

**OL4204N-50-P10-W90****Preliminary****1490+/-10nm 50mW Pulsed MQW Laser Diode DIL Module with SMF..****1. DESCRIPTION**

OL4204N-50-P10-W90 is a 1490nm Laser Diode in DIL package with SMF.

**2. FEATURES**

- Fiber output : Po=50mW
- Pulsed MQW FP Laser
- 14-pin DIL package module
- Single mode fiber(SMF)
- Built-in TEC

**3. APPLICATION**

- OTDRs
- Optical Measuring Instruments

**4.OPTICAL AND ELECTRICAL CHARACTERISTICS**

(TLD= 25°C, 10μs pulse width and 1% duty)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Threshold Current	I <sub>th</sub>	---	---	25	50	mA
Operation Current	I <sub>op</sub>	Po=50mW	---	---	550	mA
LD Forward Voltage	V <sub>f</sub>		---	---	2.5	V
Center Wavelength	λ <sub>c</sub>		1480	1490	1500	nm
Spectral Width	σ	Po=50mW, RMS×1	---	5	10	nm
Cooler Capacity	ΔT	Po=50mW	40	---	---	°C
Cooler Current	I <sub>c</sub>	ΔT=40° C,Po=50mW	---	---	1	A
Cooler Voltage	V <sub>c</sub>		---	---	2	V
Thermistor Resistance	R <sub>th</sub>	---	---	10	---	kΩ

**5.ABSOLUTE MAXIMUM RATING**

(Tc = 25°C, unless otherwise specified)

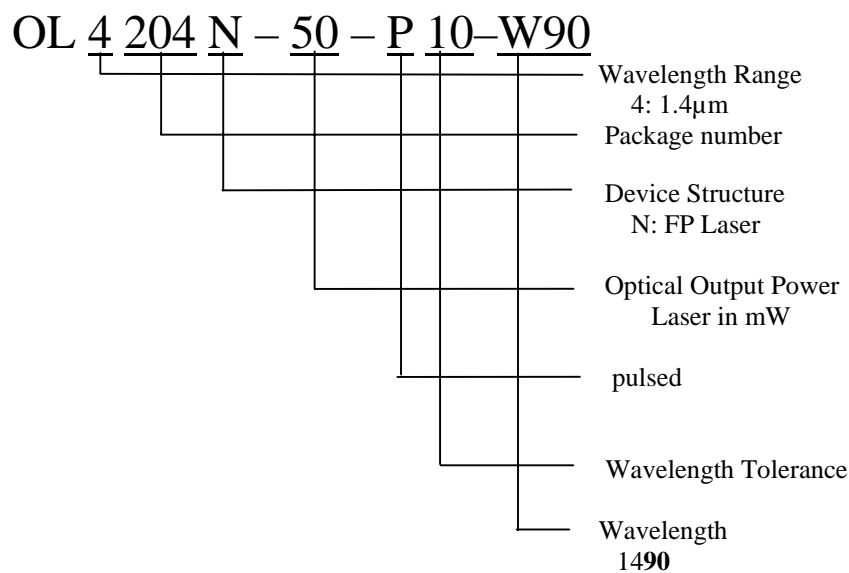
Parameter	Symbol	Rating	Unit
Fiber Output Power	Po	60*	mW
LD Reverse Voltage	VR(LD)	2.0	V
LD Forward Current	IF(LD)	600*	mA
Cooler Current	Ic	1.2	A
Operating Temperature	Topr	-20 to +65	°C
Storage Temperature	Tstg	-40 to +70	°C

Pulse width ≤ 10μs , duty ≤ 1%

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

**6. CONNECTOR AND FIBER SPECIFICATIONS**

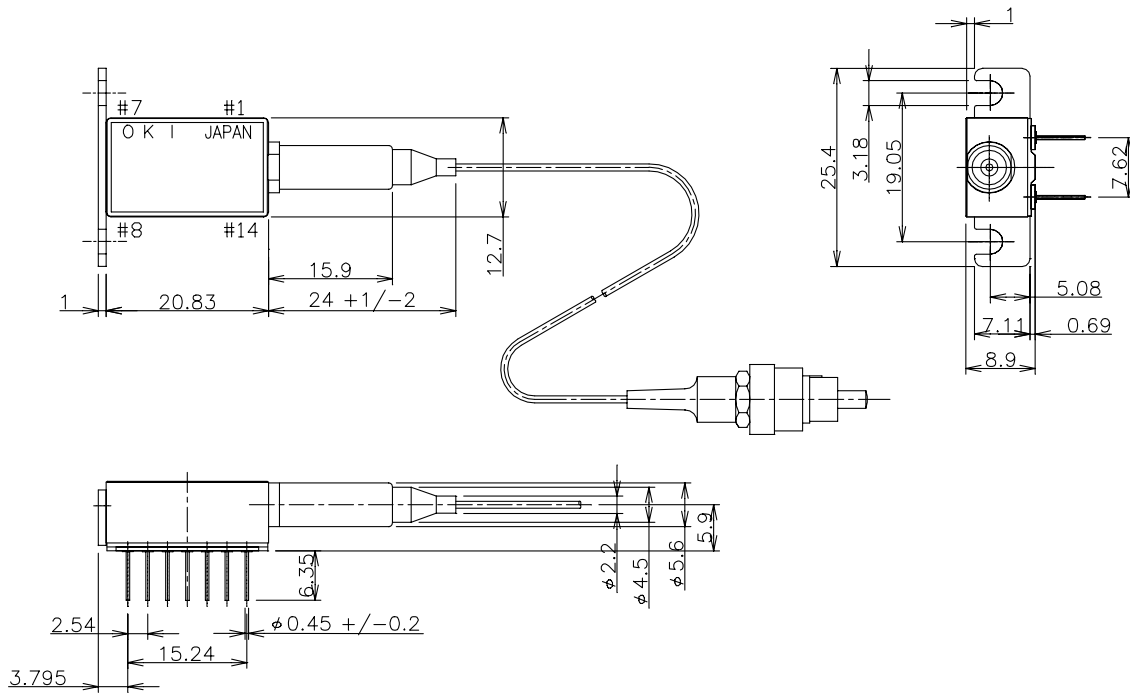
Parameter	Specifications	Unit
Type	SMF	---
Mode Field Diameter	10±1	μm
Cladding Diameter	125±2	μm
Jacket Diameter	900	μm
Length	1 (Min.)	m
Connector	FC/SPC	---

