

# RED LASER DIODE



## DL-3107-165

Ver.1 Apr. 2001

### Features

- Short wavelength : 650 nm (Typ.)
- Low threshold current :  $I_{th} = 25\text{mA}$  (Typ.)
- High operating temperature : 5 mW at 70°C
- Frame type

### Applications

- DVD-AV, DVD-ROM

### Absolute Maximum Ratings

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

Parameter	Symbol	Ratings	Unit	
Light Output	CW	$P_o$	7	mW
Reverse Voltage	Laser	VR	2	V
	PD		30	
Operating Temperature	$T_{opr}$	-10 ~ +70	°C	
Storage Temperature	$T_{stg}$	-40 ~ +85	°C	

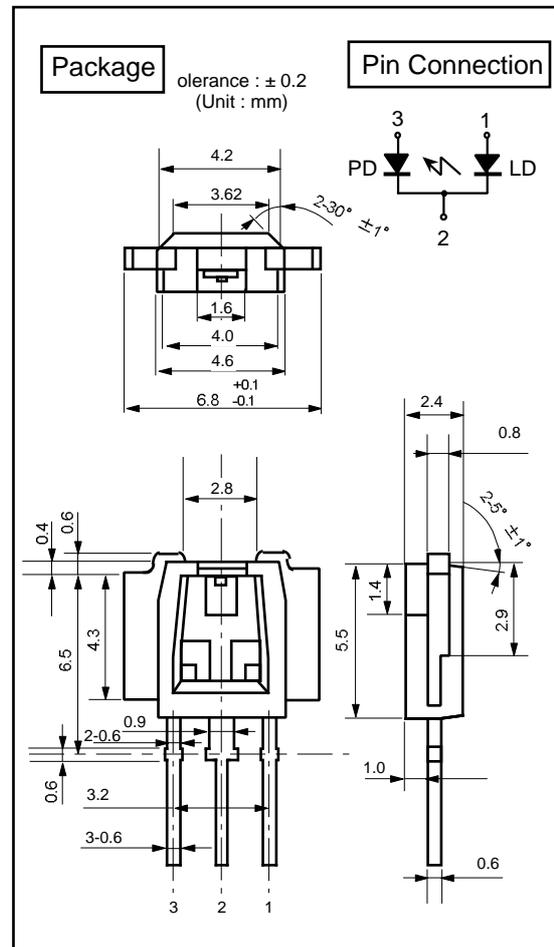
### Electrical and Optical Characteristics <sup>1) 2)</sup>

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

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit	
Threshold Current	$I_{th}$	CW	-	20	40	mA	
Operating Current	$I_{op}$	$P_o=5\text{mW}$	-	30	50	mA	
Operating Voltage	$V_{op}$	$P_o=5\text{mW}$	-	2.3	2.6	V	
Lasing Wavelength	$\lambda_p$	$P_o=5\text{mW}$	650	655	665	nm	
Beam <sup>3)</sup> Divergence	Perpendicular	$Q_v$	$P_o=5\text{mW}$	25	30	35	°
	Parallel	$Q_h$	$P_o=5\text{mW}$	7.0	8.0	10	°
Off Axis Angle	Perpendicular	$dQ_v$	-	-	$\pm 3$	°	
	Parallel	$dQ_h$	-	-	$\pm 2$	°	
Differential Efficiency	$dP_o/dI_{op}$	-	0.3	0.5	0.8	mW/mA	
Monitoring Output Current	$I_m$	$P_o=5\text{mW}$	0.05	0.1	0.3	mA	
Astigmatism	$A_s$	$P_o=5\text{mW}$	-	8	-	$\mu\text{m}$	

1) Initial values 2) All the above values are evaluated with Tottori Sanyo's measuring apparatus 3) Full angle at half maximum

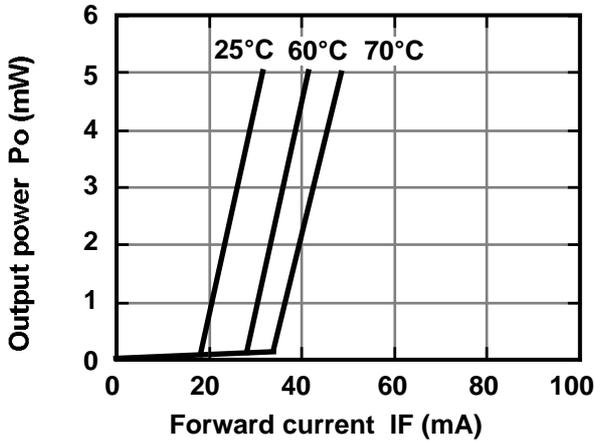
Note : The above product specification are subject to change without notice.



