

OL4128N Series

1480nm/ 120-250 mW Laser Diode Butterfly Modules with Single Mode Fiber,Built in Cooler, Isolator.

1. DESCRIPTION

OL4128N-120,140,160,180,200 and 250 are 1480nm Laser Diodes in Butterfly package with single mode fiber.

2. FEATURES

- From 120 to 250mW output power version
- Low operation current
- Includes monitor PD and Thermo-electric cooler
- Full performance in operating case temperature from 0 to 70°C

3. APPLICATION

- High Power Erbium-Doped Fiber Amplifier (EDFA)

Fiber Output Power : 250mW
OL4128N-250
(Preliminary)

Schedule
ES : Jan. / 2002
CS :Jul. / 2002

4.OPTICAL AND ELECTRICAL CHARACTERISTICS (TLD= 25°C, unless otherwise specified)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Fiber Output Power	Po	OL4128N-120 OL4128N-140 OL4128N-160 OL4128N-180 OL4128N-200 OL4128N-250(Preliminary)	120 140 160 180 200 250	--- --- --- --- --- ---	--- --- --- --- --- ---	mW
Threshold Current (BOL)	Ith	---	---	35	50	mA
Operation Current (BOL)	Iop(BOL)	Po=120mW Po=140mW Po=160mW Po=180mW Po=200mW Po=250mW	--- --- --- --- --- ---	--- --- --- --- --- 1000	500 550 600 700 800 1200	mA
Operation Current (EOL)	Iop(EOL)	---	---	---	Iop(BOL)*1.2	mA
LD Forward Voltage	Vf	If=Iop	---	---	3.0	V
Center Wavelength	λ_c	CW, If=Iop	1460	---	1490	nm
Spectral Width	σ	If=Iop, RMS	---	4	10	nm
Tracking Error	TER	Im=const., 0/25/70°C	---	---	+/- 0.5	dB
Photodiode Dark Current	ID	Vi(PD)=5V	---	---	100	nA
Monitor Current	Im	Pf=Po, Vi(PD)=5V	100	---	---	μ A
TEC Capacity	ΔT	CW, If=Iop	45	---	---	°C
TEC Current	Ic	$\Delta T=45^\circ\text{C}$, $T_c=70^\circ\text{C}$, $I_f=I_f(\text{BOL}) \times 1.2$	OL4128N-120 OL4128N-140 OL4128N-160	---	---	1.8
			OL4128N-180 OL4128N-200	---	---	2.0
			OL4128N-250	---	2.3	3.0
TEC Voltage	Vc	$\Delta T=45^\circ\text{C}$, $T_c=70^\circ\text{C}$, $I_f=I_f(\text{BOL}) \times 1.2$	OL4128N-120 OL4128N-140 OL4128N-160	---	---	4.2
			OL4128N-180 OL4128N-200	---	---	4.7
			OL4128N-250	---	4.2	5.0
Thermistor Resistance	Rth	TLD=25°C	9.5	---	10.5	k Ω

5.ABSOLUTE MAXIMUM RATING

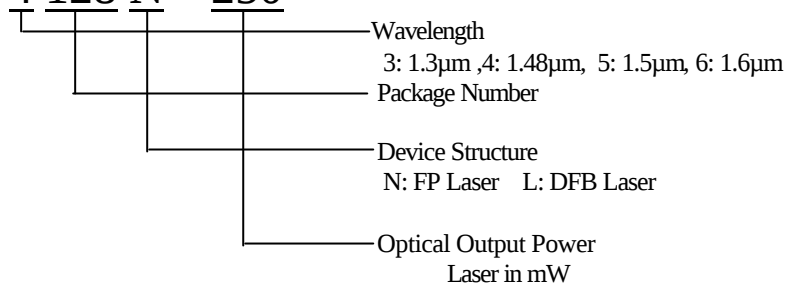
(Tc = 25°C, unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Fiber Output Power	Po	144 (OL4128N-120) 168 (OL4128N-140) 192 (OL4128N-160) 216 (OL4128N-180) 240 (OL4128N-200) 300 (OL4128N-250)	mW
Laser Diode Forward Current	If	800 (OL4128N-120) 800 (OL4128N-140) 900 (OL4128N-160) 1000 (OL4128N-180) 1100 (OL4128N-200) 1600 (OL4128N-250)	mA
Laser Diode Reverse Voltage	VR	2	V
Photo Diode Reverse Voltage	VR(PD)	12	V
Operating Case Temperature	Tc	0 to +70	°C
Storage Temperature	Tstg	-40 to +85	°C
TEC Current	Ic	2.0 (OL4128N-120) 2.0 (OL4128N-140) 2.0 (OL4128N-160) 2.1 (OL4128N-180) 2.1 (OL4128N-200) 3.2 (OL4128N-250)	A
TEC Voltage	Vc	4.4 (OL4128N-120) 4.4 (OL4128N-140) 4.4 (OL4128N-160) 4.8 (OL4128N-180) 4.8 (OL4128N-200) 5.2 (OL4128N-250)	V