**7.ORDERING INFORMATION****8.ATTACHED DATA (at 25°C )**

- (1) If-Po graph (2) spectrum graph at Po=50mW
- (3) threshold current ( Ith ) (4) operating current (Iop)
- (5) center wavelength( $\lambda_c$ ) at Po=50mW (6) Spectral Width( $\sigma$ )

9.OUTLINE DRAWING

All dimensions in millimeters  
 Tolerances unless noted +/-0.5  
 Package Type 204



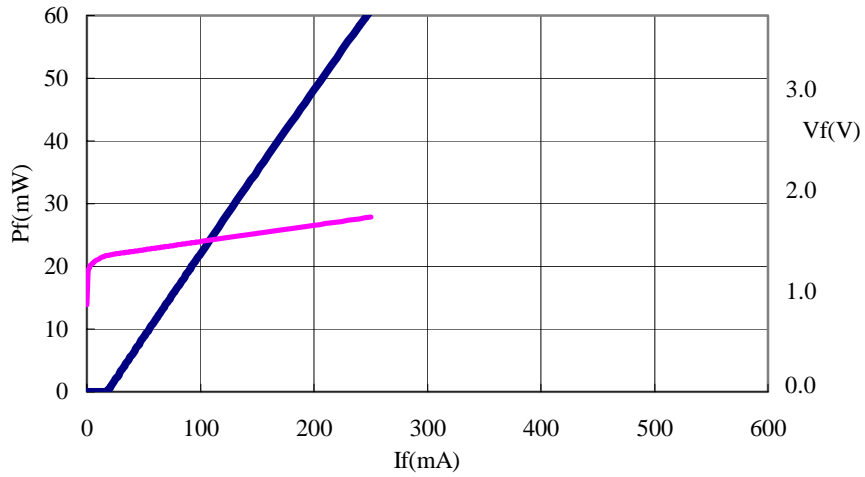
Package Pinout

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

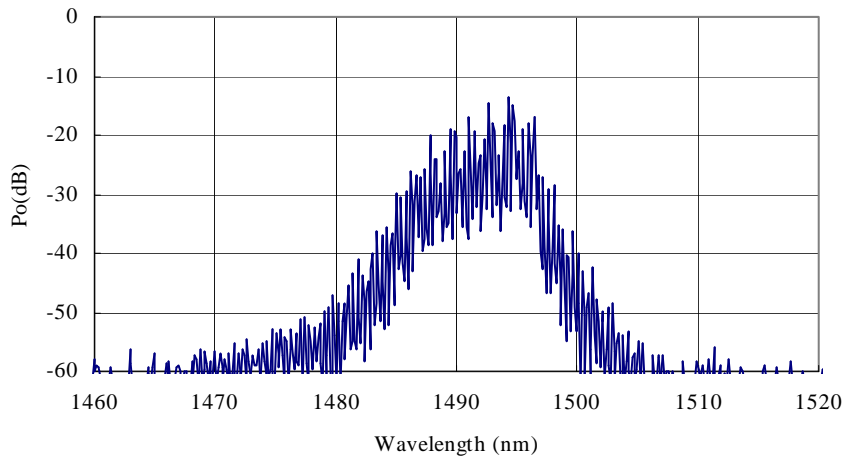
### 10 .Typical characteristics

Test Sample:OL4204N-50-P10-W90

Electrical and Optical characteristics



Spectrum



**For LD****SAFETY INFORMATION ON THIS PRODUCT**

<p><b>Warning</b></p> <p>Laser Beam</p>	<p>A laser beam is emitted from this laser diode during operation. The invisible or visible laser beam, directly or indirectly, may cause injury to the eye or loss of eyesight.</p> <p>Do not look directly into the laser beam.</p> <p>Avoid exposure to the laser beam, any reflected or collimated beam.</p>
<p><b>Caution</b></p> <p>GaAs Product</p>	<p>The product contains gallium arsenide, GaAs. GaAs vapor and powder are hazardous to human health if inhaled, ingested or swallowed.</p> <p>Do not destroy or burn the product.</p> <p>Do not crush or chemically dissolve the product.</p> <p>Do not put the product in the mouth.</p> <p>Observe related laws and company regulations when discarding this product. The product should be excluded from general industrial waste or household garbage.</p>
<p><b>Caution</b></p> <p>Optical Fiber</p>	<p>A glass-fiber is attached on the product. Handle with care.</p> <p>When the fiber is broken or damaged, handle carefully to avoid injury from the damaged part or fragments.</p>

**OKI Electronics Components**

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