

# Infrared Point Source LED Chip MED8P54

MED8P54 is a low failure infrared point source LED chip. It is well suited for optical switches, positioning and sensing applications due to its small-size emitting aperture.

## • Features

- Small-size emitting aperture ( $\phi 150\mu\text{m}$ )
- High output power
- High reliability

## • Structure

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

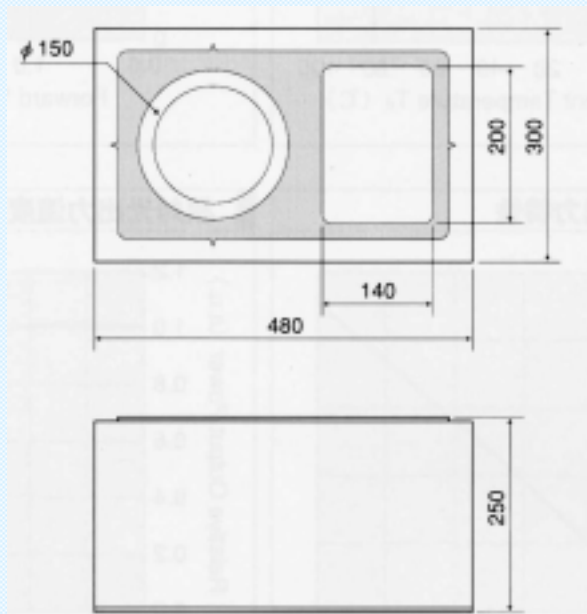
## • Applications

- Optical encoders
- Optical switches
- Optical sensors etc

## • Absolute Maximum Ratings\*( $T_a=25^\circ\text{C}$ )

Parameter	Symbol	Rating	Unit
Power Dissipation	$P_D$	200	mW
Forward Current	$I_F$	100	mA
Reverse Voltage	$V_R$	3	V
Operating Temperature	$T_{opr}$	-20 ~ 80	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-30 ~ 100	$^\circ\text{C}$

## • Dimensional outline drawing ( $\mu\text{m}$ )



## • Electro-Optical Characteristics\*( $T_a=25^\circ\text{C}$ )

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	$V_F$	$I_F=50\text{mA}$	-	1.7	2.2	V
Reverse Current	$I_R$	$V_R=3\text{V}$	-	-	10	$\mu\text{A}$
Output Power	$P_o$	$I_F=50\text{mA}$	1.5	2.4	-	mW
Peak Wavelength	$\lambda_p$	$I_F=50\text{mA}$	-	850	-	nm
Cut-off Frequency	$f_c$	$I_F=50\text{mA}+20\text{mA}_{p-p}$	-	25	-	MHz

