, 12A-24V, 7A-48V or others
- Temperature Control Range: -25°C to 150°C
- Accuracy typ.  $\pm 0.01K$
- Fast Feedback Loop P.I.D. temperature controller
- Temperature Limits
- Temp. Sensor Inputs for NTCs (standard 10 k $\Omega$ ), PT100, PT1000

**PULSING (QCW) MODE OF OPERATION:**

- Rise / Fall Time: < 20 $\mu$ s, 10%-90% (< 10 $\mu$ s on request)
- Integrated pulse generator
- Bias Current option
- Integrated low impedance cables for clean pulse response
- Accepts external analog and digital modulation
- Single pulses and pulse bursts, internal or external triggered

**INTERFACE:**

- Front Panel display with touch-keys
- RS-232 remote I/O with optional USB
- free PC User Interface based on LabVIEW™
- free LabVIEW™ VI

**DEVICE FEATURES:**

- Photo Diode Power Monitoring included
- Pilot Laser Supply
- Adjustable External Fan Support
- Supply Voltage: 98~230VAC

**OPTIONAL:**

- up to 2 TEC circuits
- additional noise reduction for I < 30A
- up to 400% pulse current boost

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#### Selection of some Standard Device Configurations:

| Type | Device Name                                                                      | Laser Current Max[A] | Laser Voltage Max[V] | 1st TEC Current Max[A] | 1st TEC Voltage Max[V] |
|------|----------------------------------------------------------------------------------|----------------------|----------------------|------------------------|------------------------|
| 15   | ds11-la55v05-pa12v18-t12731-v1-15                                                | 55                   | 5                    | 12                     | 18                     |
| 162  | ds11-la55_110v05-pa08v14-pa08v14-t12730-v1-162 1)                                | 55_110               | 5                    | 8                      | 14                     |
| 236  | ds11-la25v12-pa12v18-t12732-v1-236                                               | 25                   | 12                   | 12                     | 18                     |
| 577  | ds11-la30v10-pa12v18-t12732-v1-577                                               | 30                   | 10                   | 12                     | 18                     |
| 290  | ds11-la12v24-pa12v18-t12733-v1-290                                               | 12                   | 24                   | 12                     | 18                     |
| 578  | ds11-la14v20-pa12v18-t12733-v1-578                                               | 14                   | 20                   | 12                     | 18                     |
| 406  | ds11-la06v48-pa12v18-t12732-v2-406                                               | 6                    | 48                   | 12                     | 18                     |
| 603  | ds11-la60v06-pa15v24-t12734-v0-603                                               | 60                   | 6                    | 15                     | 24                     |
| 579  | ds11-la75v05-pa07v48-t12734-v1-579                                               | 75                   | 5                    | 7                      | 48                     |
| 283  | ls11-la27v24-t12735-v1-283                                                       | 27                   | 24                   |                        |                        |
| 580  | ls11-la50v12-t12734-v1-580                                                       | 50                   | 12                   |                        |                        |
| 77   | ls11-la64v09-t12734-v1-77                                                        | 64                   | 9                    |                        |                        |
| 389  | ls11-la80v05-t12782-v1-389                                                       | 80                   | 5                    |                        |                        |
| 479  | ls11-la90v05-t12782-v1-479                                                       | 90                   | 5                    |                        |                        |
| 581  | ls11-la120v05-t12782-v1-581                                                      | 120                  | 5                    |                        |                        |
|      | 1) Laser Modulation Boost 100% to 110A, 2nd TEC-stage with 8A 14V max integrated |                      |                      |                        |                        |

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