

LDP 201 LASER DIODE POWER SUPPLY

The model LDP 201 will operate a laser diode at constant current up to 150mA. If the laser diode includes a photodiode, then the LDP 201 will operate the laser diode in a constant optical power mode by regulating the photodiode current up to 750uA.

Terminal pins allow the user to monitor the laser diode current and the photodiode current. Protection circuitry in the LDP 201 will safeguard the laser diode from turn-on and turn-off transients.

Figures 1 and 2 show how to connect the LDP 201 to the laser diode. The LDP 201 does not have an on-off switch. When external power (battery or DC power supply) is connected, the LDP 201 will be on. For this reason the laser diode must be connected before connecting the power, and the power must be disconnected before disconnecting the laser diode.

The LDP 201 can operate in the constant current or constant optical power mode. The supply automatically switches modes as necessary so that neither the current nor the power ever exceeds the set values. If the current and power controls have been previously set for the laser diode, then the current and power will ramp up to the set values when the power is connected. If the controls have not been set, then they should be set to zero (fully counterclockwise) before connecting power.

When either control is set to zero, the laser diode will not be on. Therefore, one control will have to be set to some non-zero value, then the other control can be slowly increased while monitoring the laser diode performance. To operate in constant current mode, set the power control to maximum and slowly increase the current control unit until the laser diode current is set. To operate in constant power mode, set the current control to maximum and slowly increase the power control until the laser diode power is set.

The current monitor on the LDP 201 has an output of 1 millivolt per milliamp of laser diode current. However, the power monitor does not directly measure the laser diode optical power. Instead it measures the photodiode current, with an output of 1 millivolt per microamp of photodiode current. The laser diode manufacturer may specify the photodiode current at the recommended power (such as 450uA at 3mW) or the photodiode responsivity (such as 200uA/mW). If the manufacturer does not specify this information, then the user will have to use an optical power meter to measure the laser diode power while the current or power control is adjusted.

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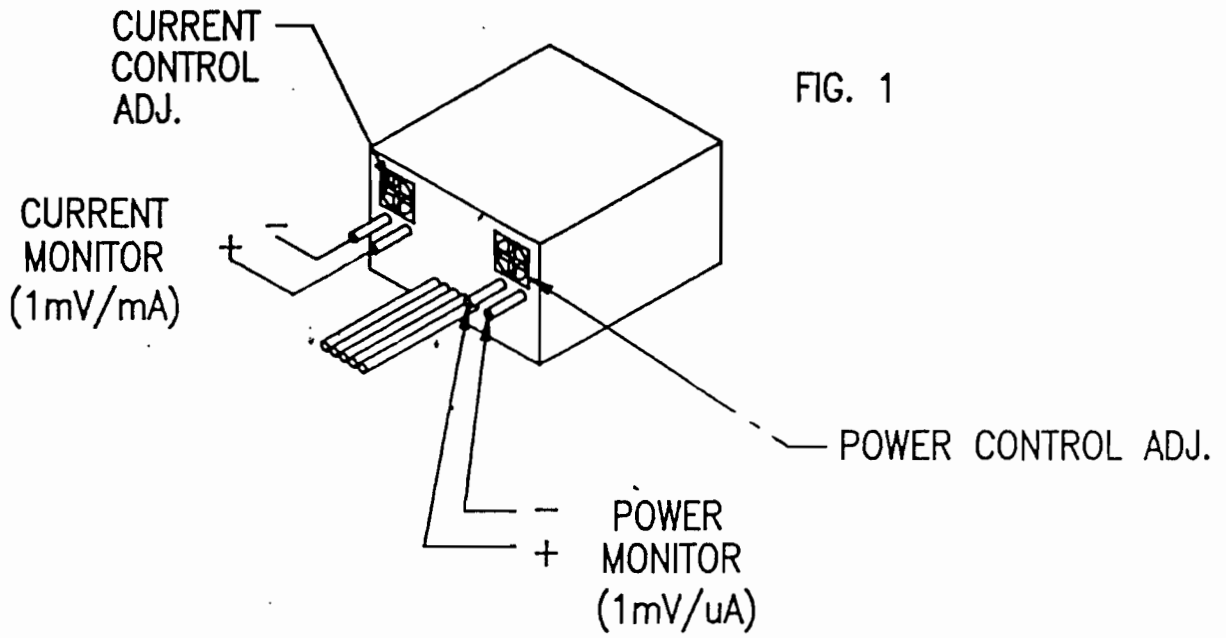
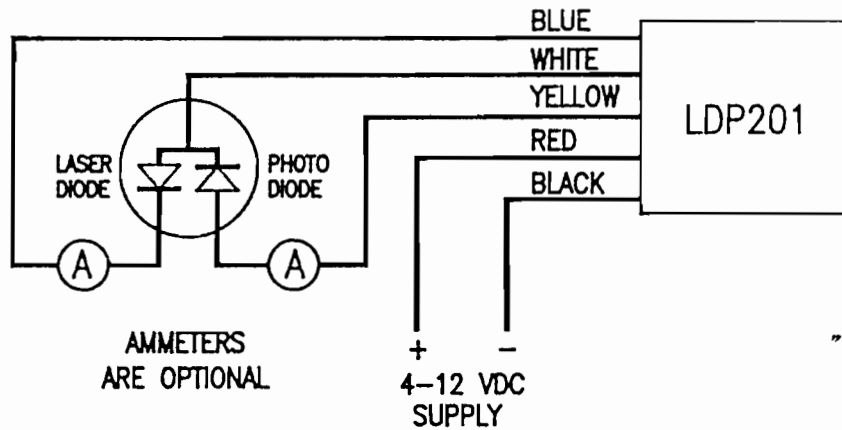
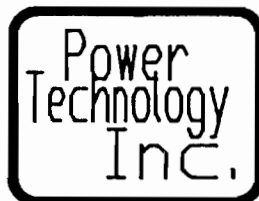


