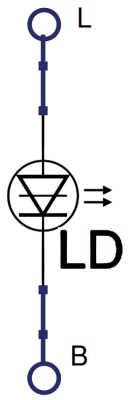
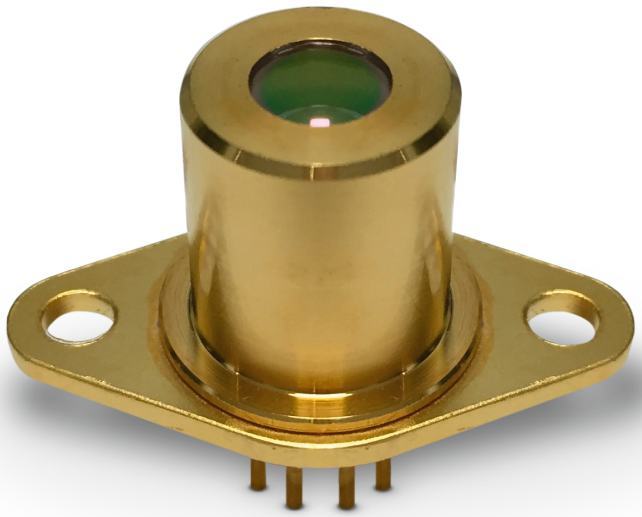
ALPES LASERS

Boston Electronics

pioneering photonics for a brighter future





SWIR Laser Diodes are supplied in a TO-66 package with collimated or divergent beam.

SWIR Laser Diodes

Short Wave Infrared Laser Diodes are continuous wave, multiple longitudinal mode Fabry-Perot devices emitting light over a bandwidth of ~20 nm with output power up to 50 mW. They are offered either as chip-on-carrier or encapsulated in a low power TO-66 package with collimated or divergent free-space beam output.

Based on InP technology, Alpes SWIR Laser Diodes emission can be tailored in the range from 1.45-2.2 microns with each design having a bandwidth of ~20 nm. Available wavelengths include the absorption bands of N_2O, H_2O, CH_4 and HCl among others.

KEY FEATURES

- Continuous Wave
- Low Dissipation
- High Beam Quality
- Small Footprint

KEY APPLICATIONS

- Gas Sensing (e.g. H_2O)
- Beacons
- Infrared Illumination

SPECIFICATIONS

QUANTITY	ACRONYM	MIN	TYP	MAX	UNIT	NOTE
Output Power		5	20	70	mW	
Threshold Current		20	100	200	mA	
Operation Current		400	600	1000	mA	
Operation Voltage		1.5	2	2.5	V	
Packaging		TO-66				
Central Wavelength		1.45	1.86	2.2	µm	1
Spectral width		10	20	50	nm	2
Operation Temperature		10	20	50	°C	3
Dimensions	LxWxH		31.6 x 17.6 x 16.6		mm^3	4
Fast Axis Divergence			2	5	mrad	5
Slow Axis Divergence			2.5	5	mrad	6

These specifications may be changed without further notice.

1. Presently, devices centered at 1.47, 1.55, 1.63, 1.74, 1.83, 1.89, and 2.10 microns are in stock and available on a 8 weeks lead time. Please enquire for the possible lead times for other wavelengths
2. The envelope of a Fabry-Perot laser can vary from one laser to another or with varying operating conditions.
3. Performances are given for operation with the external temperature at room temperature. A TEC cooler is included to stabilize the chip temperature. Performance can be degraded if the external temperature rises.
4. Maximal outside dimensions
5. For collimated beam.
6. For collimated beam.

Central Wavelength	Max. Power
1450 nm	30 mW
1470 nm	50 mW
1550 nm	30 mW
1630 nm	50 mW
1650 nm	50 mW
1730 nm	30 mW
1740 nm	40 mW
1830 nm	50 mW
1890 nm	50 mW
2080 nm	20 mW
2100 nm	10 mW
2150 nm	50 mW