CW Light Source - Distributed feedback (DFB) lasers -

FEATURES

* Semiconductor-based distributed feedback (DFB) lasers for telecom and spectroscopy applications
* Available wavelengths range between 1260 nm and 2350nm
* High Power or Narrow Linewidth models are available

APPLICATIONS

* Telecommunications (DWDM, CWDM)
* Test and measurement
* Fiber optic sensors
* Near - IR gas analysis
* Tunable diode laser absorption spectroscopy (TDLAS)

Products Lineup/Model Number

CW-DFB modules

	Wavelength(nm)	Power	
		10mW	20mW
O-band	1260-1360	NLK1B5EAAA	NLK1B5GAAA
E-band	1360-1460	NLK1E5EAAA	NLK1E5GAAA
S-band	1460-1530	NLK1S5EAAA	NLK1S5GAAA
C-band	1530-1565	NLK1C5EAAA	NLK1C5GAAA
L-band	1565-1625	NLK1L5EAAA	NLK1L5GAAA
U-band	1625-1675	NLK1U5EAAA	(NLK1U5FAAA) (15mW)

* TO-Can PKG are also available
* Longer wavelength (1675-2350 nm) LDs are also available. Please contact us for details.

NLK1556STB (S-band)

1460-1530 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 1460 - 1530 nm, ITU-T grid wavelength
* Fiber Output Power 20mW

LIMITING VALUES(T_{sub}=25deg.)

Parameter	Symbol	Ratings	Units
Laser diode reverse voltage	V_R	2.0	V
Laser diode forward current	I_F	225	mA
Operating case temperature	T_{case}	-5 to 70	deg.
Storage temperature	T_{stg}	-40 to 85	deg.
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
Forward voltage	V_F	I_F=30mA		1.2	1.6	V
Threshold current	$I_{(TH)}$	CW		10	20	mA
Fiber output power	ϕ_e	CW,I_F=130mA	20			mW
Peak wavelength	λ_p	CW,ϕ_e=20mW	-1	ITU-T	+1	nm
Spectral linewidth*	$\Delta\nu$	CW,ϕ_e=20mW		2		MHz
Side mode suppression ratio	SMS	CW,ϕ_e=20mW	35			dB
Monitoring Current(PD)	$I_{R(E)}$	CW,ϕ_e=20mW	0.1			mA
Dark current(PD)	$I_{r(0)}$	CW,V_{DR}=5V			100	nA
Tracking error	E_R	$I_{R(E)}$=constant	-0.5		+0.5	dB
Cooling capacity*	ΔT_{PE}	ϕ_e=20mW,T_{case}=70deg	45			deg.
Peltier current	I_{PE}	T_{case}=-5 to 70deg.			1	A
Peltier voltage	V_{PE}	T_{case}=-5 to 70deg.			2	V
Thermister resistance*	R	T_{sub}=25deg.		10		kΩ
Isolation*	I_s	T_{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.

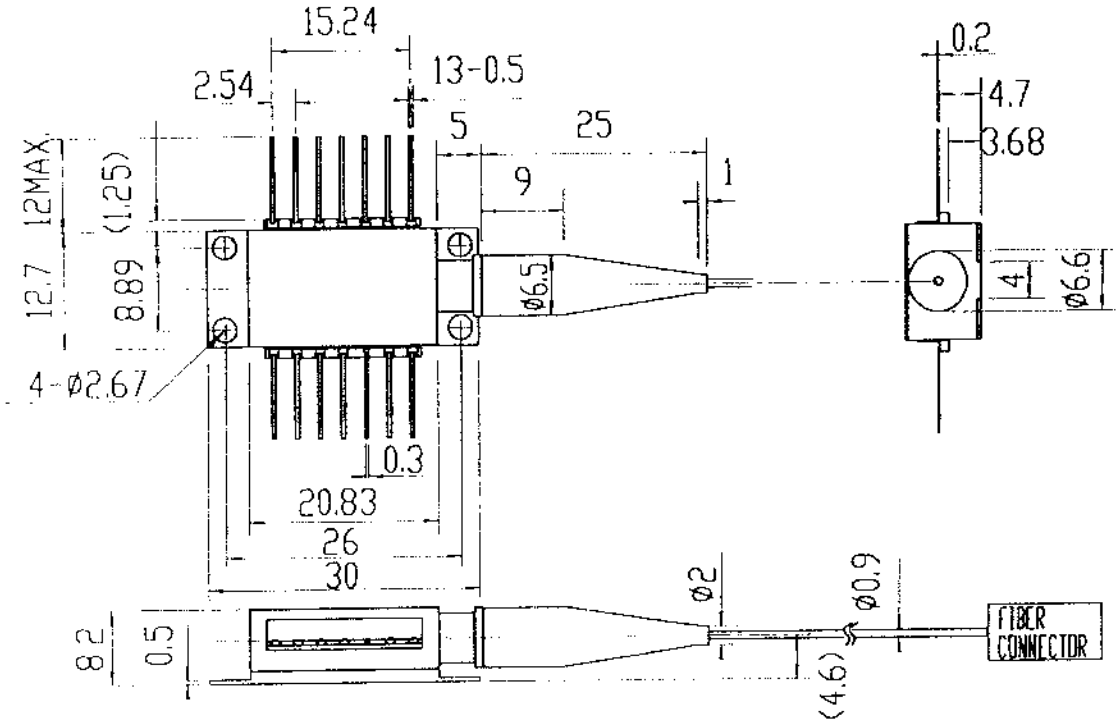
1 These products are subject to export regulations and restrictions set force by the Japanese Government.

2 NTT Electronics Corporation reserves the right to make changes in design,specification or related information at any time without prior notice.

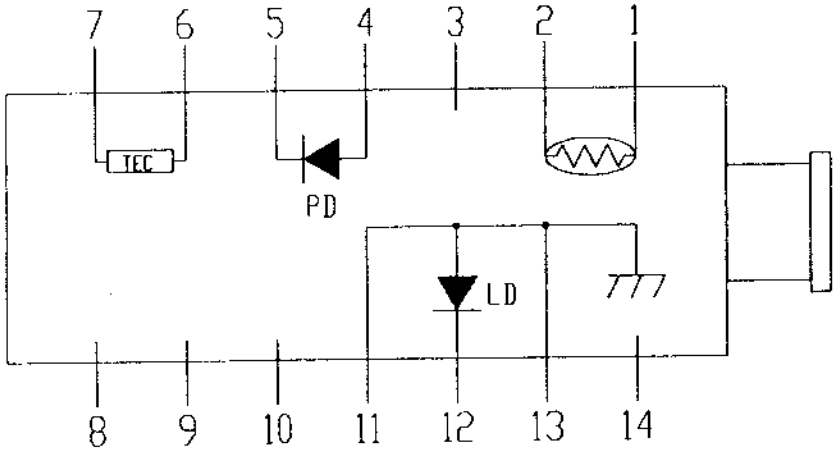
Module Type : STB

NEL

Outline Diagram [mm]



Schematic Diagram (Top View)



Pin Connection

No.	Description	No.	Description
1	Thermistor	8	NC
2	Thermistor	9	NC
3	NC	10	NC
4	PD Anode (-)	11	Case Ground
5	PD Cathode (+)	12	LD Cathode (-)
6	Cooler (+)	13	Case Ground (LD Anode)
7	Cooler (-)	14	NC