

# Select Wavelength Laser Diodes

## Select Wavelength LD (SWLD)-Series

**Product Description:** SWLD laser diodes cover customer selection of large wavelengths from 1260nm to 1650nm which are fabricated in a hermetic sealed 14-pin butterfly package. The laser diodes contain thermoelectric cooler (TEC), thermistor, monitor PD and optical isolator to secure high quality laser performance. We also have full customer selection of output powers, package types and output fibers of SM fibers, PM fibers and other special fibers. Our laser products are Telcordia GR-468 qualified, and in compliance with RoHS directives.

### Application

- LAN, WAN and metro networks
- C/DWDM systems
- Fiberoptic sensors
- Laser sources

### Features

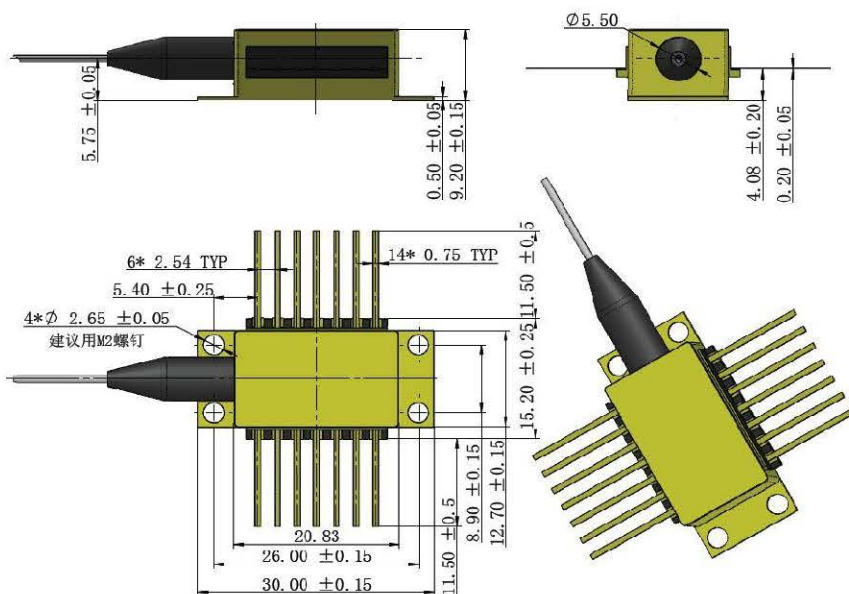
- High output power(10~100mW)
- High-performance, multiquantum well (MQW) distributed-feedback (DFB) laser
- Industry-standard, 14-pin butterfly package
- Built-in TEC and optical isolator
- Customer selection of wavelengths



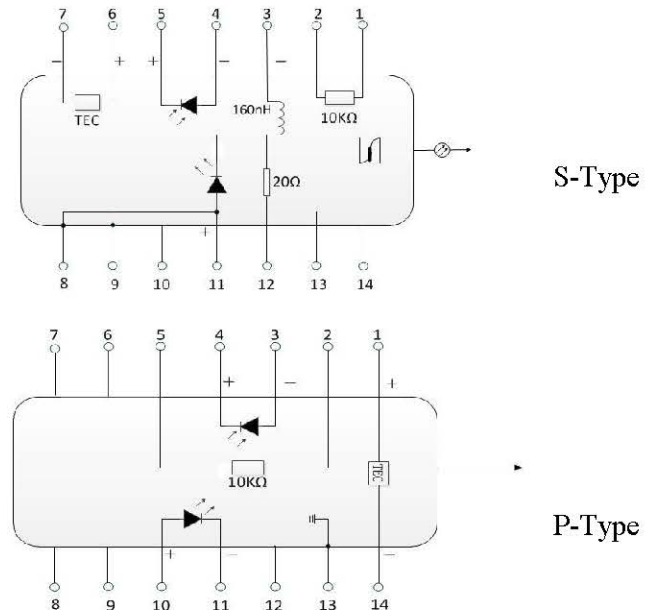
### Optical and Electric Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit
Optical Output Power	$P_o$	10	-	-	mW
Threshold Current	$I_{th}$	-	10	35	mA
Center Wavelength	$\lambda_c$	ITU grid, customer select wavelengths			nm
Forward Current	$I_F$	-	-	400	mA
Operating Current	$I_{op}$	-	100	-	mA
Laser Reverse Voltage	$V_R$	-	-	2	V
TEC set temperature	$T_s$	15	-	35	°C
Laser Forward Voltage	$V_F$	-	-	3	V
Optical Isolation	ISO	30	-	-	dB
Side-mode Suppression Ratio	SMSR	35	45	-	dB
Spectral Linewidth (FWHM)	LW	-	3	-	MHz
Bandwidth (@-3dB)	BW	-	2.5	-	GHz
PD Reverse Voltage	$V_{RPD}$	-	5	10	V
PD Forward Current	$I_{FPD}$	-	11	5	mA
PD Monitor Dark Current ( $V_r=-5V$ )	$I_D$	-	0.01	0.1	$\mu A$
TEC Current	$I_{tec}$	-	-	1.5	A
TEC Voltage	$V_{tec}$	-	-	3.5	V
Thermistor Resistance(25°C)	$R_{th}$	9.5	10	10.5	K $\Omega$
Thermistor temperature	-	-	-	100	°C
Lead Soldering Time(<260°C)	-	-	-	10	Sec
Operating Temperature Range	-	-20	-	70	°C
Storage Temperature	$T_{stg}$	-40	-	85	°C

### Mecahnical Dimensions:



### PIN Definition:



PIN	S-Type (Standard Type )	P-Type (Pump Type)
1	Thermistor	Thermoelectric Cooler (+)
2	Thermistor	Thermistor
3	Laser dc Bias (Cathode) (-)	Back-facet Monitor Anode (-)
4	Back-facet Monitor Anode (-)	Back-facet Monitor Cathode (+)
5	Back-facet Monitor Cathode (+)	Thermistor
6	Thermoelectric Cooler (+)	NC
7	Thermoelectric Cooler (-)	NC
8	Case Ground	NC
9	Case Ground	NC
10	NC	Laser Anode (+)
11	Laser Anode (+),Case Ground	Laser Cathode (-)
12	RF Laser Input Cathode (-)	NC
13	Laser Anode (+),Case Ground	Case Ground
14	NC	Thermoelectric Cooler (-)

### Ordering Information

SWLD-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Wavelength				Power	Fiber type	Pigtail length	Connector
SWLD-	1	2	7	0	01:1mW	S: SM Fiber	1: 50cm	0: None
	1	2	9	0	05:5mW	P: PM Panda Fiber	2: 100cm	1: FC/UPC
	...	...	...	...	10:10mW	M: MM Fiber	3: 150cm	2: FC/APC
	1	6	1	0	20:20mW	C: Customize	4: 200cm	3: SC/UPC
	8	6	2	0	40:40mW		C: Customize	4: SC/APC
	8	6	2	5	60:60mW			5: LC/UPC
	...	...	...	...	80:80mW			6: LC/APC
	9	6	1	0	1H:100mW			C: Customize

### Example of Ordering Form: SWLD-127010P22-01

SWLD-	1270	10	P	2	2
	1270nm	10mW	PM Panda Fiber	100cm	FC/APC
	9340	1	S	2	2
	C-band channel 34, 1550.12nm	10mW	SM Fiber	100cm	FC/APC
	8620	1	S	2	2
	L-band channel 62, 1610.06nm	10mW	SM Fiber	100cm	FC/APC