



High Power Single Mode 300mW, 7xx - 9xx nm



The SM300 series of devices represents the latest breakthrough in single mode device technology. Combining a long cavity, low confinement waveguide with a novel device structure yields a device with very high power capabilities, narrow spectral width and long operational lifetimes\*.

**Ideal Applications include:**

- Optical data storage
- Image recording
- Spectral analysis
- Printing
- Point-to-point
- Free-space communication
- Frequency doubling
- Gesture imaging

As an index guided, Fabry-Perot laser, series SM3000 can be fabricated in many "application specific" wavelengths from 785-980 nm. The unique device design provides high power, kink free operation across a spectrum of wavelengths with a form factor that can accommodate a variety of package configurations. Currently, the product is available in a 9mm package with a nominal wavelength of 785 nm.

**Key Features:**

- 300mW kink free power
- Narrow Spectral Width
- High Efficiency
- Low Astigmatism
- High Reliability\*
- Compact form factor

**Specifications**

	Min	Typical Value	Max	Units
CW Optical Power (Kink free)		300		mW
Source Size (Chip)		3		um
Operating Current (Imax)		425	525	mA
Threshold Current (Ith)		90		mA
Slope Efficiency (SE)		0.95		W/A
Operating Voltage (Vmax)		2.1	2.3	V
Series Resistance (Rs)		<1.0		Ohm
Wavelength **	778	785	792	nm
Spectral Width		<0.2	2.0	nm
Parallel Divergence		8.0		deg FWHM
Pependicular Divergence		18.0		deg FWHM
Lifetime *	5000			Hrs

\*This is a preliminary datasheet for product launch. Complete product qualification is on-going and expected to be completed in Spring of 2012.

\*\* Alternative wavelengths are available from 785- 980 with wavelength tolerances of +-3 and higher. Custom wavelength development will incur NRE charges and require 4-6 month lead times.





High Power Single Mode 300mW, 7xx - 9xx nm

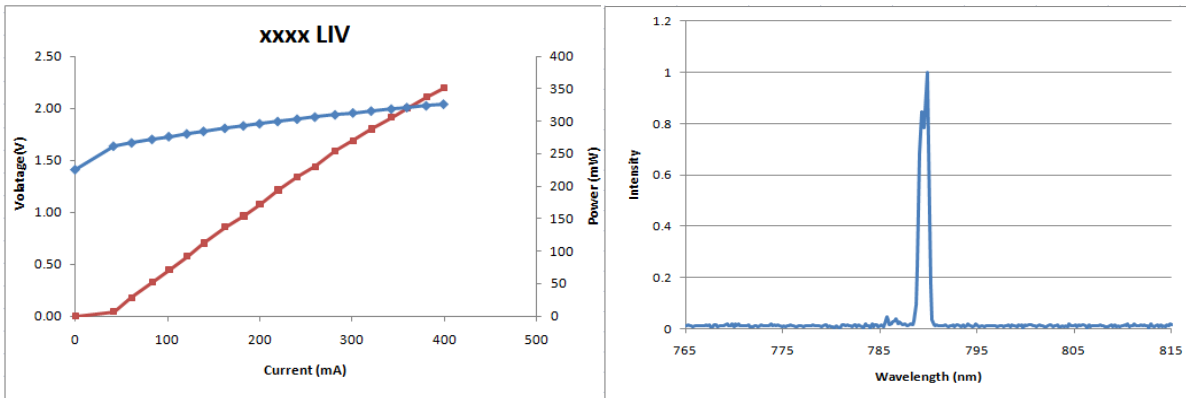


The SM300 series of devices represents the latest breakthrough in single mode device technology. Combining a long cavity, low confinement wave guide with a novel device structure yields a device with very high power capabilities, narrow spectral width and long operational lifetimes\*.

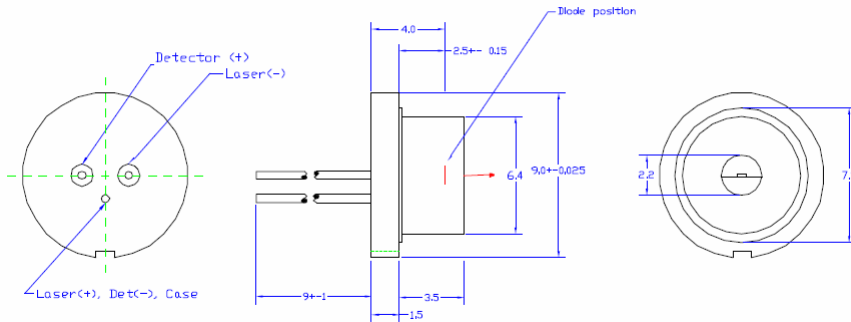
**Ideal Applications include:**

- Optical data storage
- Image recording
- Spectral analysis
- Printing
- Point-to-point
- Free-space communication
- Frequency doubling
- Gesture imaging

Electrical Specifications:



Mechanical Specifications:



Product labeling and Warnings:

**Laser Parameters**

Max Power : 300 mWatts  
Wavelength : 785 nm  
LD Operating Current: 425mA dc


**LASER LIGHT**  
S O L U T I O N S


Date of Manufacture: dd-mm-yy  
Module SN: SM300-785010-30001

**Manufactured By:**  
Laser Light Solutions  
Somerset, NJ, 08873  
732.979.2143

This Laser diode system is classified as a Class 4 laser product. All Laser safety requirements and operator training should be in place in accordance with CFR Part 1040.10 and IEC60825-1 prior to operating the unit. DO NOT Expose the eye or skin to direct and/or reflected laser light.

LASER RADIATION  
AVOID EYE OR SKIN EXPOSURE TO  
DIRECT OR SCATTERED RADIATION  
CLASS 4 LASER PRODUCT

  
LASER RADIATION

  
Made in the U.S.A

Conforms to CFR Part 1040.10 and IEC 60825-1

