

NLK5B5EBKA

High speed 1310 nm DFB laser diode in a K-connector package with 50Ω matching resistor, choke coil, 30 dB isolator and thermo-electric cooler. Pigtail fiber is connectorized with FC/PC connector.

FEATURES

* Wavelength Range	1310nm
* Fiber Output Power	4mW
* Modulation	10 Gb/s
* RF Connector	K-connector

ABSOLUTE MAXIMUM RATINGS (T_{sub}=25deg. C)

Parameter	Symbol	Ratings	Units
Laser diode reverse voltage	V _R	2.0	V
Fiber output power	Φ _e	15	mW
Laser diode forward current	I _F	150	mA
Operating case temperature	T _{case}	-5 to 70	deg. C
Storage temperature	T _{stg}	-40 to 85	deg. C
Photodiode reverse voltage	V _{DR}	10	V
Photodiode forward current	I _{DF}	10	mA
Peltier current	I _P	1.4	A

ELECTRICAL/OPTICAL CHARACTERISTICS (T_{sub}=25deg.)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Units	Data
Forward voltage	V _F	I _F =30mA		1.2	1.6	V	Deliver
Threshold current	I _(TH)	CW		15	30	mA	Deliver
Operating current above threshold	ΔI _F	CW, Φ _e =4mW			40	mA	Deliver
Fiber output power	Φ _e	CW, ΔI _F =40mA	4	5		mW	Deliver
Peak wavelength	λ _p	CW, Φ _e =4mW	1280	1310	1340	nm	Deliver
Side mode suppression ratio	SMS	CW, Φ _e =4mW	30			dB	Deliver
Monitoring current(PD)	I _{R(E)}	CW, V _{DR} =5V, Φ _e =4mW	0.1			mA	Deliver
Dark current(PD)	I _{r(0)}	CW, V _{DR} =5V			100	nA	Deliver
Tracking error	E _R	Note(1), I _{R(E)} =constant	-0.5		+0.5	dB	Deliver
Spectral width	Δλ	Note(2), -20dB		0.4	0.5	nm	Option
Rise time	t _r	Note(2), 10%-90%		25	35	ps	Option
Fall time	t _f	Note(2), 10%-90%		35	45	ps	Option
Cut-off frequency	f _c	ΔI _F =40mA	15	18		GHz	Option
Resonance frequency	f _r	ΔI _F =40mA		15		GHz	
Extinction ratio	ER	Note(2)	8.2			dB	Option
Electrical return loss	S ₁₁	ΔI _F =40mA, @ </=8GHz	10			dB	Option
Cooling Capacity	ΔT _{PE}	Φ _e =4mW, T _{case} =70deg. C	50	55		deg. C	Option
Peltier Current	I _{PE}	T _{case} =-5 to 70deg. C			1.2	A	Option
Peltier Voltage	V _{PE}	T _{case} =-5 to 70deg. C			2	V	Option
Thermister Resistance	R	T _{sub} =25deg. C		10		kΩ	
Isolation	I _s	T _{sub} =25deg. C		30		dB	

$$\Delta I_F = I_F - I_{(TH)}, \Delta T = |T_{case} - T_{sub}|$$

Put DC into the Choke coil only

Note(1) : $E_R = 10 \log((\Phi_{e70deg.C} - \Phi_{e25deg.C}) / \Phi_{e25deg.C})$ Note(2) : 9.95328Gb/s, 2²³-1PRBS, I_{p-p}=40mA



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.