

## 980nm 50mW 40°C Laser Diode in TO-18 $\phi$ 5.6mm Package

Part No. LD980A50C14

### FEATURES

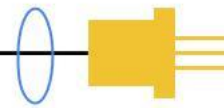
- 980nm 50mW laser diode
- Package: TO-18 (5.6mm)
- Multimode
- Low threshold current
- With monitoring PD

### ABSOLUTE MAXIMUM RATINGS

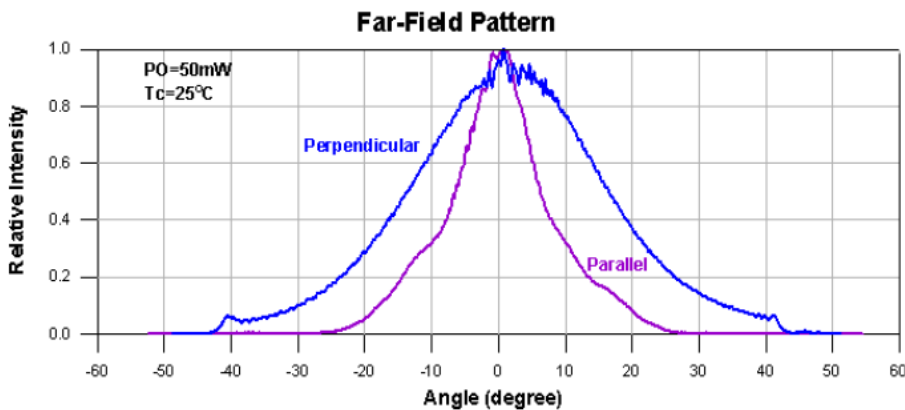
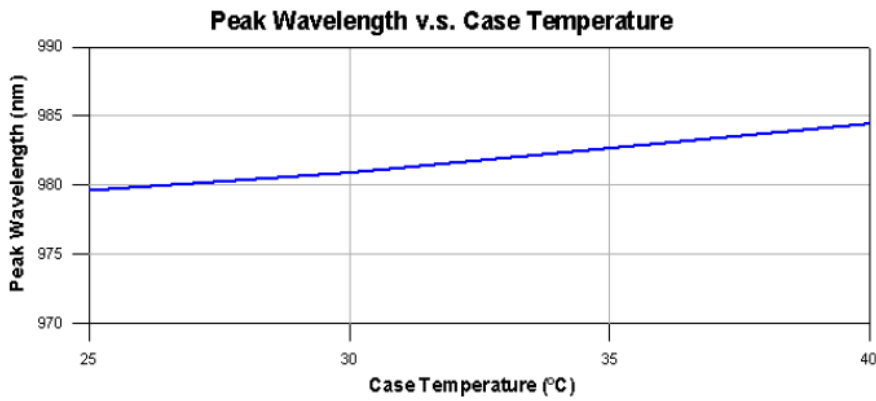
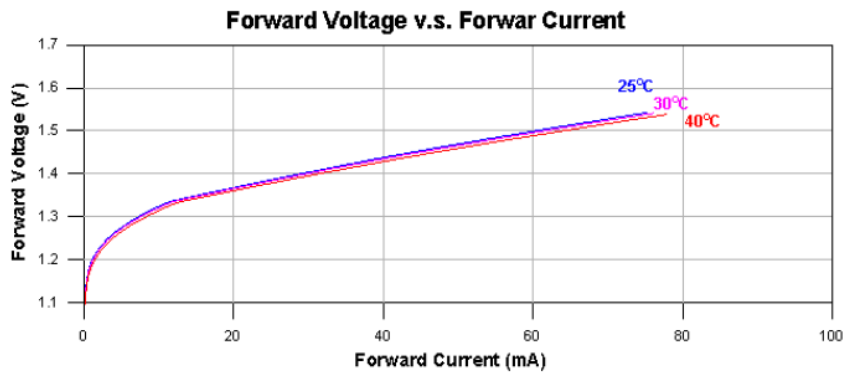
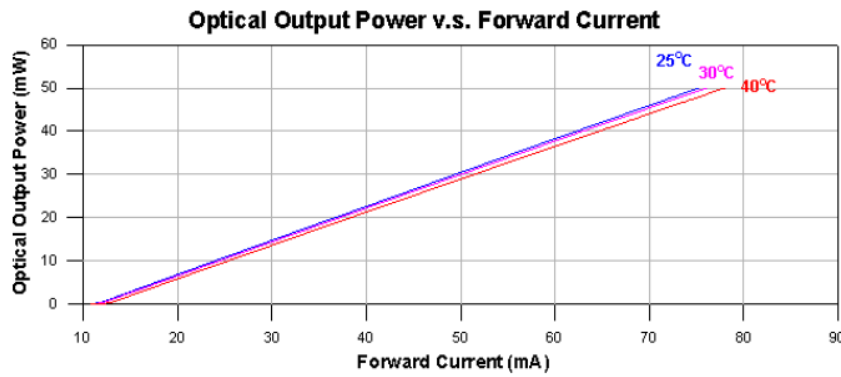
Parameter	Symbol	Rating	Unit
Optical output power	$P_O$	50	mW
Reverse voltage (LD)	$V_{RL}$	2	V
Reverse voltage (PD)	$V_{RD}$	30	V
Operating temperature	$T_{opr}$	-10 to +40	°C
Storage temperature	$T_{stg}$	-15 to +85	°C

