

Lighting

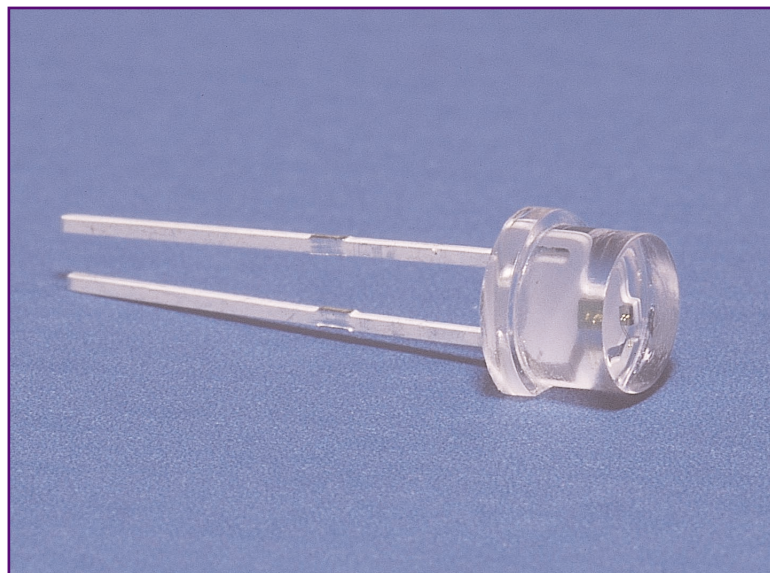
Imaging

Sensors

905nm Plastic Pulsed Laser Diode

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 C30724E 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 product to our customer. Certified to meet ISO 9001.

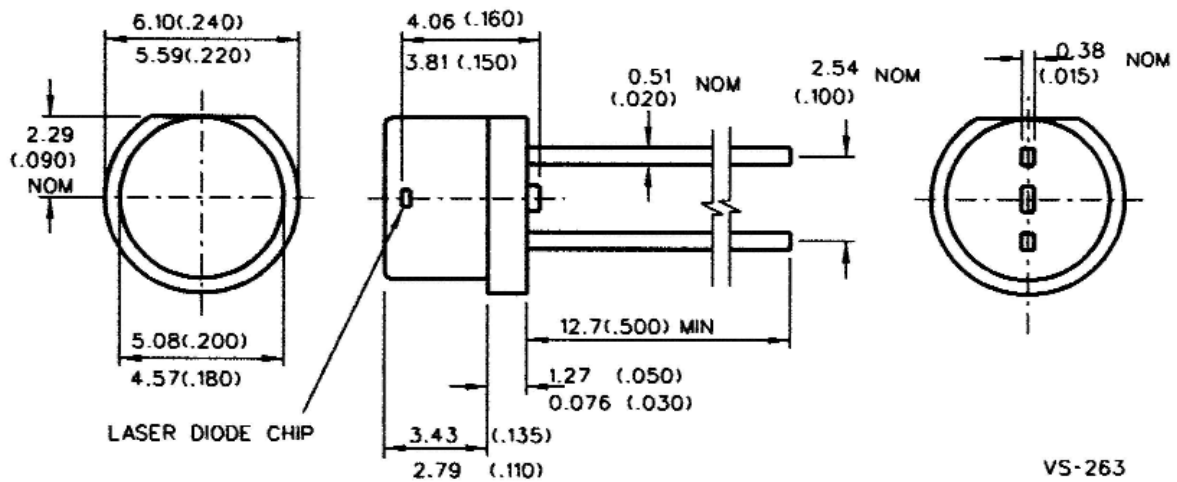


PGEW Series

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

PARAMETER	PGEW 1S03			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			10			15			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 ($\theta_{\parallel} \times \theta_{\perp}$)		10x25°			10x25°			10x30°			10x30°		
FWHM		75x1			225x1			225x120			225x240		
Source Size (w x h)													μm

Package Outline



Maximum Ratings Limiting Values

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

PerkinElmer Optoelectronics reserves the right to change or amend specifications and/or configurations at any time without notice.

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