975 nm, Fiber-Bragg-Grating-Stabilized Pump Laser

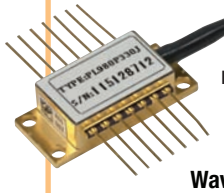
The PL980P330J Pigtailed Laser Diode consists of a field-proven, 975 nm quantum-well laser chip in a 14-pin butterfly package. The compact design includes an integrated thermoelectric cooler, a monitor photodiode, and a wavelength-stabilizing fiber Bragg grating (FBG), which ensures very little drift in the output wavelength as the temperature and current are varied. The laser is coupled into a single mode fiber pigtail (SMF: HI1060 fiber) with an FC/APC connector. This laser diode's patented device structure (F000038US01) is Telecordia GR-468-CORE qualified.

Features

- 330 mW at Fiber Output
- Fiber Bragg Grating Wavelength Stabilized
- Internal Thermoelectric Cooler and Photodiode Monitor
- Compact, Low-Profile 14-Pin Butterfly Package
- SM Fiber with FC/APC Connector
- Patented Device Structure: F000038US01
- Telecordia GR-468-CORE Qualified

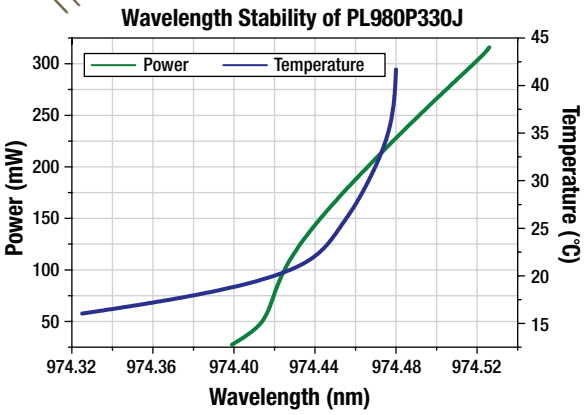
Applications

- Fiber Laser Pump
- Erbium-Doped Fiber Amplifiers (EDFAs)



PL980P330J

CAUTION: ELECTROSTATIC SENSITIVE



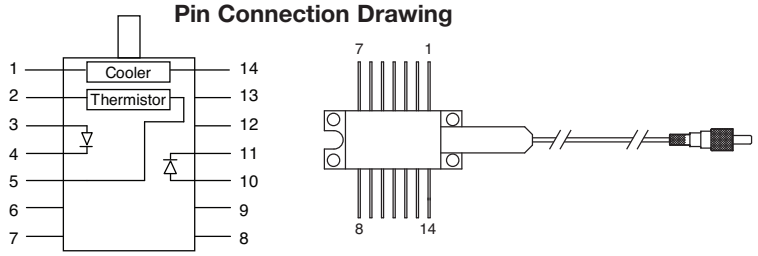
Characteristics (T_C = 25 °C, P = 330 mW)

SPECIFICATION	SYMBOL	MIN	TYPICAL	MAX
Center Wavelength	λ_C	974 nm	975 nm	976 nm
Operating Current	I_{OP}	–	600 mA	720 mA
Output Power	P_{OUT}	330 mW	–	–
Spectral Bandwidth (FWHM)	$\Delta\lambda$	–	0.5 nm	1.0 nm
Spectral Bandwidth (@ 95% Power)	$\Delta\lambda$	–	–	2.0 nm
Threshold Current	I_{TH}	–	75 mA	90 mA
Forward Voltage @ IOP	V_F	–	1.7 V	1.9V
Kink-Free Power	P_{Kink}	363 mW	–	–
Spectral Shift with Temperature	$\Delta\lambda/\Delta T$	–	–	0.02 nm / °C
Side Mode Suppression	–	-13 dB	–	–
Monitor Responsivity	R_{PD}	1 µA / mW	–	10 µA / mW
TEC Operation				
TEC Current	I_{TEC}	–	1.2 A	1.8 A
TEC Voltage	V_{TEC}	–	2.0 V	3.0 V
Thermistor Resistance	R_{TH}	9.5 kΩ	10 kΩ	10.5 kΩ
Thermistor Constant	B	3600 K	3920 K	4200 K

Absolute Maximum Ratings

SPECIFICATION	SYMBOL	MIN	MAX
Storage Temperature	T_S	-40 °C	85 °C
Operating Temperature	T_{CASE}	-20 °C	75 °C
Soldering Temperature*	–	–	250 °C
LD Forward Current	I_F	–	800 mA
LD Reverse Voltage	V_R	–	2 V
TEC Current	I_{TEC}		2.5 A
TEC Voltage	V_{TEC}	–	3.2 V
Monitor Reverse Voltage	V_{PD}	–	10 V
ESD Damage	V_{ESD}	–	500 V
Fiber Pigtail Bend Radius	–	25 mm	–

Pin Connection Drawing



1	Cooler(+)	14	Cooler(-)
2	Thermistor	13	Case Ground
3	PD Anode	12	NC
4	PD Cathode	11	Laser Cathode
5	Thermistor	10	Laser Anode
6	NC	9	NC
7	NC	8	NC

Compatible with LM14S2 Butterfly Mount Using Type 1 Adapter Card (See Page 1482)

ITEM #	$	£	€	RMB	DESCRIPTION
PL980P330J	$ 1,648.00	£ 1,186.56	€ 1.433,76	¥ 13,134.56	975 nm, 330 mW FBG-Stabilized Pump Laser, SM Fiber, FC/APC