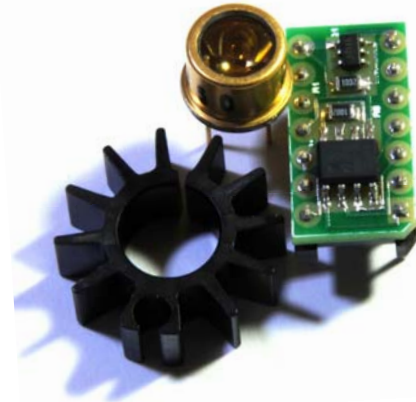


PIRE PLUS

High-speed infrared emitter with integrated drive electronics

Key Features:

- Fast pulse rates, up to 180 Hz with 50% modulation depth
- Adjustable pulse rates with 0 to 5V control circuitry
- High output emitter, .04 watts/cm² at one inch from filament
- Compact, reduced footprint solution
- Software support of custom pulse configurations
- Broadband output with 88% emissivity
- Lower overall system costs
- Typ. MTTF of >26,000 hrs at max rated power



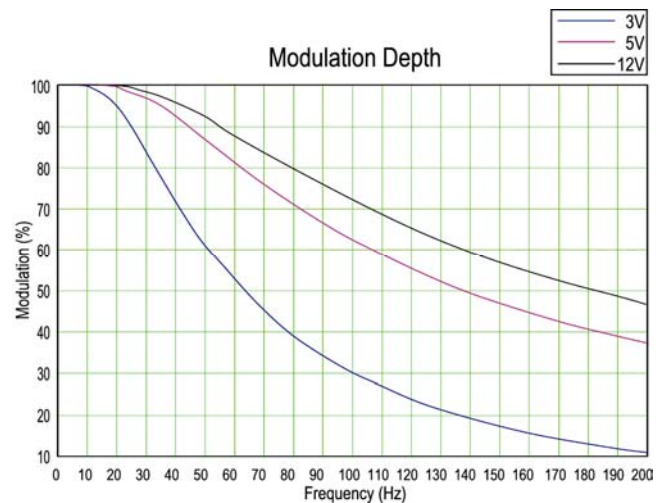
The high-performance PIRE^{PLUS}, combines a high-speed pulsable emitter with its corresponding drive electronics on a compact 14 pin circuit board. Designed to maximize output over a 1 Hz to 200 Hz range of pulse speeds, these complementary assemblies enhance signal to noise performance, while minimizing the overall system footprint.

The construction and implementation of the emitter and control circuitry, optimize performance by matching the drive waveform for the desired operating frequency. This ensures peak output temperatures at all pulse frequencies and promotes the highest output for any application. With typical pulse speeds of 180 Hz and 50% modulation depth, even trace elements in low parts per million concentrations can be accurately detected.

