

PGEW Series

905nm Plastic Pulsed Laser Diode



Description

The PGEW series employs an advanced multiple quantum well laser diode chip design producing high peak output power at low drive current. Peak wavelength is centered near the maximum responsivity of most silicon photodiodes including PerkinElmer Optoelectronics' C30724 low cost APD. Additional features include good power retention at elevated operating temperature and low output beam divergence.

The devices are ideally suited for light duty applications where cost is a primary concern and high volume production capacity is required.

Operating Considerations

The devices are operated by applying current in the forward bias direction.

Maximum rating and limiting values must never be exceeded. Exposure of the diode to even brief transient current spikes in excess of the recommended maximums, particularly in the reverse direction, can cause catastrophic device failure.

Applications

- Laser Range Finding
- LIDAR

Features

- 905nm emission
- High Peak Output power
- Low-cost packaging
- Available in high volume

PerkinElmer Optoelectronics is committed to supplying the highest quality products to our customers. Certified to meet ISO 9001.



PGEW Series

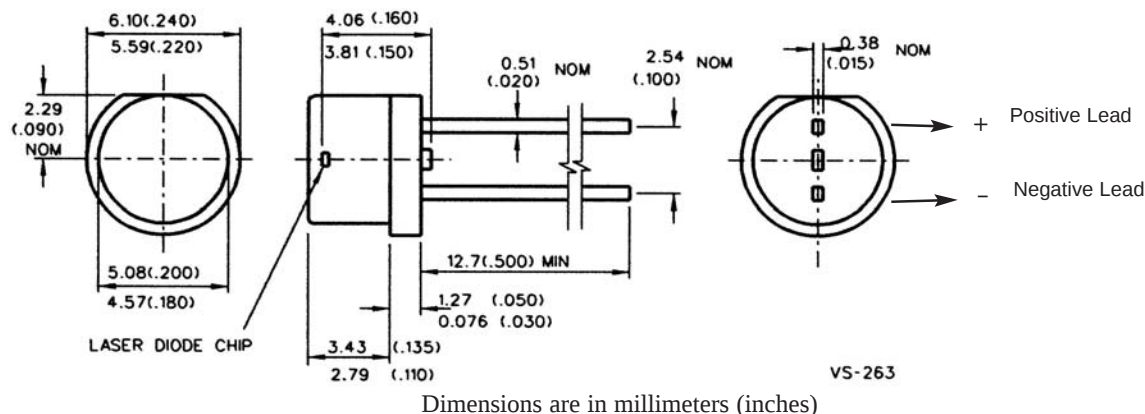
Electrical Characteristics at $T_C = 23^\circ\text{C}$, $t_W = 30\text{ns}$, $P_{rr} = 1\text{ KHz}$

Parameter	PGEW 1S03 MIN TYP MAX			PGEW 1S09 MIN TYP MAX			PGEW 2S09 MIN TYP MAX			PGEW 3S09 MIN TYP MAX			Units
Peak Output Power P_O	3.0	4.5		12	15		25	30		40	45		W
Peak Forward Current I_F			8			25			25			25	A
Peak Forward Voltage V_f		4.5			4.5			10			20		V
Center Wavelength λ_0	885	905	925	885	905	925	885	905	925	885	905	925	nm
Spectral Bandwidth $\Delta\lambda$		7			7			7			7		nm
Beam Divergence													
FWHM $\theta_{ } \times \theta_{\perp}$		10x25°			10x30°			10x30°			10x30°		
Source Size (w x h)		75x1			225x1			225x120			225x240		μm

Maximum Ratings Limiting Values

Forward Current, I_{FM}	8A to 25A	Storage Temp. Range	-20 to +70°C
Pulse Width, t_W	30ns	Operating Temp. Range	0 to +50°C
Reverse Voltage, V_{RM}	2V	Soldering for 5 secs (leads only)	+200°C
Duty Factor, du	0.0075%		

Package Outline



Ordering Information

While the information in this data sheet is intended to describe the form, fit and function for this product, PerkinElmer reserves the right to make changes. All values are nominal; specifications subject to change without notice.

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