

6-2D-LD85-028_Rev.02

AlGaAs Infrared Laser Diode

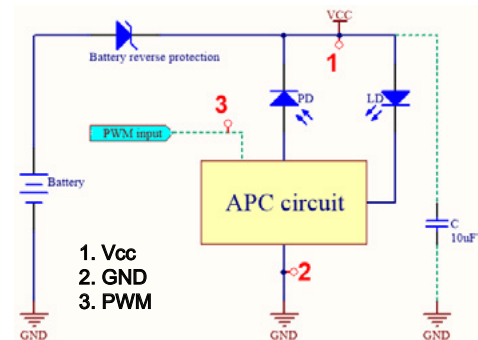
ADL-85051SM

6-2D-LD85-028_Rev.02

850nm 5mW LD

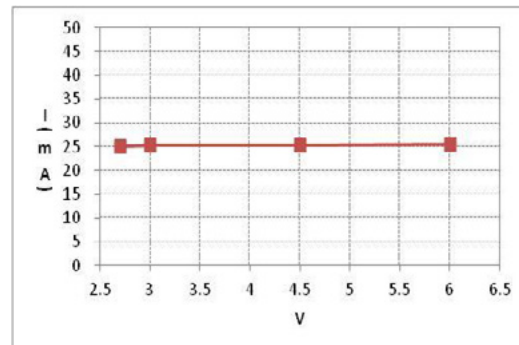
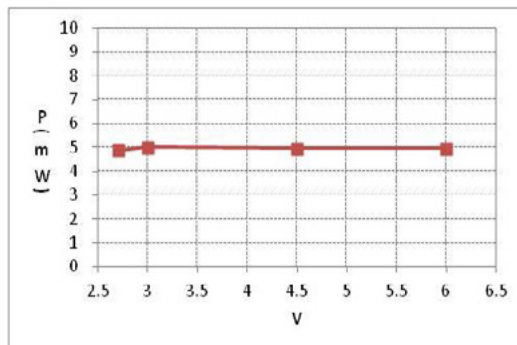
Block Diagram:

1. Traditional LD needs to connect an external APC circuit board for the constant power operation.
2. **ADL-85051SM** has an APC IC in the **TO-3.3mm** package, and APC circuit board can keep the same optical power.
3. Add capacitance is recommended for stabilizing the PWM control.
4. Battery reverse protection is recommended for protecting the APC Circuit.
5. If the setting power is below 50% of the target power, it is recommended to add >1uF capacitor between Vcc and Gnd.

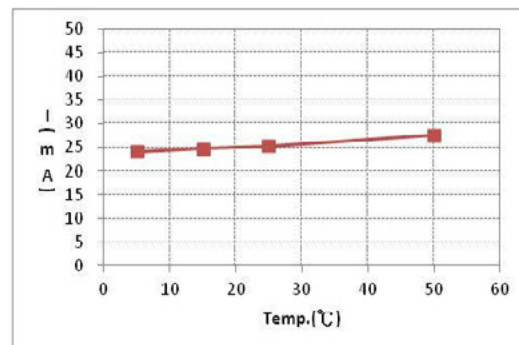
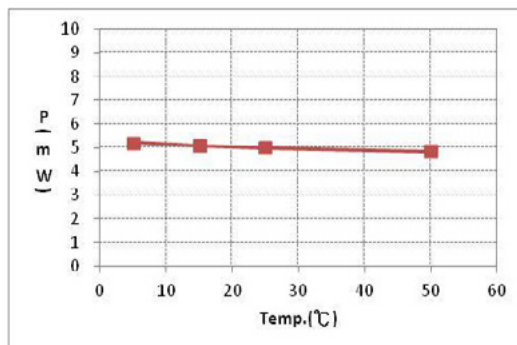


Product Characteristic Curve:

1. Vcc vs. Po(mW) & Icc(mA)



2. Temp. vs. Po(mW) & Icc(mA)



For reference only. Contents above are subject to change without notice.

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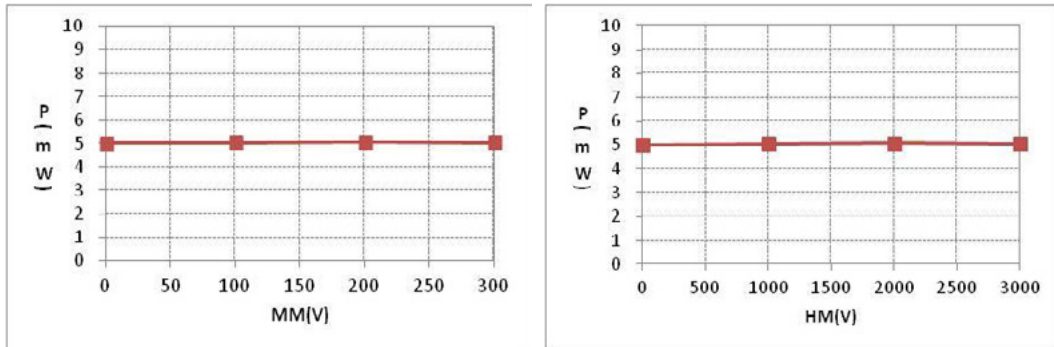
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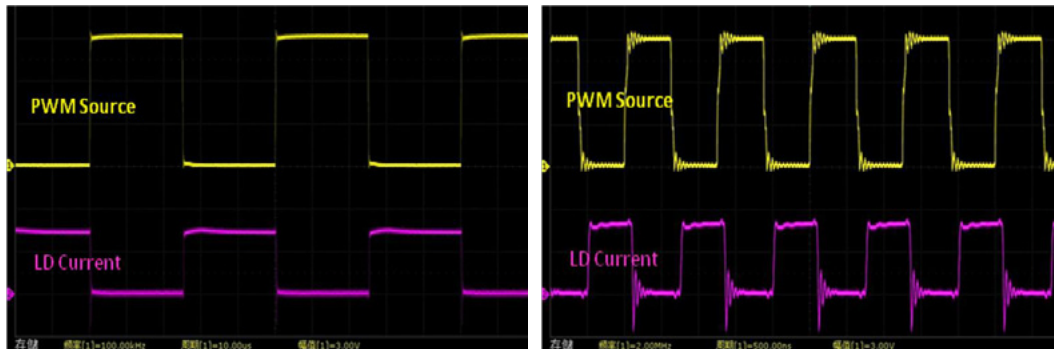
3. ESD-V(HM&MM) vs. Po(mW)



4. PWM-Freq(100kHz ,2000kHz) vs. Icc waveform

(1) 100KHz

(2) 2MHz



Special Note:

1. The laser diode cannot be replaced directly when the power supply is started normally.
2. It is recommended to use soft-start circuit before driving the laser diode.
3. Electrical specifications do not apply when operating the device outside of its rated operating conditions. Absolute maximum ratings indicate limits beyond which damage may occur, please avoid occur voltage surge when using.
4. The laser products start-up times within 100us.

● Precautions

- * To protect laser from overdriving condition, setting VR to maximum value before you turn on Vcc can minimized the laser output power.
- * Do not operate the device above the maximum rating condition, even momentarily. It may cause unexpected permanent damage to the device.
- * Semiconductor laser device is very sensitive to electrostatic discharge. High voltage spike current may change the characteristics of the device, or malfunction at any time during its service period. Therefore, proper measures for preventing electrostatic discharge are strongly recommended.
- * To obtain a stable characteristic and good reliability, the effective heat sink is necessary. So it is recommended that always apply proper heat sink before the device is operating.
- * Do not look into the laser beam directly by bare eyes. The laser beam may cause severe damage to human eyes.

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