

# 852 nm / 150mW Laser Diode

- **SDL-5421-G1 Laser Diode**
- **852 nm±4nm**
- **Single-mode**
- **Diffraction-limited Beam**
- **TEM<sub>00</sub> Single Traverse Mode**
- **3-pin Package**



## Absolute Maximum Ratings (case temperature = 25°C)

Parameter	Symbol	Minimum	Maximum	Unit
Optical Output Power	P <sub>0</sub>	-	150	mW
LD Reverse Voltage	V <sub>R</sub> (LD)	-	3	V
PD Reverse Voltage	V <sub>R</sub> (PD)	-	25	V
Operating Temperature	T <sub>opr</sub>	-20	+50	°C
Storage Temperature	T <sub>sta</sub>	-40	+80	°C
Lead Soldering Temperature	T <sub>is</sub>		+250	°C

LD = Laser Diode  
PD = Photodiode

## Optical and Electrical Characteristics (case temperature = 25°C)

Parameter	Symbol	Minimum	Typical	Maximum	Unit	Test Conditions
Threshold Current	I <sub>th</sub>	-	35	45	mA	
Operating Current	I <sub>op</sub>	-	210	230	mA	P <sub>0</sub> = 150mW
Operating Voltage	V <sub>op</sub>	-	2.3	2.8	V	P <sub>0</sub> = 150mW
Optical Output Power	T <sub>opr</sub>		-	150	mW	CW, kink-free
Slope Efficiency	η	0.75	0.85	-	mW/mA	P <sub>0</sub> = 150mW
Wavelength	λ	848	852	856	nm	P <sub>0</sub> = 150mW
Beam Divergence	θ <sub>//</sub>	-	9	-	Deg	P <sub>0</sub> = 150mW, FWHM
Spectral Width	Δλ	-	3	5	nm	
Series Resistance	R <sub>s</sub>	-	4	6	ohm	
Monitor Photodiode Operating Voltage	V <sub>op</sub>		10		mA	P <sub>0</sub> = 150mW

Specifications are subject to change without notice

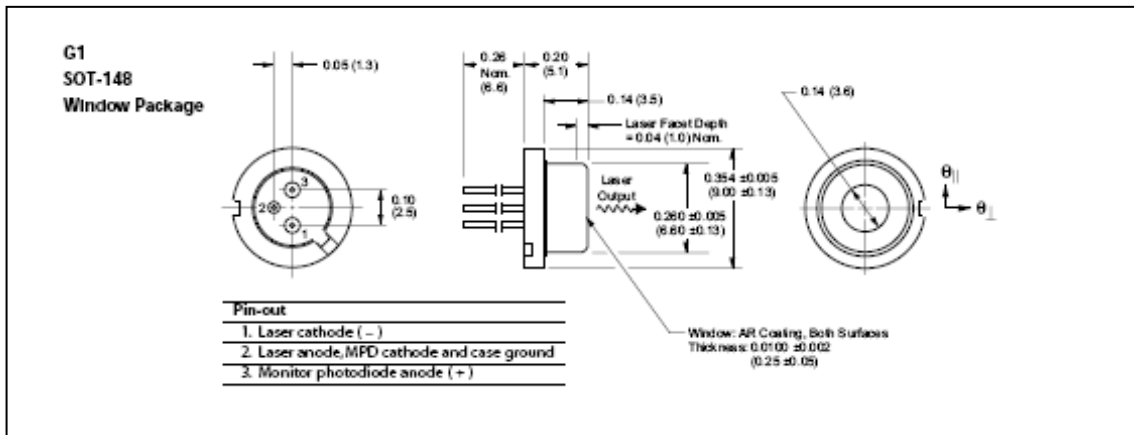


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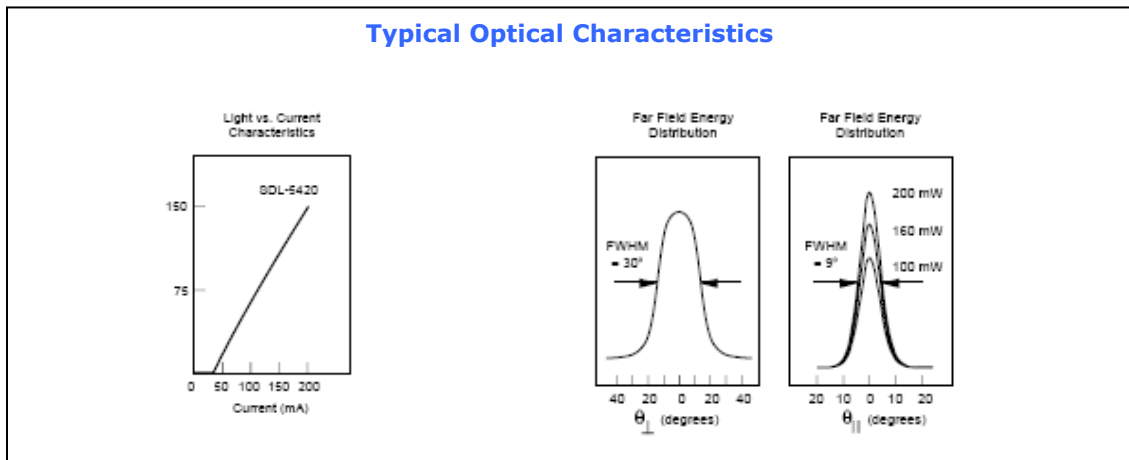
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## Mechanical Package and Layout (9mm package)



## Typical Optical Characteristics



### CAUTION

1. Device degradation accelerates with increased temperature. A careful attention to minimize the case temperature is highly recommended.
2. A proper heatsink for the laser diode will greatly enhance laser life.
3. ESD is the primary cause of unexpected laser diode failure.
4. Operating the laser diode outside of its maximum ratings may cause device failure or a safety hazard. The operating current should be increased slowly while monitoring the laser diode output.

The laser light emitted from this laser diode is invisible and may be harmful to the human eye. Avoid looking directly into the laser diode or into the collimated beam



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