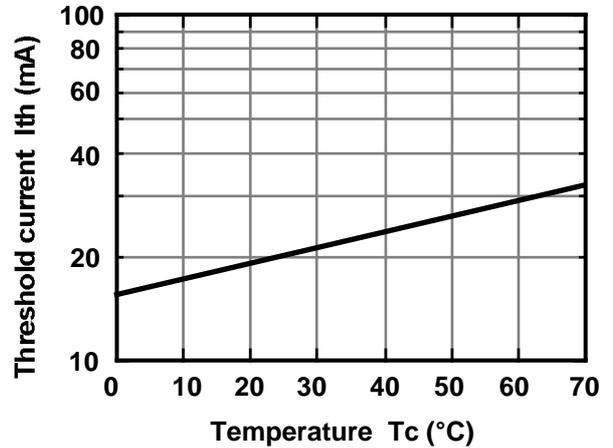
Tottori SANYO Electric Co., Ltd. Electronic Device Business Headquarters  
LED Division

## Characteristics

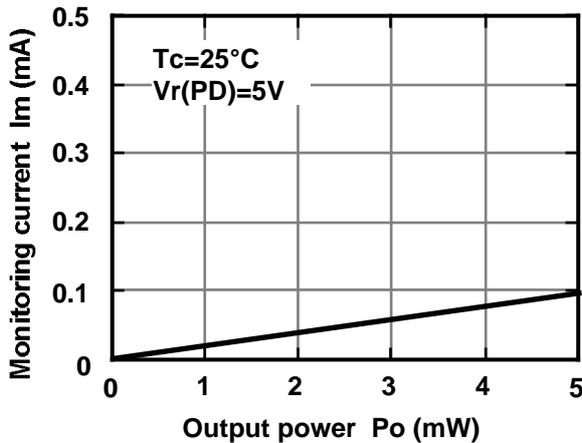
Output power vs. Forward current



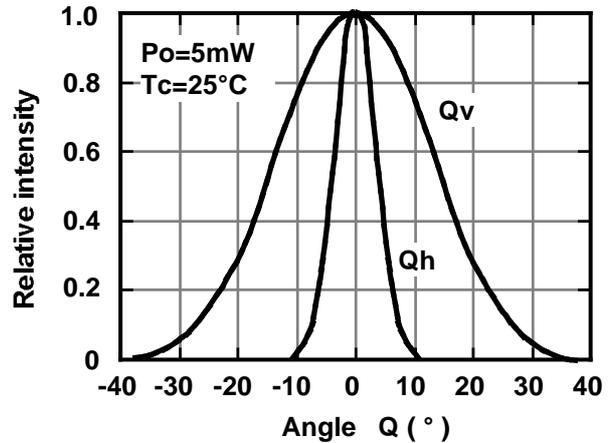
Threshold current vs. Temperature



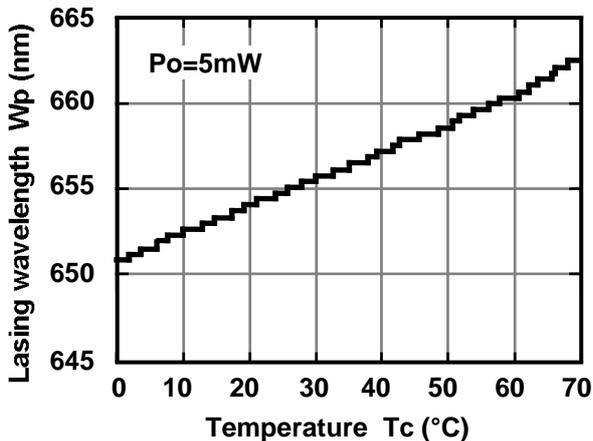
Monitoring current vs. Output power



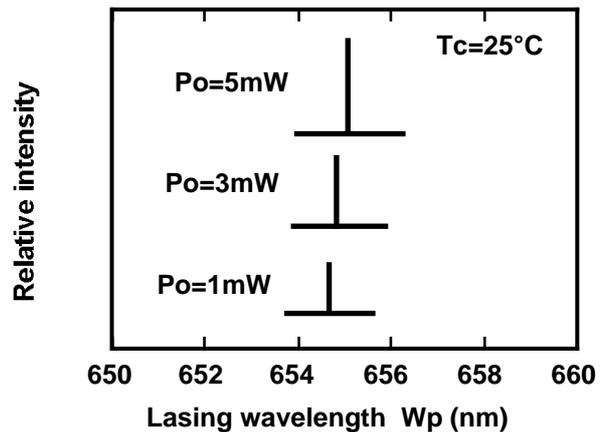
Beam divergence



Lasing wavelength vs. Temperature



Lasing wavelength vs. Output power



This is typical data and it may not represent all products.