

Data Sheet

Low Power Driver LPD 5-50

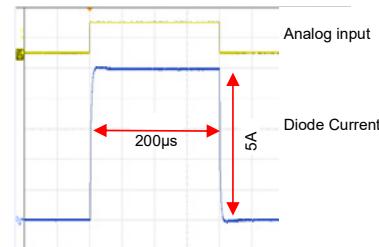
Features

Drives arbitrary current waveforms into laser diodes
 CW, pulsed, modulated or mixed curves
 Short rise and fall time, no overshoot, no ripple
 Set-point adjustment: analog input and potentiometer
 Digital enable / trigger input



Specification

| | |
|-----------------------|-------------------------------|
| Diode current | 0 mA ... 5000 mA |
| Diode voltage | max 47 V |
| Power dissipation | 5 W max (no heatsink) |
| Power dissipation | 25 W max (heatsink required) |
| Supply voltage | 7 V ... 48.0 V, max. 50 V |
| Supply voltage min | diode voltage + 1 V |
| Supply current | 5.1 A max |
| Rise time | < 3.5 µs |
| Fall time | < 3.5 µs |
| Frequency | 50 kHz max (square wave) |
| Frequency | 165 kHz max (sine wave, -3dB) |
| Accuracy | ± 1 % |
| Linearity | ± 1 % |
| Temperature stability | ±150ppm / °C |
| Ripple | no ripple |



Inputs

| | |
|-------------------------|------------------------------------|
| Diode current set point | 0 V ... 10 V (impedance: 2 kΩ) |
| Enable | TTL - low active (impedance: 1 kΩ) |

Output

| | |
|---------------|----------|
| Diode current | Terminal |
|---------------|----------|

General specifications

| | |
|---------------------|---|
| Ambient temperature | 0 ... +45 °C |
| Dimensions | 75 x 50 x 24 mm, with heat sink 75 x 50 x 35 mm |
| Weight | 54 g, with heat sink 110 g |

Description

Low power driver LPD 5-50 is a linear current source with excellent properties for driving low power laser diodes. Current waveforms can be CW, pulsed, modulated or a combination with frequencies up to 50 kHz (square wave) and currents up to 5 A. An analog modulation input and a digital enable / trigger input can generate fast and clean pulses. An analog input and a potentiometer control the current set point. Both values are added and build the effective current set point. LPD 5-50 is small and compact and can be operated without heatsink ($P_{DISS} < 5 \text{ W}$). A temperature-controlled air fan cooler (heatsink) is available for P_{DISS} up to 25W. An integrated overtemperature protection increases operating safety.

Technical subjects to change without notice.

| Type | Description | Ordering code |
|-----------|----------------|---------------|
| LPD 5-50 | Current Source | 10100931 |
| LPD 5-HSK | Heatsink Kit | 10100932 |



Warning!

**Risk of exposure of hazardous laser radiation
in combination with laser light emitting devices!**

Document: 10100931

Revision: 01

Date: 18.12.2023