

**Data Sheet**  
**Fast Diode Current Modulator MCM 20-50-z**

**Features**

- Drives arbitrary current waveforms into laser diodes
- CW, pulsed, modulated or arbitrary curves
- External trigger input, internal pulse generator
- Short rise and fall time
- Two analog hardware inputs plus software BIAS current
- Serial interface for configuration, controlling and monitoring

**Specification**

Diode current CW	0 ... 20A
Diode current pulsed	0 ... 40A (short pulses)
Diode voltage	1 ... 46V
Output power	920W
Power dissipation	60W max allowed
Supply voltage	24,5 ... 50V
Supply current	max 21A
Rise time / Fall time	6µs / 6µs (@100% current)
Frequency (set point 1)	max 80kHz
Frequency (set point 2)	max 80kHz

**Signal Inputs / Outputs**

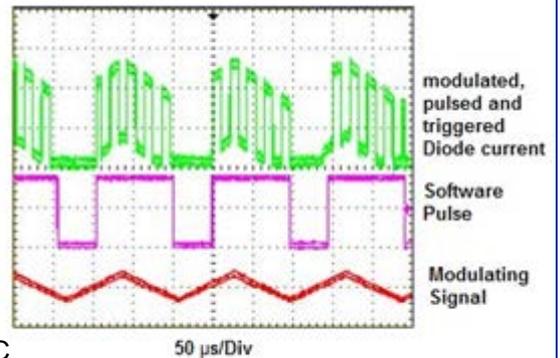
Diode current set point 1	0 ... 500mV (50 Ohm input)
Diode current set point 1 pulse	0 ... 1000mV (50 Ohm input)
Diode current set point 2	0 ... 5V (high impedance)
Enable & Reset / Trigger	Open Collector / TTL
Diode current monitor	0 ... 2,5V
Temperature	1863,9mV ... 919mV for 0 ... 80°C
Ready	Open Collector

**General Specifications**

Ambient temperature	0 ... +45°C	Temperature drift	±250ppm / °C
Cooling	Required	Frequency bandwidth DC	93 kHz (set point 1)
Dimensions	87 x 72 x 41mm	Frequency bandwidth DC	68 kHz (set point 2)
Weight	220g	Accuracy	± 0,2%
		Internal DA-converter	12-bit

**Description**

The diode current modulator MCM 20-50-z is a linear modulator with excellent properties for driving arbitrary current waveforms or pulses into laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 80 kHz and currents up to 20A for CW and 40A for short pulsed waveforms. An internal pulse generator and an external trigger input generate fast and clean pulses. The modulator is small and compact and it is designed for mounting with low inductance at laser diodes or for integration in laser diode modules. It has two hardware 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. Configuration, controlling and monitoring with PC, notebook or tablet.



Type	Interface	Order Code
MCM 20-50-U	USB	10100561
MCM 20-50-R	RS 232	10100576



**Warning!**  
**Risk of exposure of hazardous laser radiation**  
**in combination with laser light emitting devices!**

Technical subjects to change without notice.

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