

SHORT PULSED COMPONENTS

HPD Series 2100

**IR (905 nm) Short Pulse Lasers
for Industrial and Military Applications**



The HPD Series 2100 are high peak power, 905 nm pulsed diode lasers designed for applications that require powers up to 66 mW/μm of junction length at 200 ns Pulse Width. These broad area emitters have excellent reliability and good quantum efficiency. Single emitters from 75 μm to 380 μm junction length are standard. Other wavelengths from 635 nm to 980 nm, along with both linear and stacked arrays, are available on special order.

The 905 nm laser may be overdriven at narrower pulse widths using $Pod = Po * (200/Pwd)^{1/2}$. Standard packages include 5.6mm, 9mm, TO18 coaxial, and TO5 twin lead. Options include fiber pigtailed. R0 detectors are available in some packages for range finding applications. Applications include hand held rangefinders, laser speed detectors, ceilometers, weapons simulation, and proximity fuses.

Specifications @ 25°C, 200nsec, 2KHz

HPD Series 2100		2110	2120	2130	2150
Output Power	(W)	5	10	15	25
Source Size	(μm)	75	150	250	380
Operating Current	(A)	5.5	11	18	30
Threshold Current	(A)	0.3	0.6	1	1.5
Typical Wavelength		905 nm ±10 nm			
Other Wavelengths		886-1100 nm			
Spectral Width		4 nm			
Slope Efficiency		1 W/A			
Max Duty Cycle		0.1%			
Beam Divergence		40 x 10 deg (FWHM)			
Linear Arrays		Available on special order			
Typical Packages		TO56, 9mm, TO5, TO18			

Vertical Stacks Specifications @ 25°C, 200nsec, 500Hz

HPD Series 2100-XX		2110-2S	2120-3S	2130-4S	2150-6S
Output Power	(W)	10	30	60	150
Source Size	(μm)	75 x 120	150 x 240	250 x 360	380 x 600
Operating Current	(A)	5.5	11	18	30
Threshold Current	(A)	0.3	0.6	1	1.5
Wavelengths	(nm)	886-1100	886-1100	886-1100	886-1100
Max Duty Cycle	(%)	0.1	0.07	0.05	0.01

4 Stanley Boulevard,
Hamilton International
Technology Park,
Blantyre, Glasgow, G72 0BN
Scotland
Tel: +44 (0) 1698 827000
Fax: +44 (0) 1698 827262

E-mail: sales @intenseco.com
Web: www.intenseco.com

1200A Airport Road
North Brunswick, NJ 08902
USA
Tel: +1 732 249 2228
Fax: +1 732 249 8139

next generation lasers

Drivers

Intense-HPD can recommend companies offering commercial drivers for short pulse laser diodes. Contact an applications engineer for additional information.

Shown below are typical circuit diagrams for drivers utilizing SCRs or FETs. Leads in the high current loop must be kept as short as possible to reduce series inductance.

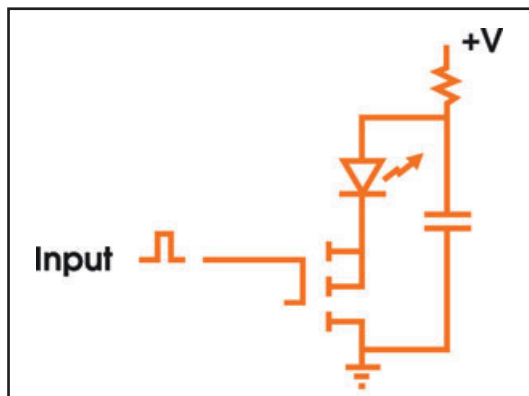


Figure 1. Typical FET Driver Circuit

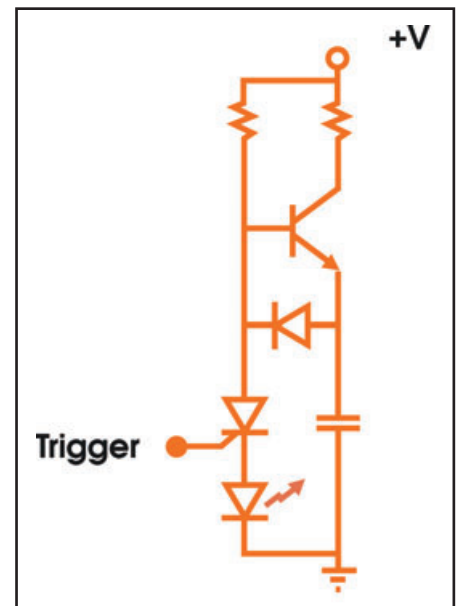


Figure 2. Typical SCR Driver Circuit

Safety

Intense-HPD Aluminum Gallium Arsenide lasers emit infrared radiation. This radiation is invisible to the human eye and safety precautions must be taken to prevent potential eye damage. Do not view or stare at operating lasers. If viewing is required, use a matte surface or suitable viewing screen.

Disclaimer

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