

Infrared Point Source LED Chip MED8P53

MED8P53 is a low failure infrared point source LED chip. It is optimized for optical switches and encoder applications due to its small-size emitting aperture.

• Features

- Small-size emitting aperture ($\phi 50\mu\text{m}$)
- High output power
- High reliability

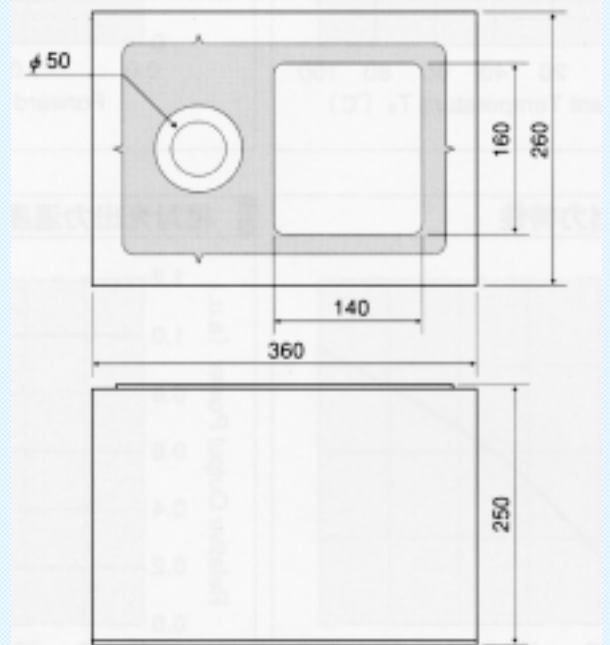
• Structure

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

• Applications

- Optical encoders
- Optical switches
- Optical sensors etc

• Dimensional outline drawing (μm)



• Absolute Maximum Ratings*(Ta=25°C)

Parameter	Symbol	Rating	Unit
Power Dissipation	P_D	150	mW
Forward Current	I_F	80	mA
Reverse Voltage	V_R	3	V
Operating Temperature	T_{opr}	-20 ~ 80	°C
Storage Temperature	T_{stg}	-30 ~ 100	°C

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

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$I_F=50\text{mA}$	-	2.0	2.4	V
Reverse Current	I_R	$V_R=3\text{V}$	-	-	10	μA
Output Power	P_o	$I_F=50\text{mA}$	1.2	2.0	-	mW
Peak Wavelength	λ_p	$I_F=50\text{mA}$	-	850	-	nm
Cutoff Frequency	f_c	$I_F=50\text{mA}+20\text{mA}_{p-p}$	-	45	-	MHz

