

**ds01-o44-series OEM - High Power Current Source + TEC Controller**



The product series ds01-o44 of OEM drivers has all features of the ds-series. It is powered by an input voltage of 24VDC. The power ranges up to 400W. The laser diode current ranges up to 80A and voltage up to 18V.

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 25µs. Rise times below 5µs are achievable.

Multiple TEC circuits for temperature stabilisation with Peltier Elements can be implemented.

**PRECISION CURRENT SOURCE:**

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

**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 200W  
4A-14V, 8A-14V, 12A-18V, 12A-24V or others
- Temperature Control Range: -25°C to 150°C
- Accuracy typ. ±0.01K
- Fast Feedback Loop P.I.D. temperature controller
- Temperature Limits
- Temp. Sensor Inputs for NTCs (standard 10 kΩ), PT100, PT1000

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

- Rise / Fall Time: < 25µs, 10%-90% (< 5µs 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:**

- 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: 24VDC ± 10%

**OPTIONAL:**

- up to 3 TEC circuits
- additional noise reduction for I < 30A
- up to 400% pulse current boost

**ACCESSORIES:**

- tabletop power supplies 24V and 90W to 600W with ds01-connector are available

**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]
186	ls01-la1.5v14-o4400-v1-186	1.5	14		
289	ds01-la1.5v14-pa04v14-o4400-v2-289	1.5	14	4	14
258	ds01-la1.5v14-pa04v14-pa04v14-o4400-v0-258 1)	1.5	14	4	14
30	ds01-la04v14-pa04v14-o4400-v0-30	4	14	4	14
97	ds01-la04v14-pa04v14-pa04v14-o4400-v1-97 1)	4	14	4	14
47	ds01-la08v14-pa08v16-o4400-37-47	8	14	8	16
33	ds01-la08v14-pa04v14-pa04v14-o4400-v1-33 1)	8	14	4	14
294	ds01-la12v14-pa08v16-o4400-v1-294	12	14	8	16
347	ds01-la14v06-pa08v14-o4400-v1-347	14	06	8	14
	1) 2nd TEC 4A-14V				

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

