

- High power CW operation- 500 milliwatts
- High brightness- 150 μm aperture
- Wavelength 650 ± 3 nm standard

The LDX-2515-650 laser diode is a high power, multimode, visible red laser diode. These AlGaInP broad-area, gain-guided lasers are produced using MOCVD growth which offers high efficiency, low threshold current, and excellent reliability. The low wavelength makes these diodes suitable for display applications, and the 650 nm wavelength is also useful in photodynamic therapy.

Because these devices are more sensitive to operating temperature than longer wavelength devices, it is essential that the lasers be operated with adequate cooling. An operating temperature of 15 °C is recommended; the efficiency and lifetime of the devices will be improved with even lower operating temperatures.

These devices are available in a High-Heat-Load package which has an integral thermoelectric cooler, thermistor, and monitor photodiode. They are also available on an open heatsink package, as well as other package options; please inquire.

Device ratings:

Parameter	Min.	Typ.	Max.	Units
Output Power @ 15 °C		500	600	mW
Threshold Current	800	1150	1400	mA
Operating Current at Rated Power	1400	1700	2000	mA
Operating Temperature	-10		15	°C

Device characteristics at 15°C and at 500 mW output power:

Parameter	Min.	Typ.	Max.	Units
Forward Voltage	1.8	2.1	2.4	Volts
Wavelength	647	650	653	nm
Spectral Width		1.5	3	nm (FWHM)
Divergence- Parallel		7	9	degrees (FWHM)
Divergence- perpendicular	36	38	40	degrees (FWHM)
Polarization Ratio		>50:1		
Aperture Size		150 x 1		μm
Slope Efficiency	0.7	0.9	1.1	mW/mA