FIG-2



MATERIAL

FINISH



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UNLESS OTHERWISE STATED TOLERANCES ARE AS FOLLOWS: DO NOT SCALE THIS DRAWING.

DRAWN DATE
 KC 02-23-90
 CHECKED
 PROJ. ENGR

TITLE

LDP201
 INFORMATION DWG.

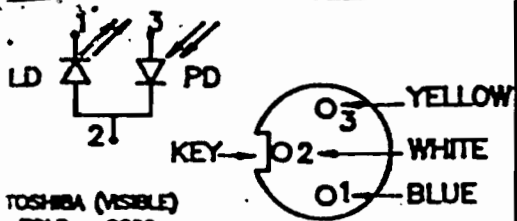
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ENGR APPROVED

SC 1:1 NO.

0-0206-0105 RV A SZ A

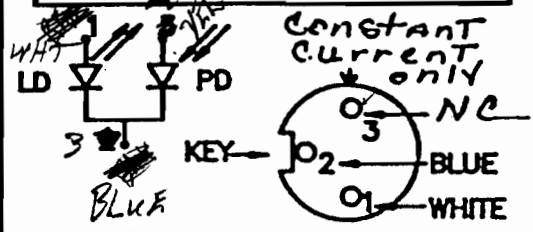
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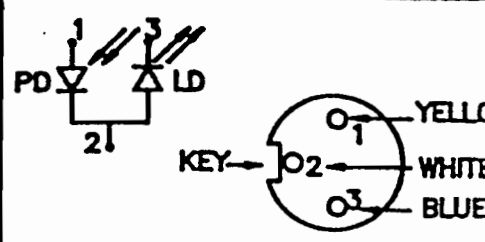
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SPECTRA DIODE LABS (INFRARED)
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 SOL 5401
 SOL 5410
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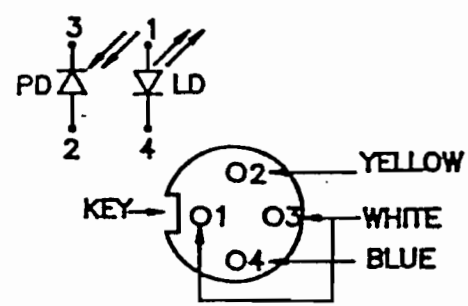
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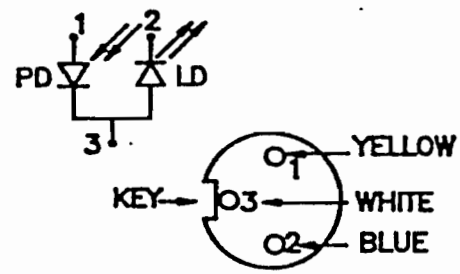
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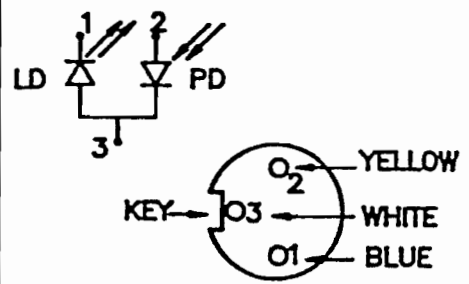
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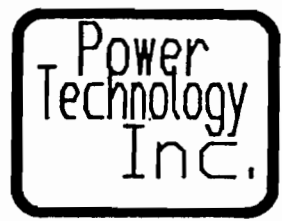
PHILIPS
 CQL60 (INFRARED)



NEC
 NDL 3200 (VISIBLE)



SONY
 SLD 151 (VISIBLE)



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JTE: THERE IS NO STANDARD FOR PINOUT. NUMBERS MAY COUNT CLOCKWISE OR COUNTERCLOCKWISE. INFORMATION TAKEN FROM MANUFACTURERS DATA SHEETS. BOTTOM VIEW OF LASERS. 1 DOES NOT GUARANTEE THE CORRECTNESS OF THIS INFORMATION.

