

# Thermal Control TO Laser

## Description

Optune-TTO-635 is a thermal control TO laser that delivers wavelength controlled by mini-TEC inside of TO at specified wavelength 635nm over 10nm range tunable, It is designed to perform well beyond the industry standard. Key features of this thermal control TO laser include high wavelength and power stability. This thermal control laser takes advantage of semiconductor laser chip with built-in TEC inside of TO56

The devices are packaged in a TO56 with laser welding process providing high efficiency and stable output power and high reliability. Output beam is coupled to output by aspheric lens.

## Applications

- Bio-medical instrument
- Optical measuring instrumentation
- Laser beam generator

## Features

- Center wavelength =635±0.1nm
- Output power>20mW
- Internal thermoelectric cooler and thermistor
- RoHS Compliance

## Specification

### Absolute Maximum Ratings

Parameter	Symbol	Condition	Min	Max	Unit
Reverse Voltage	VR			10	V
Forward Current	IF			100	mA
Photodiode Reserve Voltage	PVF	lop		30	V
Case Temperature	Tc	lop	-10	60	°C
Laser Temperature	TLaser	lop	10	50	°C
Thermoelectric Cooler Voltage	VTEC			4.3	V
Thermoelectric Cooler Current	ITEC			1.2	A
Storage Temperature	Tstg	Unbiase	-40	85	°C
Storage Humidity			5	85	%RH

<b>Electro Static Discharge</b>	VESD	Human body mode	500		V
<b>Lead Soldering Temperature</b>				260	°C
<b>Lead Soldering Time</b>				10	sec

### Electro-Optical Characteristics

(TLaser=25°C, unless otherwise noted)

Parameter	Symbol	Condition	Min	Type	Max	Unit
<b>Threshold Current</b>	I <sub>th</sub>	CW		40	55	mA
<b>Output power</b>	P <sub>o</sub>	CW		20		mW
<b>Operating Current</b>	I <sub>op</sub>	CW		70	80	mA
<b>Operating Voltage</b>	V <sub>op</sub>	CW		2.3	2.6	V
<b>Peak Wavelength</b>		CW,70mA		635		nm

### Dimensions and PIN Assignment

