

### Features

High speed current source for laser diodes and LEDs  
 CW, pulsed, modulated or mixed current waveforms  
 Very short rise and fall time  
 Excellent dynamic performance  
 Two analogue inputs  
 Trigger input  
 Onboard pulse generator  
 LEDs for status indication  
 Fast current monitor output  
 RS 232 interface for configuration, controlling and monitoring  
 Closed-loop-adaptation adjustable via software with Graphical User Interface (GUI)



### Specification

|                                   |                                                  |
|-----------------------------------|--------------------------------------------------|
| Diode current                     | 0 ... 5 A                                        |
| Diode voltage                     | 0 ... 44 V                                       |
| Supply voltage                    | 10 V ... 48 V, max. 50 V                         |
| Rise time                         | <10 ns (load dependent)                          |
| Fall time                         | <10 ns (load dependent)                          |
| Modulation (input 50 $\Omega$ )   | 0 ... 50 MHz max                                 |
| Modulation (input 10 k $\Omega$ ) | 0 ... 100 kHz max                                |
| Onboard pulse generator           | 1 Hz ... 5 MHz, 100 ns ... 1 s in steps of 10 ns |

### Inputs

|                         |                                                                        |
|-------------------------|------------------------------------------------------------------------|
| Diode current set point | 0 ... 1000 mV (input 50 $\Omega$ ) or 0 ... 5 V (input 10 k $\Omega$ ) |
| Trigger, Enable, Reset  | TTL 5 V                                                                |

### Outputs

|                       |                                      |
|-----------------------|--------------------------------------|
| Diode current monitor | 0 ... 250 mV (into 50 $\Omega$ )     |
| Temperature           | 0 ... 4 V corresponds to 0 ... 80 °C |
| Ready, Error          | TTL 5 V                              |

### General specifications

|                     |                       |
|---------------------|-----------------------|
| Ambient temperature | 0 ... +45 °C          |
| Dimensions          | 95 mm x 60 mm x 30 mm |
| Weight              | 150 g                 |

### Ordering Codes

|                           |          |
|---------------------------|----------|
| VFS 05-25-U               | 10100549 |
| USB Cable USB C to SubD9M | 11002352 |
| USB Cable USB C to USB A  | 11002351 |
| MPC GUI software for PC   | 31000057 |

### Description

The VFS 05-50-R is a linear current modulator for laser diodes and LEDs. Adaptation to the internal capacitive and inductive parasitics of the diode can be easily done by the customer using the MPC GUI software. To achieve maximum performance, diodes must be connected via low inductance metal sheets (striplines) which are optionally available. Modulation can be accomplished by external analog signals (analog inputs), external digital signal (trigger input) or by onboard pulse generator (gate input). The onboard pulse generator is synchronized to the external trigger signal with no missing or clipping pulses.