\* as mounted on TO18 header and hermetically sealed

*Star LED*



Daido Steel Co., Ltd

MED8P54 data sheet

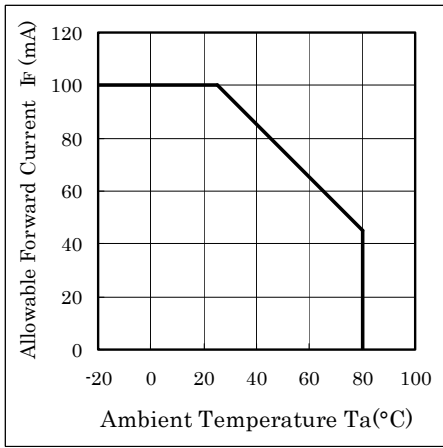


Fig1. IF / Ta

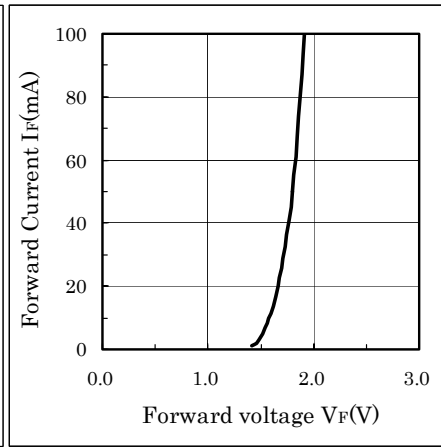


Fig2. IF / VF

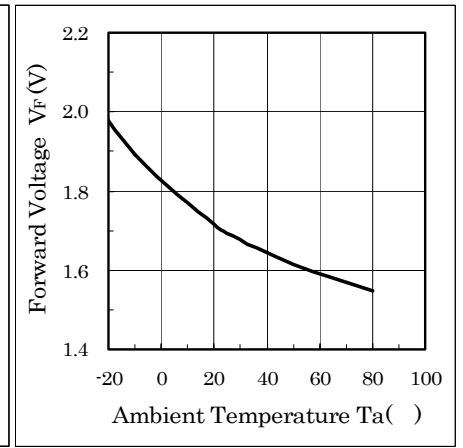


Fig3. VF / Ta

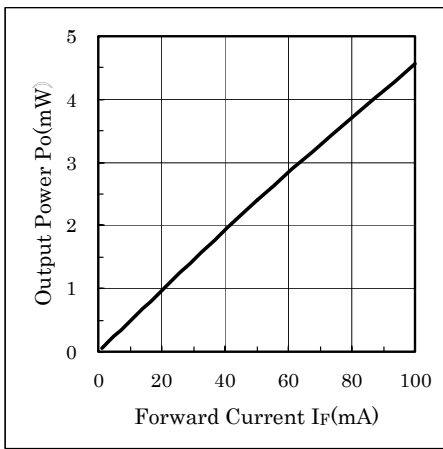


Fig4. Po / IF

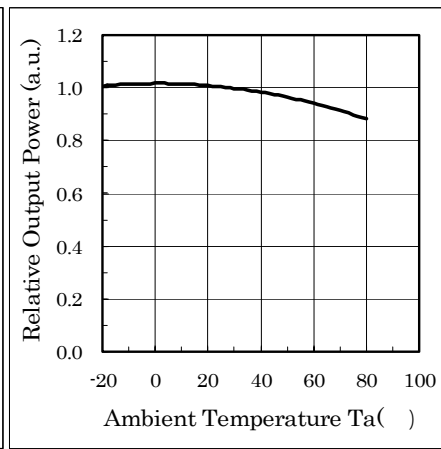


Fig5. Relative Po / Ta

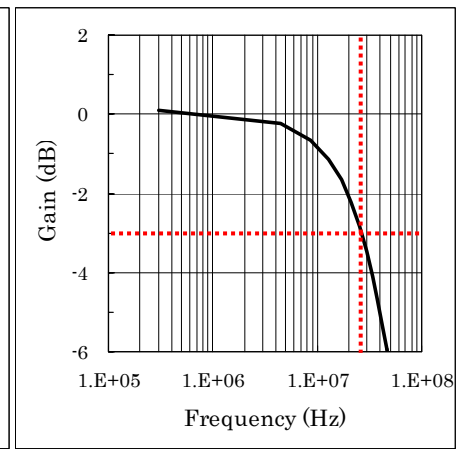


Fig6. Frequency Response

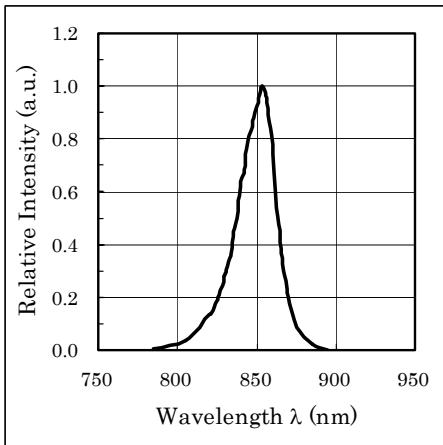


Fig7. Spectral Characteristics

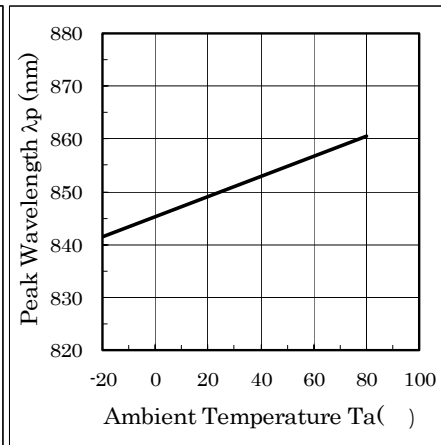


Fig8. Peak Wavelength / Ta

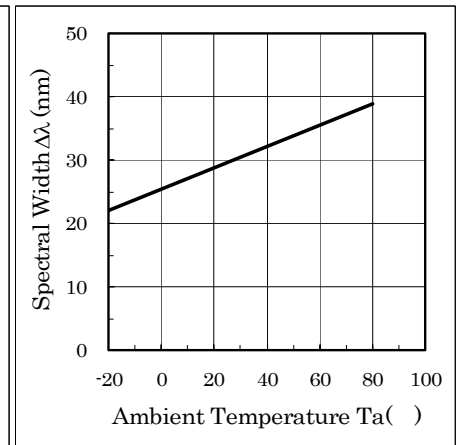


Fig9. Spectral Width / Ta

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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).



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