



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  $\sim 20$  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  $\sim 20$  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	<b>1</b>
Spectral width		10	20	50	nm	<b>2</b>
Operation Temperature		10	20	50	°C	<b>3</b>
Dimensions	LxWxH		31.6x17.6x16.6		mm <sup>3</sup>	<b>4</b>
Fast Axis Divergence			2	5	mrad	<b>5</b>
Slow Axis Divergence			2.5	5	mrad	<b>6</b>

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.