

Features

Drives arbitrary current waveforms into laser diodes
 CW, pulsed, modulated or mixed current waveforms
 Very short rise and fall time
 Excellent dynamic performance
 Two analog inputs plus BIAS current
 Small dimensions, low weight

Specification

| | |
|-------------------------|------------------|
| Diode current CW | 0 ... 20 A |
| Diode current pulsed | 0 ... 40 A |
| Diode voltage | 0 ... 49 V |
| Output power | 980 W max |
| Power dissipation | 30 W max allowed |
| Supply voltage | 1 V ... 50 V |
| Supply current | 20 A max |
| Supply voltage* | 3 V ... 6 V |
| Rise time | 50 ns |
| Fall time | 50 ns |
| Frequency (set point 1) | 10 MHz max |
| Frequency (set point 2) | 100 kHz max |

Inputs

| | |
|---------------------------|-----------------------------|
| Diode current set point 1 | 0 ... 500 mV (50 Ohm input) |
| Diode current set point 2 | 0 ... 5 V (high impedance) |
| Enable | TTL |
| Reset | TTL |

Outputs

| | |
|-----------------------|---------------------------|
| Diode current monitor | 0 ... 50 mV (into 50 Ohm) |
| Temperature | 0 ... 4 V for 0 ... 80°C |
| Ready | TTL |
| Excess temperature | TTL |

General specifications

| | |
|---------------------|-----------------|
| Ambient temperature | 0 ... +45 °C |
| Cooling | Required |
| Dimensions | 95 x 61 x 20 mm |
| Weight | 240 g |
| Ordering Code | 10100314 |

* for internal electronics

Description

The fast diode current modulator FM 20-50 is a linear modulator with improved properties for driving arbitrary current waveforms or fast pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 10 MHz and currents up to 20 A for CW and 40 A for pulsed waveforms. The modulator is small and compact and it is designed for mounting it with low inductance directly at laser diodes or for integrating it in laser diode modules. It has two analogue inputs for the current set point. A high frequency input (50 Ohm input impedance) with a bandwidth of 10 MHz and a low frequency input with a bandwidth of 100 kHz. Additionally, there is a 10 turns potentiometer for generating a CW-current (bias current). All set points are added and build the effective current set point.

Technical subjects to change without notice.

