

next generation lasers

SHORT PULSED COMPONENTS

HPD Series 2400

**IR (1550 nm) Short Pulse Eye Safe Lasers
for Industrial and Military Applications**



The HPD Series 2400 are high peak power, eye safe, 1550 nm pulsed diode lasers designed for applications that require powers up to 33 mW/μm of junction length at 200 ns Pulse Width. These broad area emitters have excellent reliability and good quantum efficiency. Single emitters from 150 μm to 350 μm junction length are standard. Other wavelengths from 886 nm to 1100 nm, along with stacked arrays, are available on special order.

The 1550 nm laser may be overdriven at narrower pulse widths using $P_{od} = P_o * (200/P_{wd})^{1/2}$. 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 2400		2410	2424
Output Power	(W)	5	12
Source Size	(μm)	150	350
Operating Current	(A)	20	40
Threshold Current	(A)	1.0	2.0
Typical Wavelength		1550 nm ±20 nm	
Other Wavelengths		886-1100 nm	
Spectral Width		12 nm	
Slope Efficiency		0.3 W/A	
Max Duty Cycle		0.1%	
Beam Divergence		48 x 15 deg (FWHM)	
Typical Packages		TO56, 9mm, TO5, TO18	

Vertical Stacks Specifications @ 25°C, 200nsec, 2KHz

HPD Series 2400-XX		2410-2S	2424-2S	2424-4S
Output Power	(W)	10	24	48
Source Size	(μm)	150 x 150	150 x 350	350 x 360
Operating Current	(A)	20	40	40
Threshold Current	(A)	1.0	2.0	2.0
Max Duty Cycle	(%)	0.05	0.05	0.01

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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.

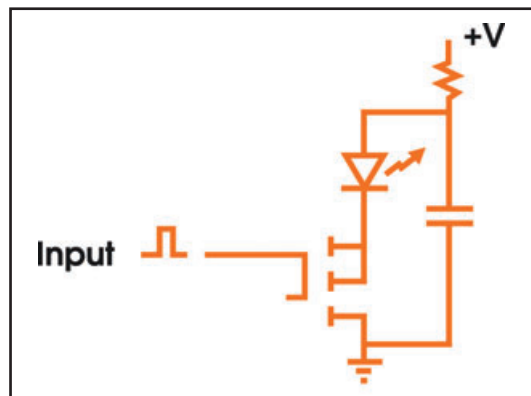


Figure 1. Typical FET Driver Circuit

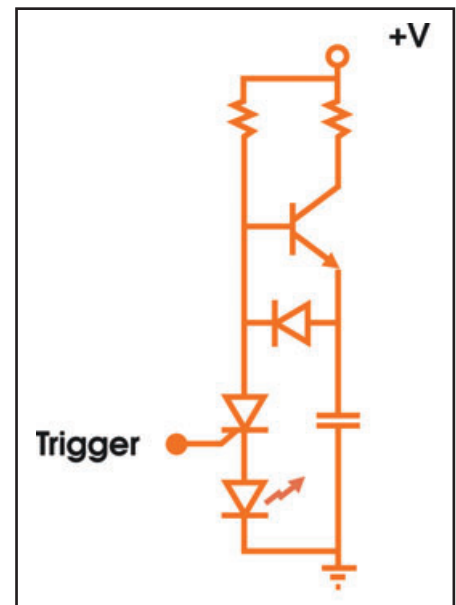


Figure 2. Typical SCR Driver Circuit

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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