

Features

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



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 ... 49 V |
| Supply current | 20 A max |
| Supply voltage* | 3 V ... 6 V |
| Rise time | 55 ns |
| Fall time | 55 ns |
| Frequency (set point 1) | 9 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) |
| Trigger | TTL |
| Enable | TTL |
| Reset | TTL |

Outputs

| | |
|-----------------------|----------------------------|
| Diode current monitor | 0 ... 110 mV (into 50 Ohm) |
| Temperature | 0 ... 4 V for 0 ... 80°C |
| Ready | TTL |

General specifications

| | |
|---------------------|-----------------|
| Ambient temperature | 0 ... +45 °C |
| Cooling | Required |
| Dimensions | 95 x 61 x 20 mm |
| Weight | 240 g |
| Ordering Code | 10100414 |

* for internal electronics

Description

The fast diode current modulator VFM 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 9 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 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 9 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. A TTL-Trigger input generates fast and clean pulses at the high frequency input set point 1.

Technical subjects to change without notice.