* as mounted on TO18 header and hermetically sealed

Star LED



Daido Steel Co., Ltd

MED8P53 data sheet

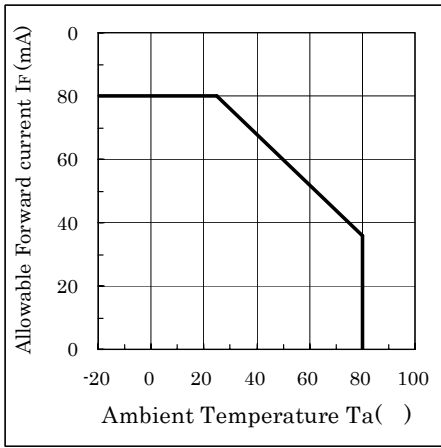


Fig1. IF / Ta

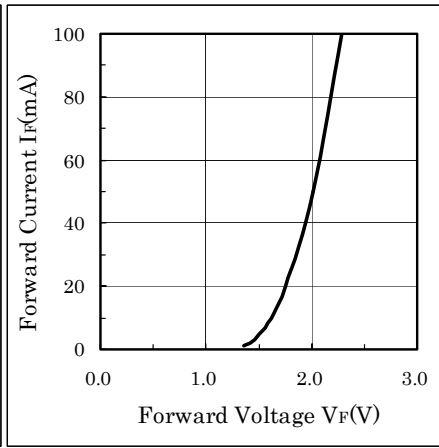


Fig2. IF / VF

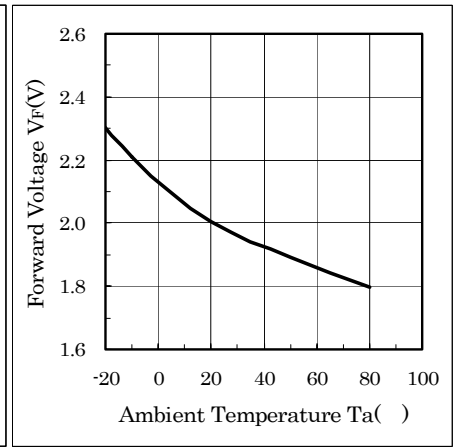


Fig3. VF / Ta

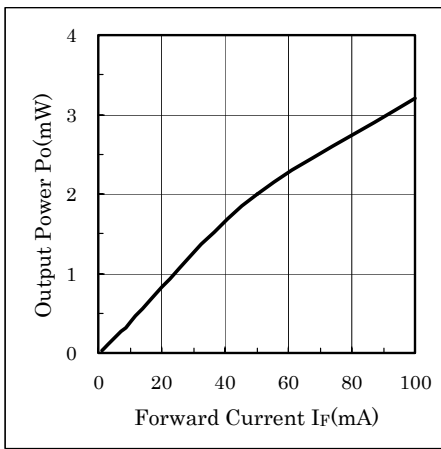


Fig4. Po / IF

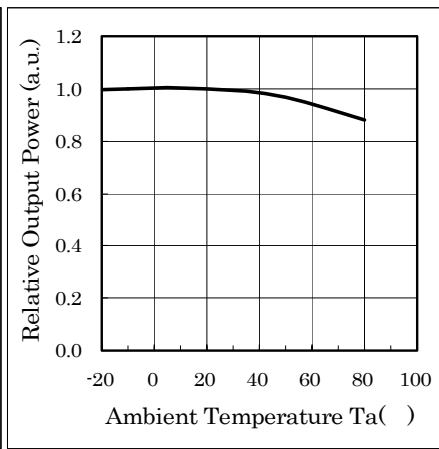


Fig5. Relative Po / Ta

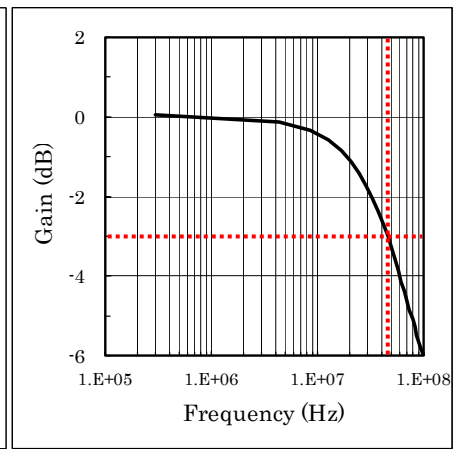


Fig6. Frequency Response

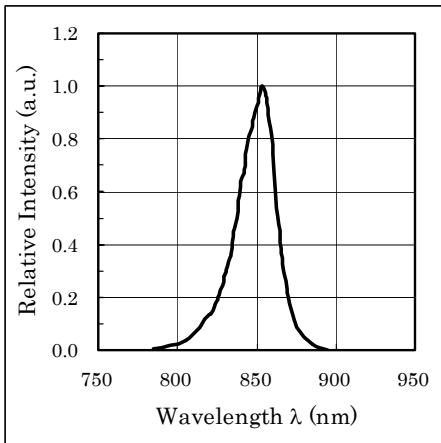


Fig7. Spectral Characteristics

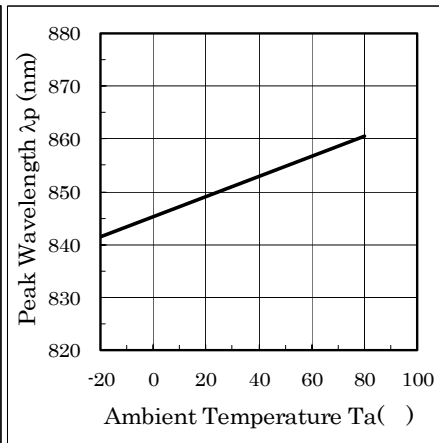


Fig8. Peak Wavelength / Ta

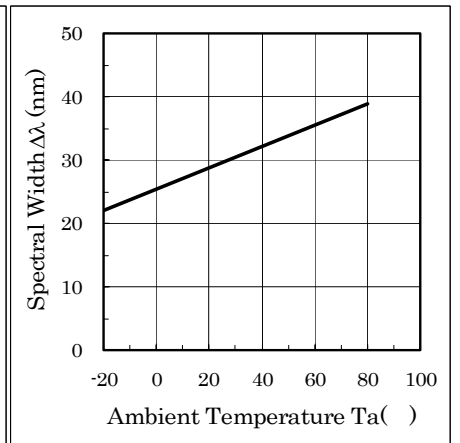


Fig9. Spectral Width / Ta

This catalogue was compiled in September 2003. All items listed in the catalogue are subject to change without any prior notice.

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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