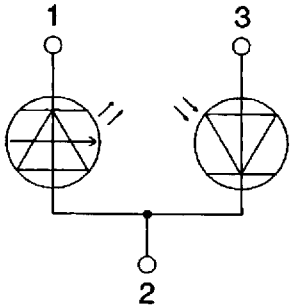
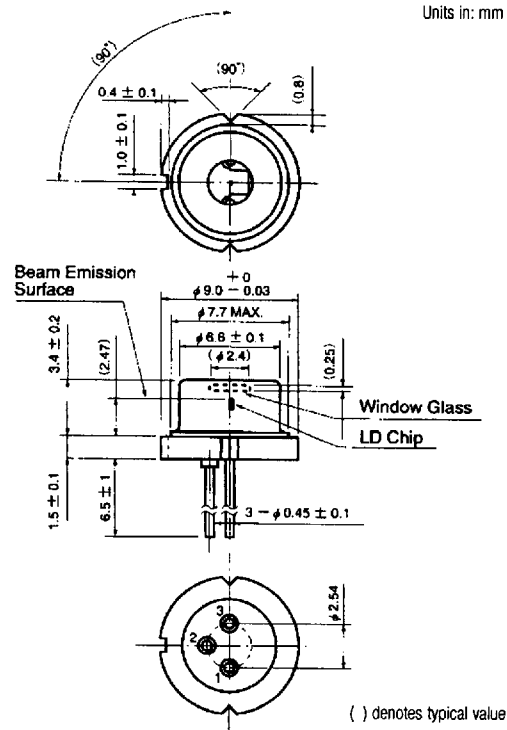


- Standard index guided type MQW InGaAlP VLD
- Package flange: $\varnothing 9\text{mm}$
- Applications include:
Bar code scanners, measurement systems,
alignment systems, etc.

Pin Connection



1. Laser diode cathode
 2. Laser diode anode
photodiode cathode
 3. Photodiode anode
- case and pin no. 2 are in common



JEDEC	—
EIAJ	—
TOSHIBA	15 — 783

Maximum ratings ($T_c=25^\circ\text{C}$)

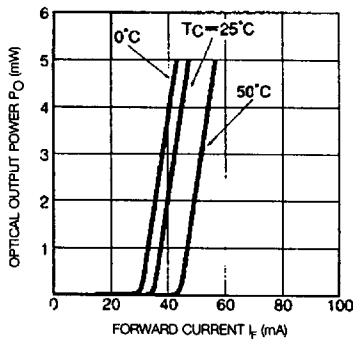
Characteristic	Symbol	Rating	Unit
Optical Output Power(CW)	P_o	5	mW
LD Reverse Voltage	$V_{R(LD)}$	2	V
PD Reverse Voltage	$V_{R(PD)}$	30	V
Operation Case Temperature	T_c	-10~50	$^\circ\text{C}$
Storage Temperature	T_{stg}	-40~85	$^\circ\text{C}$

Optical-electrical characteristics ($T_c=25^\circ\text{C}$)

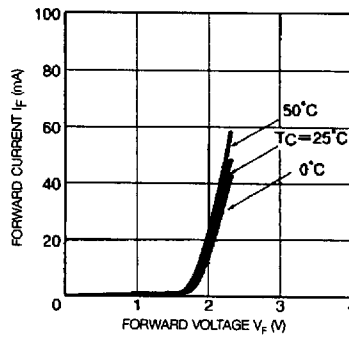
Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Threshold Current	I_{th}	CW operation	—	35	60	mA
Operation Current	I_{op}	$P_o=5\text{mW}$	—	50	75	mA
Operation Voltage	V_{op}	$P_o=5\text{mW}$	—	2.3	2.8	V
Lasing Wavelength	λ_p	$P_o=5\text{mW}$	650	660	670	nm
Beam Divergence	$\theta_{ }$	$P_o=5\text{mW}$	4	7.5	11	$^\circ$
	θ_{\perp}	$P_o=5\text{mW}$	23	29	35	$^\circ$
Monitor Current	I_m	$P_o=5\text{mW}$	0.30	1.1	1.9	mA
PD Dark Current	$I_{D(PD)}$	$V_R=5\text{V}$	—	—	100	nA
PD Total Capacitance	$C_{T(PD)}$	$V_R=5\text{V}, f=1\text{MHz}$	—	—	20	pF

Examples of Typical Characteristics

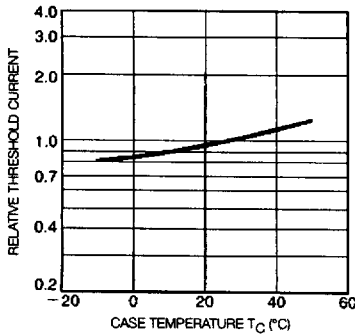
Optical Output Power vs. Forward Current



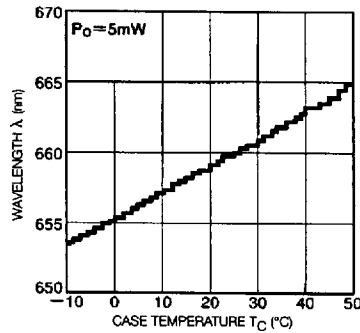
Forward Current vs. Forward Voltage



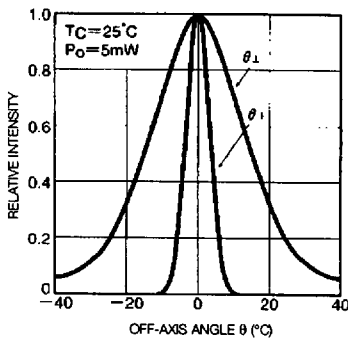
Case Temperature Dependence of Threshold Current



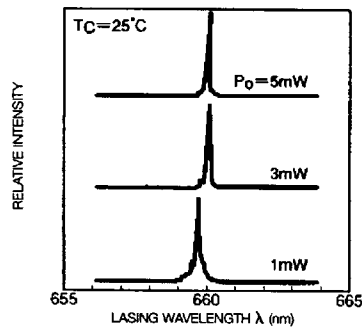
Case Temperature Dependence of Lasing Wavelength



Far-field Patterns



Lasing Spectrum



Monitor current vs. Optical Output Power

