

CLI-30

30 W VCSEL-Based Compact Laser Illuminator

FLIR's VCSEL-based Compact Laser Illuminator (CLI) is a high power, pulsed laser illuminator capable of up to 30 W of peak powers. Designed for SWaP-sensitive platforms, the CLI provides speckle-free illumination through use of FLIR's proprietary VCSEL technology in a passively cooled compact package. Currently available in the NIR band at 808 and 860 nm, the CLI is controlled through a serial port and operates from 8 up to 1000 Hz. Various fixed beam divergences are offered. Designed as an OEM component, FLIR can customize the design to fit your specific requirements.

Features:

- Uses proprietary Vertical-Cavity, Surface-Emitting Laser (VCSEL) technology
- Improved eye-safety from VCSELs over conventional laser diodes
- 30 W peak output power, 2 power set points, variable brightness control
- Speckle-free, high-quality illumination
- Passively cooled
- Removable optic for fixed beam divergences from 8-30°
- Programmable frequency and pulse width operation

Platforms:

- Traffic Illumination
- Border Control Surveillance
- Law Enforcement / Security
- LED replacement for longer range, brighter, and higher efficiency illumination

Applications:



Handheld



Unmanned



Security



Industrial



Gimballed

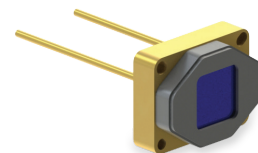
Specifications

PARAMETER	VALUE
Wavelengths	808 / 860 nm
Output Power (max.)	30 W
Output Laser Settings	Programmable: HI and LO power levels, frequency, pulse width
Output Laser Control	Via UART command control or follows strobe
Brightness Control	Via UART command control or subject to PWM signal
VCSEL Conversion Efficiency	30%
Operating Frequency	8 - 1000 Hz
Max Pulse Width	13 ms
Max Operating Duty Cycle	10%
Beam Divergence	8°-30° fixed divergence via screw on lens mount
Beam Pattern	Top hat
Laser Classification	Class 3B
Electrical Parameters	
Input Power Supply	21 - 48 V
Strobe	Input or output
Pulse width modulation	Brightness control via PWM signal
Control interface	Via UART or Strobe/PWM
Mechanical	
Dimensions (L x W x H)	111.9 x 21.5 x 15 mm
System Weight	50 grams
Environmental	
Operation Temperature	0°C to +80°C
Storage Temperature	-55°C to +85°C

Related Package Assemblies

VCSEL in High-Power Package

Available Wavelengths	808	860
Laser Output Power (QCW)	30 W	30 W
Conversion Efficiency	+30%	+30%
Threshold Current	10 A	10 A
Operating Current	40 A	40 A
Operating Voltage	2.3 V	2.3 V
FWHM Divergence	24°	28°
Package	HP-T0	HP-T0



High-Power VCSEL
Array Package