Exceeding these ratings may lead to immediate destruction or permanent deterioration of the device.

6. CONNECTOR AND FIBER SPECIFICATIONS

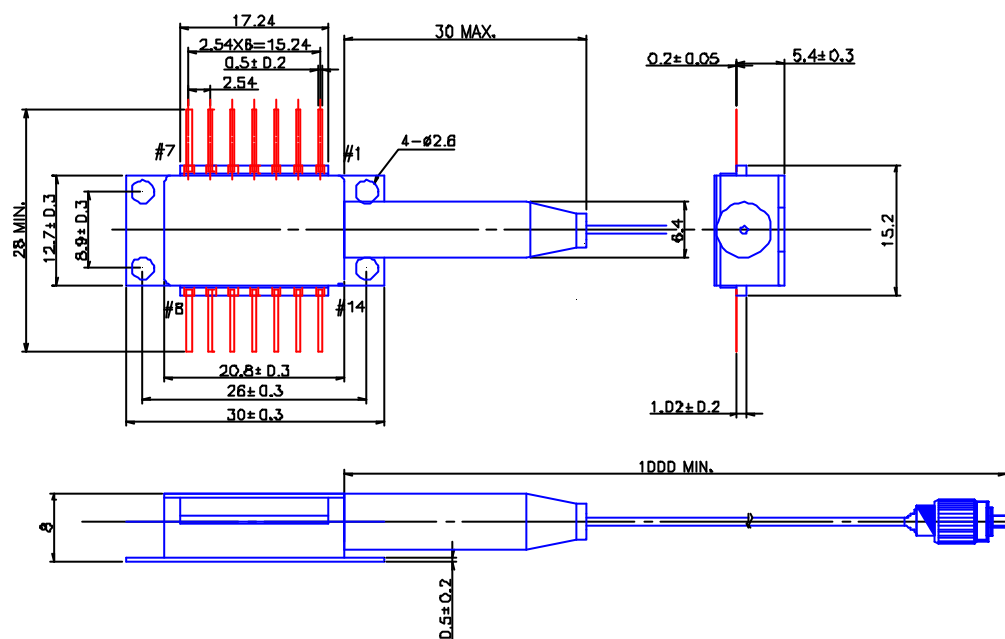
Parameter	Specifications	Unit
Type	SM	---
Mode Field Diameter	10+/-1	μm
Cladding Diameter	125+/-2	μm
Jacket Diameter	900	μm
Length	1 (Min.)	m
Connector	FC/SPC	---

7.ORDERING INFORMATION**OL 4 128 N – 250**

Fiber Output Power	Oki Part Number
120mW	OL4128N-120
140mW	OL4128N-140
160mW	OL4128N-160
180mW	OL4128N-180
200mW	OL4128N-200
250mW	OL4128N-250

8.OUTLINE DRAWING

All dimensions in millimeters
Tolerances unless noted ± 0.5
Package No. 128(Unit: mm)



Package Pinout

Pin No.		Pin No.	
1	TEC+	8	NC
2	Thermistor	9	NC
3	Monitor Anode	10	LD Anode
4	Monitor Cathode	11	LD Cathode
5	Thermistor	12	NC
6	NC	13	GND
7	NC	14	TEC-