

690 nm 10 Watt CW Diode Array

The LDX-4119-690 is a high power CW monolithic laser diode array. The InAlGaP epitaxial design offers high efficiency, and proven reliability.

Standard packaging is a 20 x 20 x 6 mm copper heatsink. Because of the temperature sensitive nature of this type of laser, they must be aggressively cooled for proper operation. To achieve the maximum ratings, the temperature of the laser heatsink must be held near 15°C with TEC or chilled water cooling.

Other laser wavelengths and stripe configurations are available from 630 to 1060 nm; please inquire.

General Specifications:

Parameter	Min.	Typ.	Max.	Units
CW Output Power @ 15 °C	10		11	watts
Array Length		1		cm
Emitter Dimensions		150 x 1		µm
Emitter Spacing		500		µm
Number of Emitters		19		

Environmental Specifications:

Parameter	Min.	Typ.	Max.	Units
Laser Operating Temperature	0	15	20	°C
Storage Temperature	-20		60	°C
Humidity (non-condensing)	0%		95%	

Device characteristics at 15 °C and at 10 watts output power:

Parameter	Min.	Typ.	Max.	Units
Operating Current	24	30	36	amps
Threshold Current	14	18	22	amps
Forward Voltage	1.9	2.2	2.5	Volts
Slope Efficiency	0.6	0.9	1.1	mW/mA
Wavelength	685	690	695	nm
Spectral Width		3	6	nm (FWHM)
Wavelength Temperature Tuning		0.25		nm/°C
Divergence- Parallel	5	7	9	degrees (FWHM)
Divergence- Perpendicular	36	40	44	degrees (FWHM)
Polarization Ratio		>50:1		