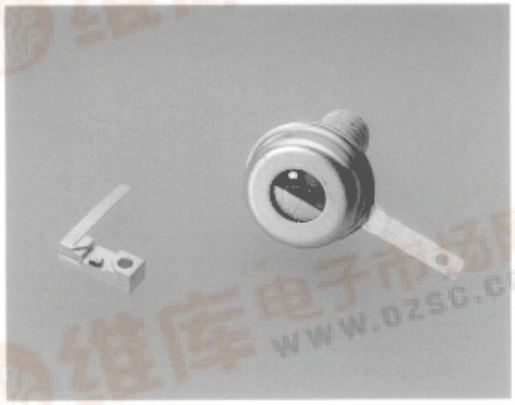
1.3μm Laser Diode
OL301A, OL303A

DESCRIPTION

OKI OL301A, OL303A are 1.3μm InGaAsP/InP laser diodes developed as light sources for fiber-optic communications and optical equipment.

FEATURES

- Low threshold current, typical 20mA
- High temperature operation, up to 70°C
- Stable fundamental transverse mode
- Long life, high reliability



ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

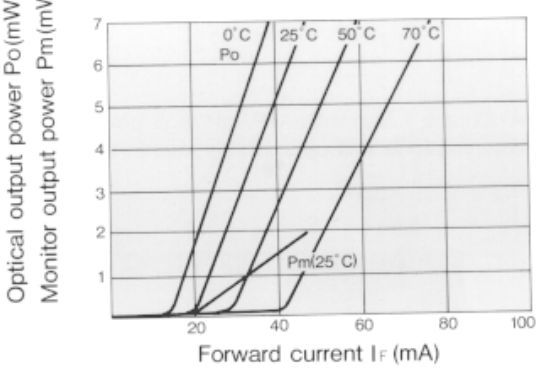
Parameter	Symbol	Ratings	Unit
Optical Output	Po	10	mW
Reverse Voltage	Vr	2	V
Operating Temperature	Topr	−20～+70	°C
Storage Temperature	Tstg	−40～+100	°C

OPTICAL AND ELECTRICAL CHARACTERISTICS

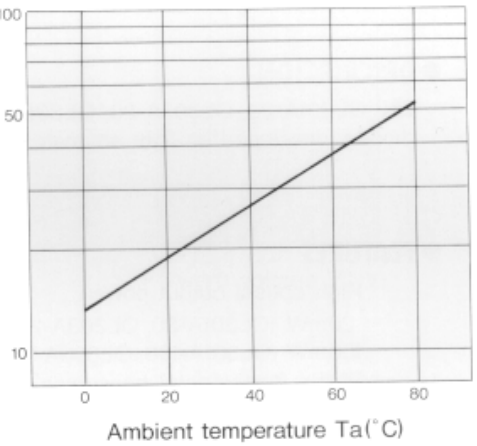
(Ta=25°C)

Parameter	Symbol	Test Conditions	MIN	TYP	MAX	Unit
Threshold Current	Ith	—	—	20	35	mA
Optical Output	Po	IF=Ith+30mA	5	7	—	mW
Monitor Output	Pm	Po=7mW	1	2.5	—	mW
Forward Voltage	VF	IF=Ith+30mA	—	—	2	V
Peak Wavelength	λp	Po=7mW	1280	1310	1330	nm
Spectral Half Width	Δλ	Po=7mW	—	2	5	nm
Full Angle at Half Maximum (parallel)	$\theta_{\parallel}$	Po=7mW		25	35	degree
Full Angle at Half Maximum (perpend.)	$\theta_{\perp}$	Po=7mW		35	45	degree
Rise Time	tr	Ibias=Ith	—	0.3	0.5	ns
Fall Time	tf	Po=7mW	—	0.5	0.8	ns

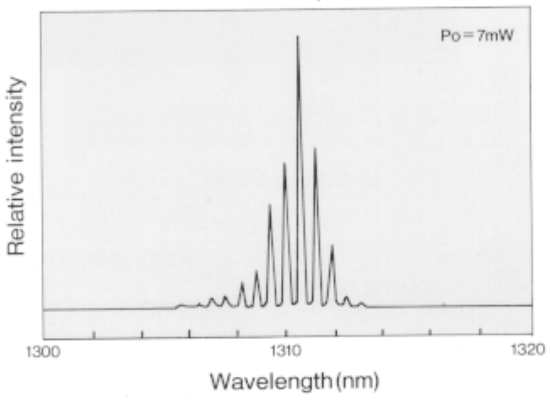
Opticul output vs. forward current



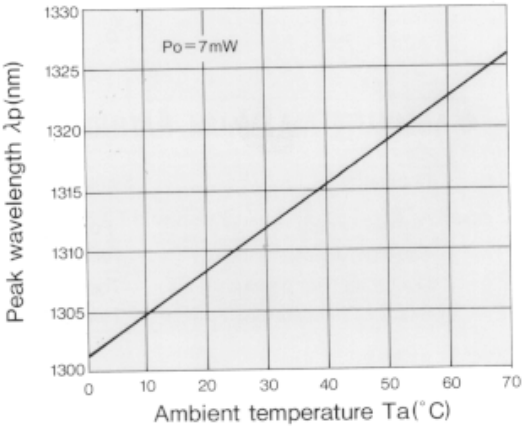
Temperature dependence of threshold current



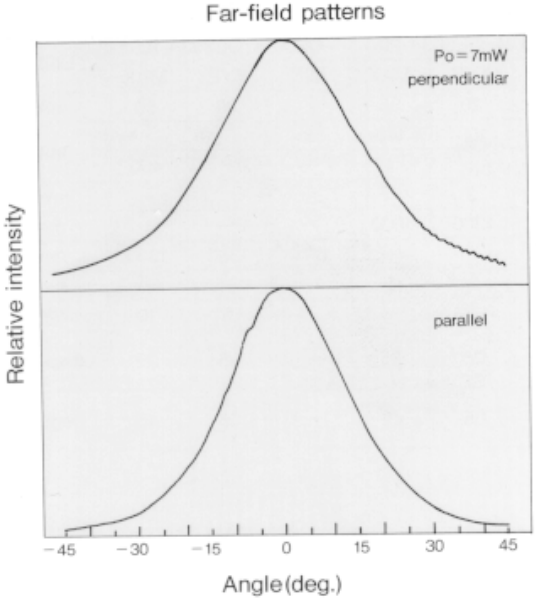
Emission spectrum



Temperature dependence of peak wavelength



Far-field patterns



Pulse response (Ta=25°C)