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## AMP-BLD-6560-PS SHORT PULSE LASER DRIVER

PICOSECOND PULSE GENERATION

LIDAR

APPLICATIONS

SENSING

SEED LASERS

#### **KEY** FEATURES

- Output current up to 2 A
- Compliance voltage up to 3 V
- Extra short 50 ps pulse width
- Repetition rate up to 10 MHz
- Computer interface
- External trigger option
- On-board TEC controller
- On-board pulse generator
- LabVIEW compatible
- 5 VDC input power
- RS232/USB/CAN interfaces
- Integrated heatsink
- Compact size 65 mm x 60 mm x 14 mm



#### SPECIFICATIONS

PARAMETER	MIN	TYP	MAX	UNITS
INPUT				
Voltage	4.8	5	5.2	VDC
Current	-	-	0.6	А
External trigger	2.2		-	NDC
(50 $\Omega$ impedance)	3.3	-	5	VDC
OUTPUT				
Current	-	-	2000	mA
Compliance	1		2	V
voltage	I	-	5	V
Pulse width*	40	50	150	ps
Repetition rate	0.001	-	10	MHz
Rise time*	40	50	60	ps
Fall time*	40	50	100	ps
TEC current	-1.5	-	1.5	А
TEC set temperature	15	25	45	°C
TEC voltage	1	-	4	V
Trigger	2	3	3.3	V
TEMPERATURE				
Operating	+10	-	+50	°C
Storage	-20	-	+70	°C
Humidity,	_	_	95	0/6
non-condensing			25	70
CONTROL INTERFACES				
Interface options	CAN, USB, RS232			
CONNECTORS				
Power	2-pin terminal block			
External trigger	SMA Jack (73251 - 1350			1350
		Mo	olex)	
Interface connectors	US	USB: Mini-USB, Type B		
	(1734035-1 TE connectivity)			
	RS232: D-SUB9			
	CAN: 2-pin terminal block			
MECHANICAL				
Size	65 mm x 60 mm x 14 mm			
Weigth	< 160 g	g		

\* Output performance depends upon laser diode characteristics. Performance cannot be guaranteed for all laser types. See optical output waveforms.

### OVERVIEW, SPECIFICATIONS

#### DESCRIPTION

The AMP-BLD-6560-PS is a compact short pulse seed laser diode driver for powering 14-pin butterfly laser diode modules for applications which require pulse width about 50 ps. The pulse repetition frequency can be varied from 1 kHz to 10 MHz. The driver circuitry operates from a single 5 VDC power source. All other needed voltages are generated on the board by high efficiency switching power supplies. The driver supplies a bidirectional proportional-integral-derivative (PID) thermoelectric cooler controller (TEC) with current capability of 1.5 A and voltage capability of 4 V.

The main parameters of AMP-BLD-6560-PS (power, repetition frequency, temperature set point) are controlled by computer interface.

The AMP-BLD-6560-PS has an external TTL-compatible input for repetition rate control from single shot up to 10 MHz.

The AMP-BLD-6560-PS have an external output for synchronization with each optical output.

PCB is attached to a metal heatsink for good thermal management (not shown in picture).



#### PERFORMANCE, DIMENSIONS

#### DIMENSIONS AND CONNECTORS



#### COMPATIBLE LASER PINOUT

PIN	Function		
1	TEC +		
2	Thermistor		
3	N/C		
4	N/C		
5	Thermistor		
6	N/C		
7	N/C		
8	N/C		
9	N/C		
10	LD anode		
11	LD catchode		
12	N/C		
13	Case ground		
14	TEC -		

#### OPTICAL OUTPUT WAVEFORMS

Test laser diode Innolume DFB-1064-PM-50-PM



#### Test laser diode Innolume DFB-1064-PM-50-PM



#### ORDERING INFORMATION



Example: AMP - BLD - 6560 - PS - USB

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