

Laser diode gets hot after being powered on



Overview

A laser diode generates some heat at the junction points with a long time of electric current like general semiconductors. It starts strong but then the power fades away ~5 secs later gradually to a low power "mode". Also the diode gets extremely hot. What could be the reasons and how to fix the problem ?

What kind of heat sinking are you using?

What kind of heat sinking are you using?

Well there's your issue. In a short-time scale, an increased temperature generally reduces the gain, increases the wavelength and the. As the temperature of the laser diode rises, its maximum output power and power dissipation decreases and its operating range is reduced. This will be like a one way street or road. They're often used to protect other parts of a circuit. A slight voltage drift or ripple, harmless to other components, can instantly push the current past its absolute maximum rating.



Article Content

Laser diode optical output dependence on junction temperature for

Build-up of waste heat in the laser diode leads to an increase in diode junction temperature. If laser diode junction temperature is not properly controlled, the optical power level out

Related Video Reference

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