

# 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 Excelitas' 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

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## PGEW Series

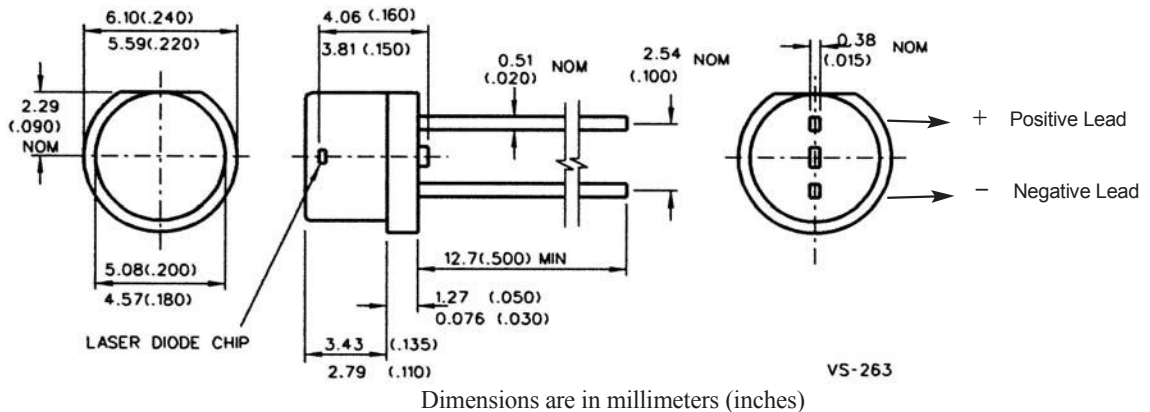
### Electrical Characteristics at $T_C = 23^\circ\text{C}$ , $t_W = 30\text{ns}$ , $P_{rr} = 1\text{ KHz}$

Parameter	PGEW 1S03			PGEW 1S09			PGEW 2S09			PGEW 3S09			Units
	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	
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 $\lambda_0$	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			$\mu\text{m}$

### 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, Excelitas reserves the right to make changes. All values are nominal; specifications subject to change without notice.

For more information email us at [generalinquiries@excelitas.com](mailto:generalinquiries@excelitas.com) or visit our web site at [www.excelitas.com](http://www.excelitas.com)

Canada:  
Excelitas Technologies  
16800 Trans Canada Highway  
Kirkland, Québec, H9H 5G7  
Canada  
Phone (514) 683-2200  
Fax: (514) 693-2210

USA:  
Excelitas Technologies  
44370 Christy Street  
Fremont, CA  
94538-3180  
Phone: (510) 979-6500  
Fax: (510) 687-1152

Europe:  
Excelitas Technologies  
Wenzel-Jaksch-Str.31  
65199 Wiesbaden  
Phone: +49 611 492 534  
Fax: +49 611 492 578

Asia:  
Excelitas Technologies  
47 Ayer Rajah Crescent  
#06-12  
Singapore 139947  
Phone: +65 6775 2022  
Fax: +65 6775 1008

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