DFB Laser

2330 nm DFB-LD for CO gas sensing

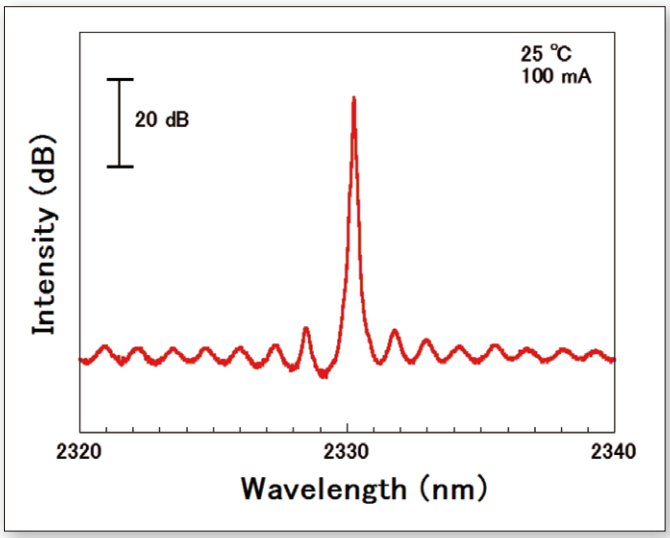
KELD1G5BAAH (2330)

Laser structure

- ✓ InP-based MQW DFB lasers

Characteristics

- ✓ Wavelength: 2320 – 2340 nm
- ✓ High SMSR
- ✓ High output power
- ✓ Good thermal properties



Absolute maximum ratings (T_{sub}=25deg.C)

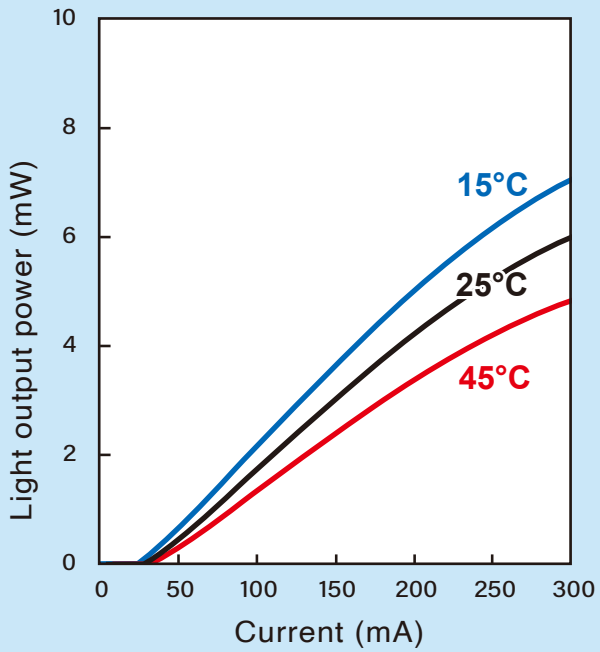
Parameter	Symbol	Ratings	Units
Laser diode reverse voltage	V_R	2.0	V
Laser diode forward current	I_F	300	mA
Operating case temperature	T_{case}	-5 to 70	deg.C
Storage temperature	T_{stg}	-40 to 85	deg.C
Peltier current	I_P	1.4	A

Electrical / Optical Caracterisitics (T_{sub}=25deg.C)

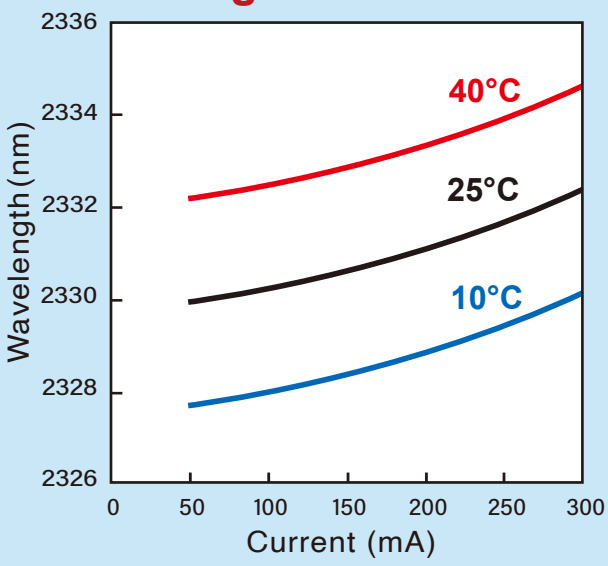
Parameter	Symbol	Condition	Min.	Typ.	Max.	Units
Forward voltage	V_F	I_F=30mA			1.6	V
Threshold current	$I_{(TH)}$	CW			60	mA
Fiber output power	ϕ_e	CW, I_F=130mA	2			mW
Peak wavelength	λ_p	CW, ϕ_e=2mW		2330		nm
Side mode suppression ratio	SMS	CW, ϕ_e=2mW	25			dB
Cooling capacity	ΔT_{PE}	ϕ_e=2mW, T_{case}=70deg.C	45			deg.C
Peltier current	I_{PE}	T_{case}=-5 to 70deg.C			1	A
Peltier voltage	V_{PE}	T_{case}=-5 to 70deg.C			2	V
Thernister resistance	R	T_{sub}=25deg.C		10		kΩ

DFB Laser

IL Curve

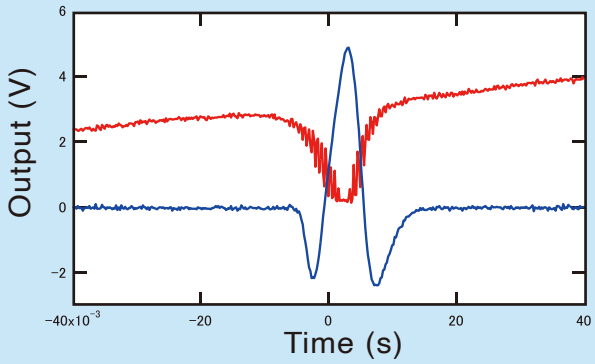


Tuning Characteristics

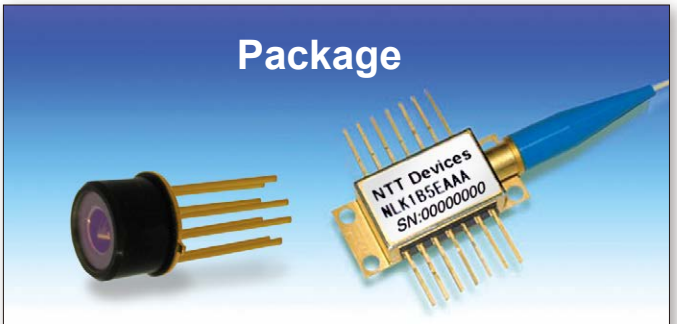


dλ/dI: ~8pm @150mA
dλ/dT: 0.15nm/K

CO WMS 2f signal



Package



TEC-TO-Can

Butterfly package

NTT Innovative Devices

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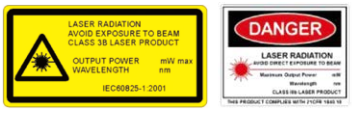
Sensing application website



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