

## NLK1C5EAAA

1530-1565 nm DFB laser diode in a butterfly-type 14 pin package with thermo-electric cooler.  
Pigtail fiber is connectorized with an FC/PC connector.

### FEATURES

- \* Wavelength Range 1530 - 1565 nm, ITU-T grid wavelength
- \* Fiber Output Power 10mW

### ABSOLUTE MAXIMUM RATINGS(T<sub>sub</sub>=25deg.C)

Parameter	Symbol	Ratings	Units
Laser diode reverse voltage	V <sub>R</sub>	2.0	V
Laser diode forward current	I <sub>F</sub>	225	mA
Operating case temperature	T <sub>case</sub>	-5 to 70	deg.
Storage temperature	T <sub>stg</sub>	-40 to 85	deg.
Photodiode reverse voltage	V <sub>DR</sub>	10	V
Photodiode forward current	I <sub>DF</sub>	10	mA
Peltier current	I <sub>P</sub>	1.4	A

### ELECTRICAL/OPTICAL CHARACTERISTICS(T<sub>sub</sub>=25deg.C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Units
Forward voltage	V <sub>F</sub>	I <sub>F</sub> =30mA		1.2	1.6	V
Threshold current	I <sub>(TH)</sub>	CW		10	20	mA
Fiber output power	φ <sub>e</sub>	CW, I <sub>F</sub> =80mA	10			mW
Peak wavelength	λ <sub>p</sub>	CW, φ <sub>e</sub> =10mW	-1	ITU-T	+1	nm
Spectral linewidth*	Δν	CW, φ <sub>e</sub> =10mW		2		MHz
Side mode suppression ratio	SMS	CW, φ <sub>e</sub> =10mW	35			dB
Monitoring Current(PD)	I <sub>R(E)</sub>	CW, φ <sub>e</sub> =10mW	0.1			mA
Dark current(PD)	I <sub>r(0)</sub>	CW, V <sub>DR</sub> =5V			100	nA
Tracking error	E <sub>R</sub>	I <sub>R(E)</sub> =constant	-0.5		+0.5	dB
Cooling capacity*	ΔT <sub>PE</sub>	φ <sub>e</sub> =10mW, T <sub>case</sub> =70deg	45			deg.
Peltier current	I <sub>PE</sub>	T <sub>case</sub> =-5 to 70deg.			1	A
Peltier voltage	V <sub>PE</sub>	T <sub>case</sub> =-5 to 70deg.			2	V
Thermister resistance*	R	T <sub>sub</sub> =25deg.		10		kΩ
Isolation*	I <sub>s</sub>	T <sub>sub</sub> =25deg.		30		dB

$$\Delta T = |T_{case} - T_{sub}|$$

\* Data is not attached.



### WARNING

If you plan to use these products in equipment which could endanger lives in the event of a product failure, please consult an NEL engineer before usage. Improper application of these products may endanger life. To avoid possible injury, make certain these products are used in a redundant configuration.

- 1 These products are subject to export regulations and restrictions set force by the Japanese Government.
- 2 NTT Electronics Corporation reserves the right to make changes in design, specification or related information at any time without prior notice.
- 3 The characteristics which are not specified in the data sheet are not guaranteed.
- 4 The characteristics under the different operation conditions from the ones specified in the data sheet are not guaranteed.