BDL-SMN Picosecond / CW Diode Laser Family

Free-beam output or single-mode fibre coupling
Beam-profile correction optics
Wavelengths 375 nm, 405 nm, 445 nm, 473 nm, 488 nm, 515 nm, 640 nm, 685 nm, 785 nm
Pulsed and CW operation
Pulse width down to 40 ps
Repetition rate 20-50-80 MHz
Low skew trigger output
Cooled laser diode
Internal power regulation loop
Linear response to power control signal
Fast on / off / multiplexing capability
Synchronisation input
Complete electronics integrated in laser housing
Simple +12V wall-mounted power supply

Designed and manufactured by

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Optical
Repetition Rate
Wavelength, nm
Pulse width (FWHM, at medium power)
Pulse width (FWHM, at maximum power)
Peak Power
Power control range
(Average CW equivalent power, adjustable via external power control signal)
Diameter of laser beam
Polarisation
Fibre coupling
Coupling efficiency into single-mode fibre, typically
Stability of Repetition Rate
Pulse-to-Pulse jitter
Reaction time to ‘Laser on’ signal (pulsed mode)
Reaction time to ‘Laser on’ signal (CW mode)
Power and pulse shape stabilisation after switch-on

Trigger Output
Pulse Amplitude
Pulse Width
Output Impedance
Connector
Delay from Trigger to Optical Pulse
Jitter between Trigger and Optical Pulse

Synchronisation Input
Amplitude
Duty cycle
Frequency
Switching from internal clock to sync input

Control Inputs
Frequency, 20 MHz
Frequency, 50 MHz
Frequency, 80 MHz
CW operation
LASER ON / OFF
External Power Control

Power Supply
Power Supply Voltage
Power Supply Current
Power Adapter

Mechanical Data
Dimensions
Mounting Thread

Maximum Values
Power Supply Voltage
Voltage at Digital Control Inputs
Voltage at Ext. Bias Input
Ambient Temperature

1) Typical values, sample tested. Depends on pulse width and selected power.
2) Depends on wavelength version.
3) All inputs have 10 kΩ pull-up resistors. Open input is equivalent to logic 'high'.
4) Dependent on ambient temperature. Cooling current changes due to temperature regulation of laser diode.
5) Operation below 13 °C may result in extended warm-up time.