

PLDxK-CH Series Chassis-Mount Laser Driver



FEATURES

- Three models: 5, 10, 12.5 A output current
- The 5 A and 10 A drivers operate from a single 5 VDC power supply; 12.5 A driver requires two separate power supplies
- Chassis-mount module
- Separate laser diode supply input allows for compliance voltage up to 28 V
- Manual Adjustments
 - » Current Setpoint and Current Limit
 - » Photodiode Sensitivity
- Remote adjustments for OEM applications
 - » Current setpoint and modulation input
 - » Output Enable/Disable
 - » Monitors for output current, photodiode current, output current limit, and limit status
- Safety features protect the laser diode
 - » CDRH Output On delay and slow start
 - » Mechanical shorting relay on output
 - » Latching current limit
- PCB-mount versions also available

TIME-TESTED RELIABILITY

The PLDxK-CH Series Laser Diode Drivers deliver the reliability and performance you expect from a Wavelength Electronics laser driver in a compact and easy-to-integrate chassis-mount package. Tens of thousands of PLDxK-CH drivers are deployed in laser systems around the world, proving beyond doubt the reliability and stability of the design.

A WIDE RANGE OF APPLICATIONS

PLDxK-CH Series drivers are found in industrial cutting and welding applications, manufacturing vision systems, photovoltaic quantum efficiency testers, fiber aligners, and laser diode LIV testers.

VERSATILE AND EASY TO USE

The PLD5K-CH and PLD10K-CH drivers operate from a single 5 V power supply. The drivers can be configured to use a separate power supply in order to drive lasers up to 28 V compliance.

The PLD12.5K-CH requires separate power supplies—one for the driver and one for the laser—which allows you to choose the best low-noise, high-power supplies for your application.

PRACTICAL FEATURES FOR REAL-WORLD CONDITIONS

Built-in features make your product more robust to real-world operating conditions and minimize your electronics overhead:

- Remote enable can be tied to a safety interlock and a temperature controller, such as Wavelength's PTC Series.
- Built-in Constant Current and Constant Power operating modes minimize your electronics overhead.
- Analog setpoint input gives you remote external control of the laser current and modulation.
- Latching current limit safely switches off output if current limit is reached.

When used with Wavelength's temperature controllers, such as the PTCxK-CH Series, these laser drivers provide stable and reliable performance that sets your system apart from your competitors' and keeps your customers satisfied.

COUNT ON WAVELENGTH ELECTRONICS

Our experienced Sales Engineers are available to help you decide which laser driver is right for your application. Call today or visit our website to find out how Wavelength Electronics can help you to be successful.

PLDxK-CH Series

Chassis-Mount Laser Driver

PLDXK-CH LASER DRIVER SPECIFICATIONS

DRIVER OUTPUT CURRENT	PLD5K	PLD10K	PLD12.5K	UNIT	NOTE
Max Output Current	5	10	12.5	A	
Short Term Stability, 1 hr	< 100	< 200	< 200	ppm	Constant Current mode
Short Term Stability, 1 hr	< 0.02	< 0.05	< 0.05	%	Constant Power mode
Compliance Voltage, 5 VDC supply	< 3			V	
Compliance Voltage, 30 VDC supply	< 28			V	
Temperature Coefficient	< 200			ppm / °C	
Photodiode feedback range, Low	15 - 500			µA	
Photodiode feedback range, High	50 - 5000			µA	
EXTERNAL MODULATION					
Modulation Bandwidth, 3 dB	120	80	50	kHz	Constant Current mode
Rise / Fall Time	4.8 / 9.4	5.9 / 10	8 / 9	µsec	
90% Depth of Modulation	70	70	40	kHz	
POWER SUPPLY REQUIREMENTS					
Supply Voltage for Electronics	5			VDC	PLD5K-CH and PLD10K-CH can be driven from a single supply, or use a second supply for high-compliance lasers. PLD12.5K-CH requires two power supplies.
Supply Voltage for Laser	3 – 30			VDC	
Quiescent current	150	250	250	mA	
Max Internal Power Dissipation	40	40	40	W	
ABSOLUTE MAXIMUM RATINGS					
	VALUE			UNIT	NOTE
Electronics Supply Voltage	5.5			VDC	Max input voltage for high-compliance lasers is 30 VDC
Laser Power Supply Voltage	30			VDC	
Case Operating Temperature	0 to 50			°C	
Case Storage Temperature	-55 to 125			°C	
Weight	3.2			oz	89.6 g
Size	1.12 x 2.35 x 2.9			inches	28.5 x 59.7 x 73.7 mm

Additional specifications are available in the product datasheet; download at www.teamWavelength.com/products/product.asp?part=157

ORDERING INFORMATION

PART NUMBER	DESCRIPTION
PLD5K-CH	5 A Laser Driver
PLD10K-CH	10 A Laser Driver
PLD12.5K-CH	12.5 A Laser Driver
WCB308	Power / LD Cable Set

Free, effective, and responsive technical support is available to simplify integration of Wavelength products into your OEM design. Standard product can be modified to meet your unique application requirements.

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