

MED8P51 is a low failure rate infrared point source LED chip optimized for optical switches, encoders and other light source applications due to its oval-shaped emitting aperture.

### Features

- Oval-shaped emitting aperture (160×40μm)
- High output power
- High reliability

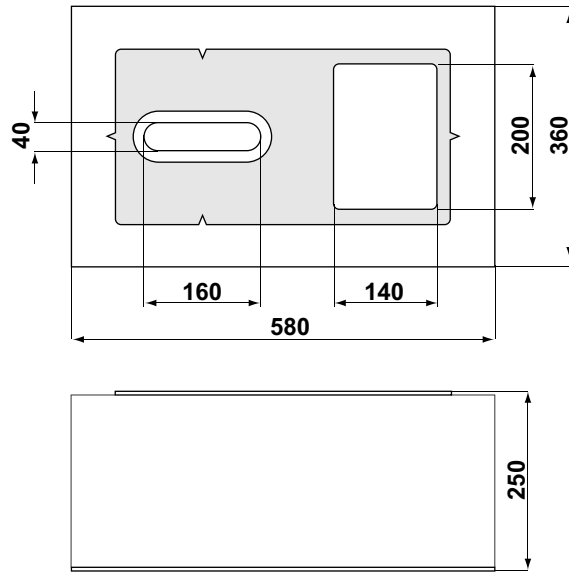
### Structure

- Material : AlGaAs/GaAs sub.
- Electrode : Au alloy (p,n)
- Emitting surface : p side

### Applications

- Optical encoders
- Optical switches
- Optical sensors etc

### Dimensional outline drawing(μm)



### Absolute Maximum Ratings\* (Ta=25°C)

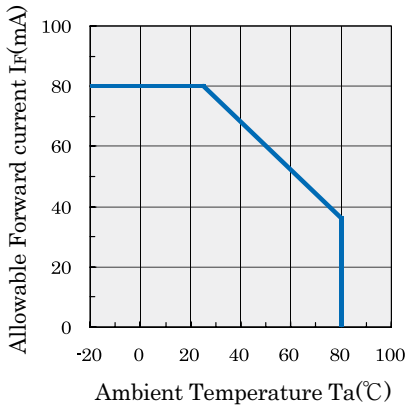
Parameter	Symbol	Rating	Unit
Power Dissipation	P <sub>D</sub>	150	mW
Forward Current	I <sub>F</sub>	80	mA
Reverse Voltage	V <sub>R</sub>	3	V
Operating Temperature	T <sub>opr</sub>	-20 ~ 80	°C
Storage Temperature	T <sub>stg</sub>	-30 ~ 100	°C

### Electro-Optical Characteristics\* (Ta=25°C)

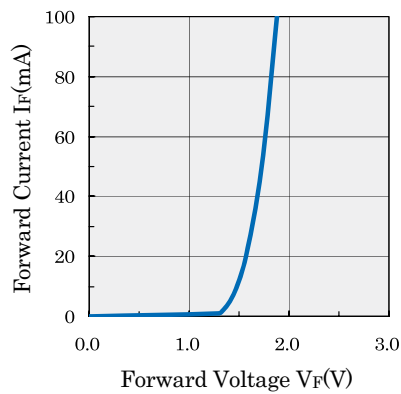
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =50mA	-	2.0	3.0	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =3V	-	-	10	μA
Output Power	P <sub>o</sub>	I <sub>F</sub> =50mA	1.2	2.0	-	mW
Central Emission Wavelength	λ <sub>c</sub>	I <sub>F</sub> =50mA	-	855	-	nm

