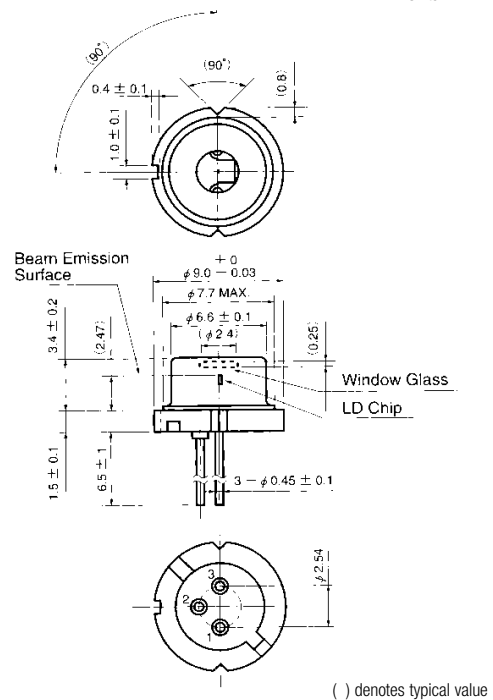
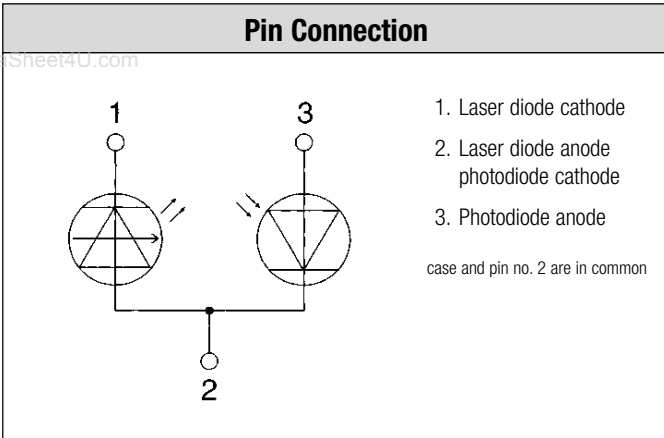


- Short wavelength index guided type MQW InGaAlP VLD
- Package flange:  $\varnothing 9\text{mm}$
- Applications include:  
Bar code scanners, alignment/measurement systems, medical systems, etc.



JEDEC	—
EIAJ	—
TOSHIBA	15 - 7B2

### Maximum ratings (Tc=25°C)

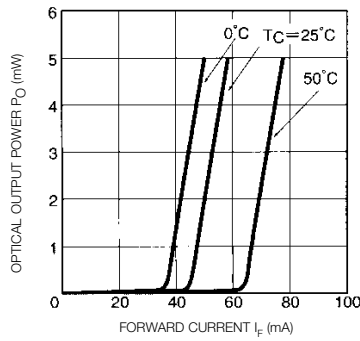
Characteristic	Symbol	Rating	Unit
Optical Output Power	$P_O$	5	mW
LD Reverse Voltage	$V_{R(LD)}$	2	V
PD Reverse Voltage	$V_{R(PD)}$	30	V
Operation Case Temperature	$T_C$	-10~50	°C
Storage Temperature	$T_{stg}$	-40~85	°C

### Optical-electrical characteristics (Tc=25°C)

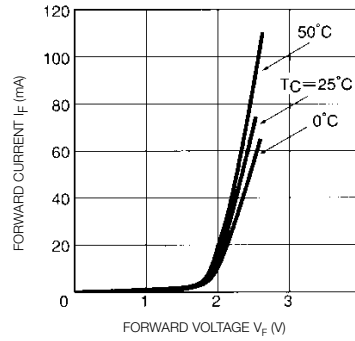
Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Threshold Current	$I_{th}$	CW operation	—	45	65	mA
Operation Current	$I_{op}$	$P_o=5\text{mW}$	—	60	80	mA
Operation Voltage	$V_{op}$	$P_o=5\text{mW}$	—	2.2	2.8	V
Lasing Wavelength	$\lambda_P$	$P_o=5\text{mW}$	640	650	660	nm
Beam Divergence	$\theta_{  }$	$P_o=5\text{mW}$	4	7.5	11	°
	$\theta_{\perp}$	$P_o=5\text{mW}$	25	30	35	°
Monitor Current	$I_m$	$P_o=5\text{mW}$	0.25	1.1	1.7	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

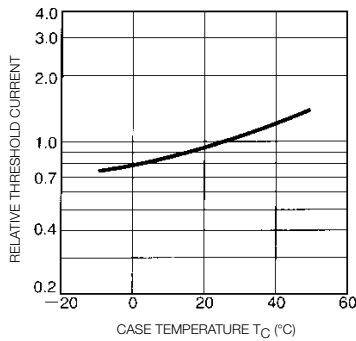
**Optical Output Power vs. Forward Current**



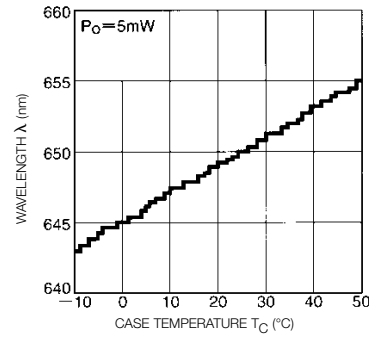
**Forward Current vs. Forward Voltage**



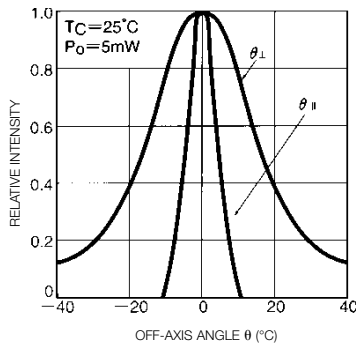
**Case Temperature Dependence of Threshold Current**



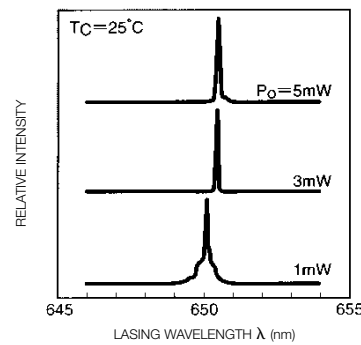
**Case Temperature Dependence of Lasing Wavelength**



**Far-field Patterns**



**Lasing Spectrum**



**Monitor Current vs. Optical Output Power**

