

- High Power CW Operation- 150 milliwatts
- Highly Visible to the Eye.
- Wavelength 640 ±5 nm Standard

The LDX-2106-640 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 640 nm wavelength of these devices is over five times more visible to the eye than standard 670 nm laser diodes.

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 TO-3 package which has an integral thermoelectric cooler, thermistor, and monitor photodiode. They are also available on an open heatsink package, 9.0mm window package, as well as other package options; please inquire.

Device ratings:

Parameter	Min.	Typ.	Max.	Units
Output Power @ 15 °C		150	160	mW
Threshold Current	300	450	600	mA
Operating Current at Rated Power	500	700	900	mA
Operating Temperature	-20	15	20	°C

Device characteristics at 15°C and at 150 mW output power:

Parameter	Min.	Typ.	Max.	Units
Forward Voltage	1.8	2.2	2.6	Volts
Wavelength	635	640	645	nm
Spectral Width		1	3	nm (FWHM)
Divergence- Parallel		7	9	degrees (FWHM)
Divergence- perpendicular	32	42	50	degrees (FWHM)
Polarization Ratio		>50:1		
Aperture Size		60 x 1		µm
Slope Efficiency	0.50	0.7	1.0	mW/mA