REVISIONS				
REV.	DATE	DRAWN	APPVD	DESCRIPTION

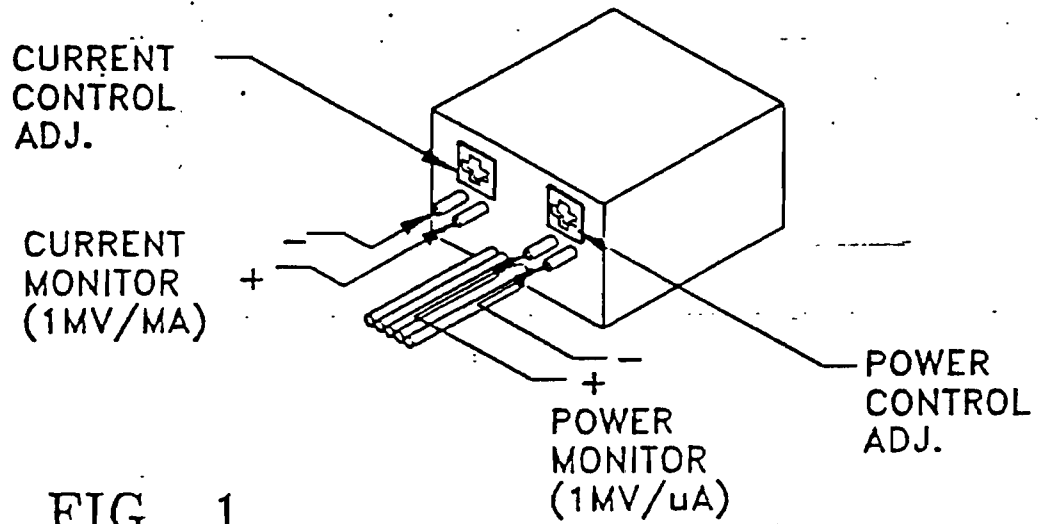


FIG. 1

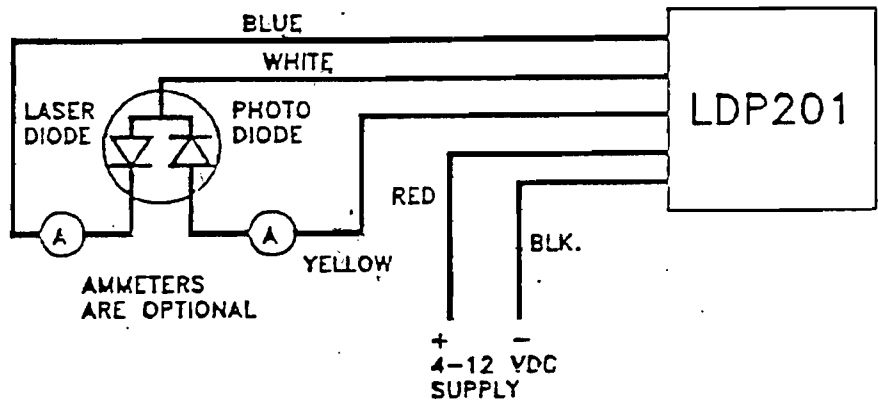



FIG. 2

MATERIAL		Power Technology Incorporated Address correspondence to: Box 9769 Little Rock, Arkansas Plant Location: 7925 Mabelvale Cutoff Mabelvale Arkansas 501-568-1995 TVX910-722-7313		
FINISH		TITLE INFORMATION DWG. LDP201		
DO NOT SCALE THIS DWG UNLESS OTHERWISE SPECIFIED TOLERANCES SHALL BE AS FOLLOWS DECIMAL .XX FRACTIONAL .XXX ANGULAR MATERIAL AND HOLE SIZES NOT INCLUDED		DRAWN DATE KC 2-23-90	SCALE SIZE NUMBER A 206-105	
		CHECKED ENGR		
APPROVED		SCALE SIZE NUMBER A 206-105		