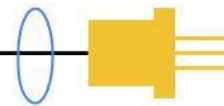
### ELECTRICAL AND OPTICAL CHARACTERISTICS ( $T_c = 25^\circ\text{C}$ )

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Lasing wavelength	$\lambda$	970	980	990	nm	$P_O = 50\text{mW}$
Threshold current	$I_{th}$	-	12	20	mA	-
Operating current	$I_{op}$	-	75	100	mA	$P_O = 50\text{mW}$
Operating voltage	$V_{op}$	1	1.5	2.1	V	-
Slope efficiency	$\eta$	0.5	0.8	-	mW/mA	$(30\text{mW}-10\text{mW})/(I_{30\text{mW}}-I_{10\text{mW}})$
Monitor current	$I_m$	0.1	0.3	0.5	mA	$P_O = 50\text{mW}$
Parallel divergence angle	$\Theta_{//}$	8	13	18	deg	$P_O = 50\text{mW}$
Perpendicular divergence angle	$\Theta_{\perp}$	25	30	35	deg	$P_O = 50\text{mW}$

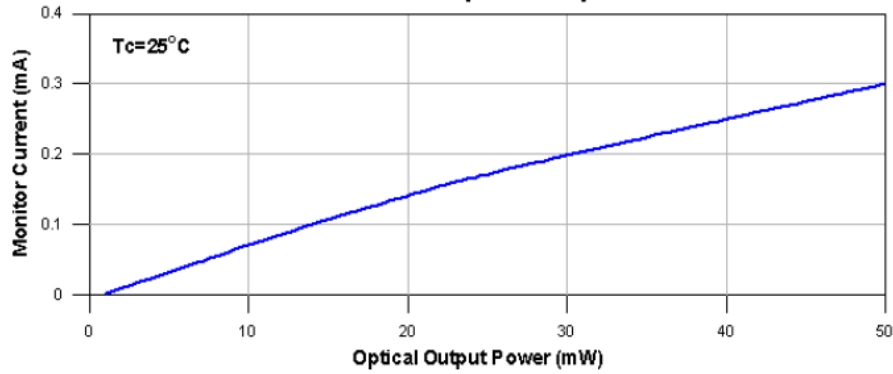


### TYPICAL CHARACTERISTICS

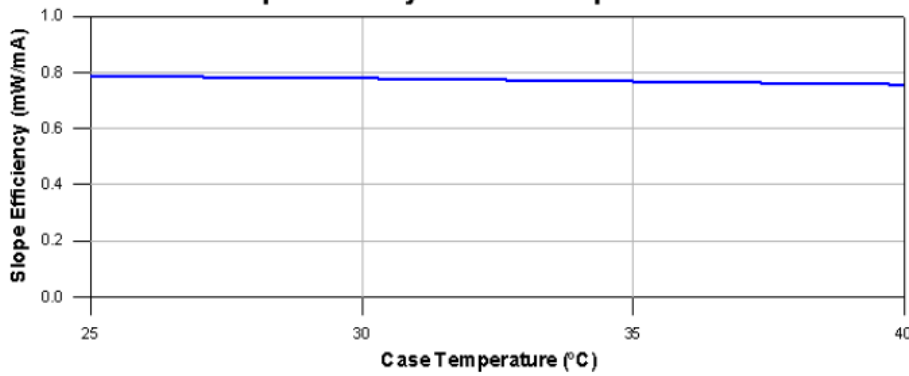




**Monitor Current v.s. Optical Output Power**



**Slope Efficiency v.s. Case Temperature**



**Threshold Current v.s. Case Temperature**

