

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 ... 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 ... 50 V
Supply current	40 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	10100316
* for internal electronics	

Description

The fast diode current modulator FM 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 10 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 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.

