

**Features**

Drives arbitrary current waveforms into high voltage,  
 high power laser diodes  
 CW, pulsed, modulated or mixed  
 Short rise and fall time  
 Frequency up to 20 MHz  
 Excellent dynamic performance  
 Two analog inputs  
 Small dimensions


**Specification**

|                      |                           |
|----------------------|---------------------------|
| Diode current        | 0 ... 20 A                |
| Diode current pulsed | 0 ... 40 A (short pulses) |
| Diode voltage        | 0 ... 24 V                |
| Output power         | 480 W max                 |
| Power dissipation    | 30 W max allowed          |
| Supply voltage       | 1 V ... 25 V              |
| Supply current       | 20 A max                  |
| Supply voltage*      | 3 V ... 6 V               |
| Rise time            | 16 ns                     |
| Fall time            | 9 ns                      |
| Frequency            | 20 MHz 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              | 250 g           |
| Ordering Code       | 10100340        |

\* for internal electronics

**Description**

The fast diode current modulator FM 20-25 is a linear modulator for driving arbitrary current waveforms into high voltage, high power laser diodes. Current waveforms can be CW, pulsed, modulated or mixed with frequencies up to 20 MHz and currents up to 20 A for CW and 40 A for pulsed waveforms. The FM 20-25 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. The FM 20-25 has two analogue inputs for the current setpoint, a high frequency input (50 Ohm input impedance) with a bandwidth of 20 MHz and a low frequency input with a bandwidth of 100 KHz. Both inputs cover the full current range. 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.

For detailed information see operating manual or visit our website.

