

Features

Drives arbitrary current waveforms into laser diodes
 CW, pulsed, modulated or mixed waveforms
 Short rise and fall time
 Trigger input and onboard pulse generator
 Two analog inputs plus software BIAS current
 USB interface for configuring, operating and monitoring

Specification

Diode current CW	0 ... 10 A
Diode current pulsed	0 ... 20 A (short pulses)
Diode voltage	1 ... 46 V
Output power	460 W
Power dissipation	30 W max allowed
Supply voltage	24.5 V ... 50 V
Supply current	11 A max
Rise time	6 μ s
Fall time	6 μ s
Frequency (set point 1)	80 kHz max
Frequency (set point 2)	80 kHz max

Inputs

Diode current set point 1	0 ... 500 mV (50 Ohm input)
Diode current set point 1 pulse	0 ... 1000 mV (50 Ohm input)
Diode current set point 2	0 ... 5 V (high impedance)
Enable TTL	
Reset TTL	
Trigger TTL	

Outputs

Diode current monitor	0 ... 2.5 V
Temperature	1863.9 mV ... 919 mV for 0 ... 80 °C
Ready	Open Collector

General specifications

Output current temperature coefficient	± 250 ppm / °C
Accuracy of output current	± 0.2 %
Ambient temperature	0 ... +45 °C
Cooling	Required
Dimensions	87 x 72 x 41 mm
Weight	220 g
Ordering Code	10100560

Description

The fast diode current modulator MCM 10-50-U is a linear modulator with excellent 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 80 kHz and currents up to 10 A for CW and 20 A for short pulsed waveforms. An onboard pulse generator and a trigger input generate fast and clean pulses. The modulator has two analogue inputs for the current set point and one software BIAS current set point. All set points are added and build the effective current set point. The modulator is small and compact and it is designed for mounting it with low inductance at laser diodes or for integrating it in laser diode modules. Technical subjects to change without notice.