\*As mounted on TO18 header and hermetically sealed

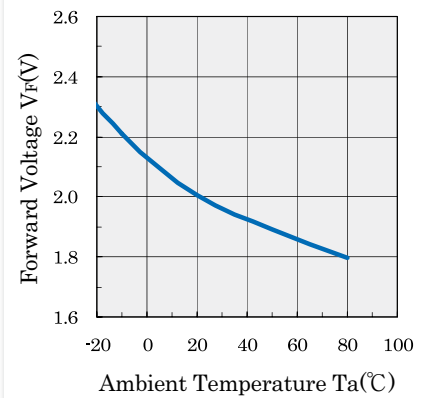
**Fig1.  $I_F / T_a$**



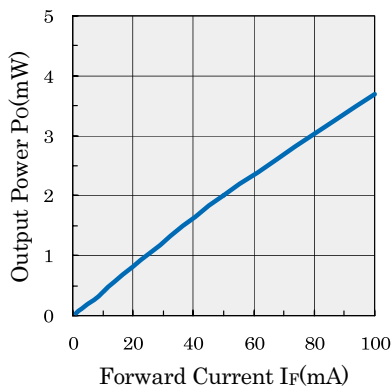
**Fig2.  $I_F / V_F$**



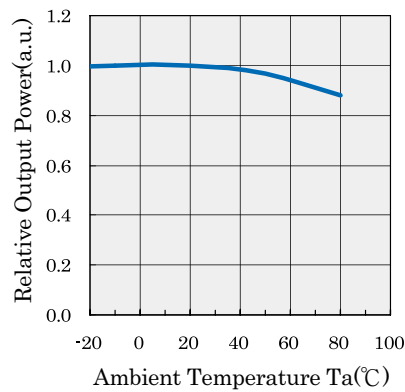
**Fig3.  $V_F / T_a$**



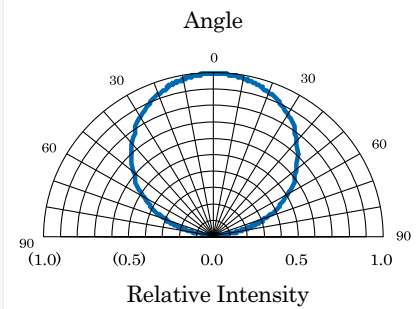
**Fig4.  $P_O / I_F$**



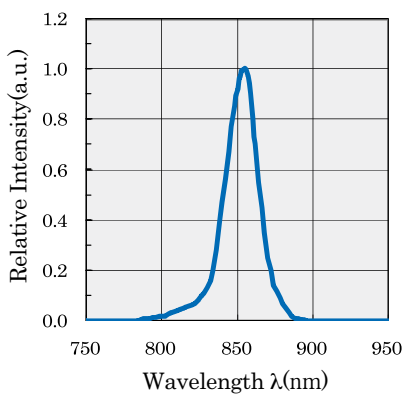
**Fig5. Relative  $P_O / T_a$**



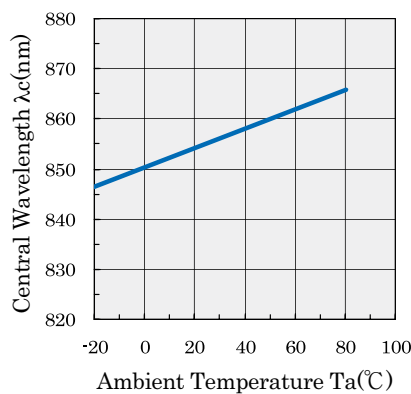
**Fig6. Spatial Distribution**



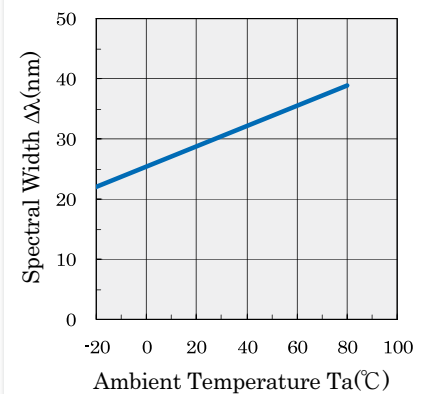
**Fig7. Spectral Characteristics**



**Fig8. Central Wavelength  $\lambda_c / T_a$**



**Fig9. Spectral Width  $\Delta\lambda / T_a$**



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Products listed in this catalogue are manufactured for use in standard applications (eg: household appliances, OA/AV, telecommunications, measurement instruments). Please do not use the products in critical reliability and security applications (eg: space and aviation, critical-safety transport applications, nuclear power control, medical, life-supporting units and equipment).