10100416

VFM 40-50
Fast Diode Current Modulator

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 ... 40 A
Diode current pulsed	0 ... 80 A
Diode voltage	0 ... 49 V
Output power	1960 W max
Power dissipation	60 W max allowed
Supply voltage	1 V ... 49 V
Supply current	40 A max
Supply voltage*	3 V ... 6 V
Rise time	56 ns
Fall time	56 ns
Frequency (set point 1)	8.9 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	10100416

* for internal electronics

Description

The fast diode current modulator VFM 40-50 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 8.9 MHz and currents up to 40 A for CW and 80 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 8.9 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.

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