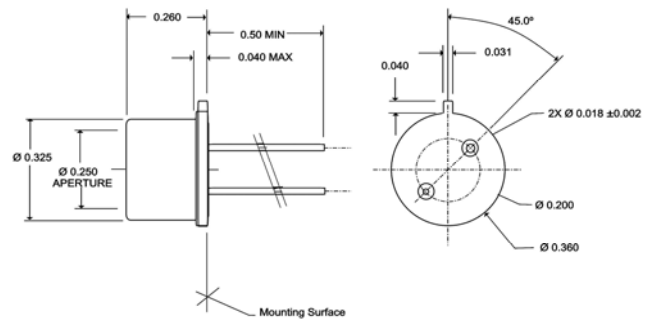
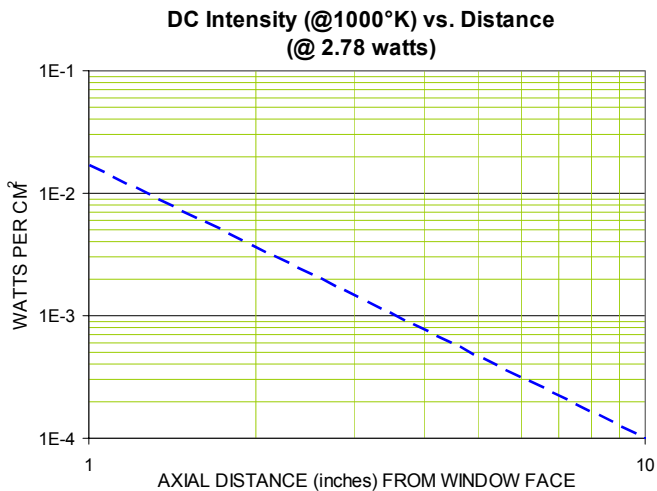
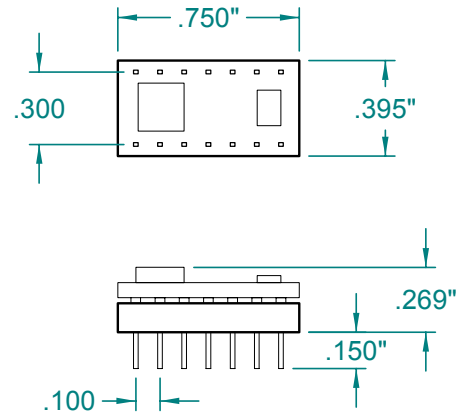
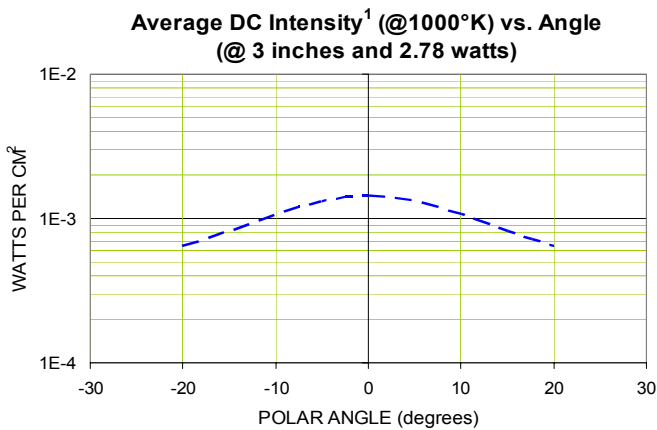
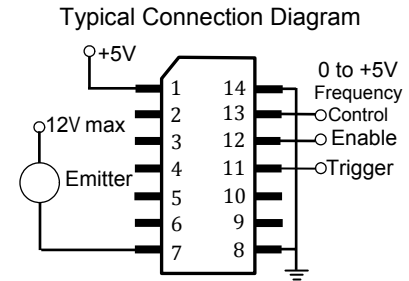
The PIRE^{PLUS} sub-system is an ideal solution for a variety of applications. The control circuitry will exploit the capabilities of the high-speed source in any application, pulsed or steady state. With this emitter, controller set, designers can now focus on maximizing the overall system performance rather than interfacing with the source.

Applications:

- Gas analysis, medical and industrial
- Environmental monitoring
- Spectroscopy
- Process control systems
- Plastics sorting



Specification	Minimum	Typical	Maximum
Emitter Voltage	3V		12V
Pulse Frequency Range	2Hz	100Hz	200Hz
Frequency Control Voltage	0V	2.5V	5V
Emitter Resistance		2.5Ω	
Peak Emitter Current (12V)			5A
Average Emitter Current (12V)	10mA		220mA
Output Enable Voltage	0V (disable)		5V (enable)
Filament Temperature (12V)			1000°K
Filament Emissivity		88%	
Operating Temperature	-30°C		+100°C
Lifetime (MTTF)	26,000 Hrs		
Spectral Output (with Sapphire Window)	0.35μm		6μm



1. Average of values parallel and perpendicular to element

Radial Output Intensity Distribution vs. Angle

