StarLED
Infrared Point Source LED Chip
MED8P56A

MED8P56A is a low failure infrared point source LED die.
It is well suited for optical switches, positioning and sensing applications due to its small-size emitting aperture.

Features

- Small-size emitting aperture ($\phi 160 \mu m$)
- Small side-face emission
- 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℃)

Parameter	Symbol	Rating	Unit
Forward Current	I_F	100	mA
Reverse Voltage	V_R	3	V
Operating Temperature	T_{opr}	-20~80	℃
Storage Temperature	T_{stg}	-30~100	℃

Electro-Optical Characteristics* (Ta=25℃)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	I_F=50mA	-	1.7	2.2	V
Reverse Current	I_R	V_R=3V	-	-	10	μA
Output Power	P_O	I_F=50mA	1.5	2.4	-	mW
Central Wavelength	λ_C	I_F=50mA	-	855	-	nm
Side-face Emission	P_S	I_F=50mA	-	-	1	%

*As mounted on TO18 header and hermetically sealed

DAIDO STEEL

Fig1. IF / Ta

Forward Current IF(mA) vs Ambient Temperature Ta(℃)

Fig2. IF / VF

Forward Current IF(mA) vs Forward Voltage VF(V)

Fig3. VF / Ta

Forward Voltage VF(V) vs Ambient Temperature Ta(℃)

Fig4. PO / IF

Output Power Po(mW) vs Forward Current IF(mA)

Fig5. Relative PO / Ta
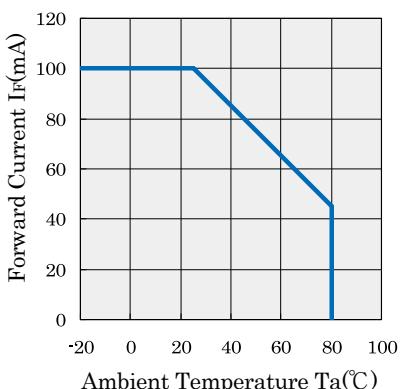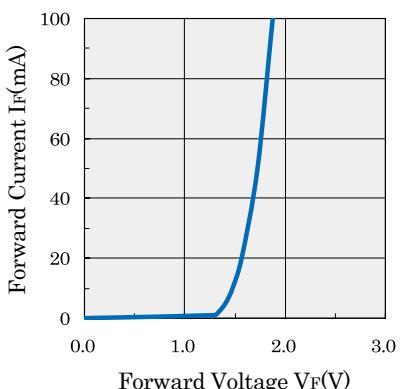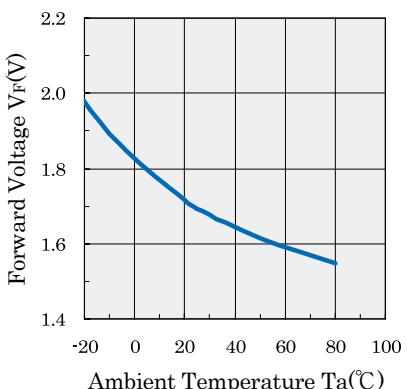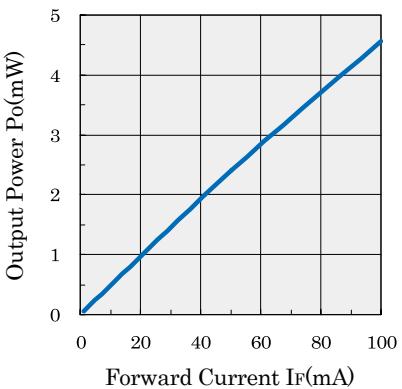
Relative Output Power (a.u.) vs Ambient Temperature Ta(℃)
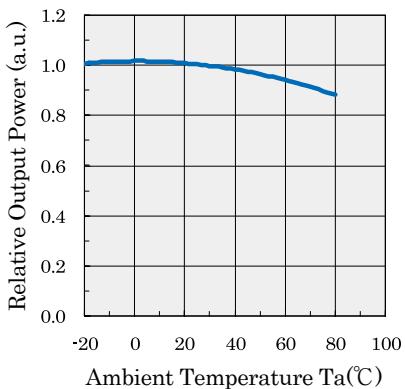
Fig6. Spatial Distribution

Angle / Relative Intensity; Intensity(a.u.) vs Angle (deg)
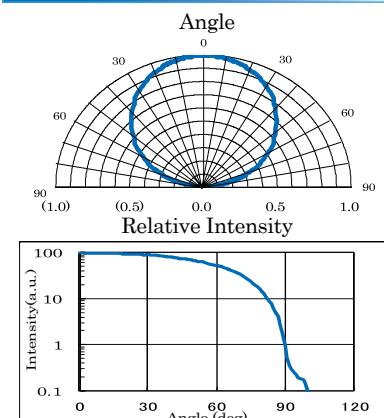
Fig7. Spectral Characteristics

Relative Intensity(a.u.) vs Wavelength λ(nm)
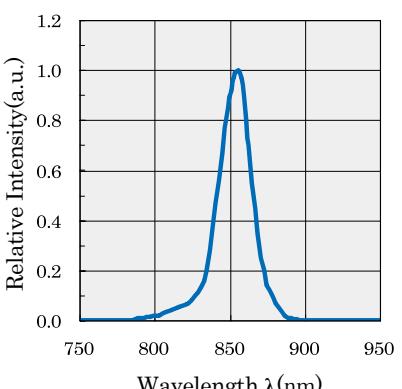
Fig8. Central Wavelength / Ta

Central Wavelength λc(nm) vs Ambient Temperature Ta(℃)

Fig9. Spectral Width / Ta
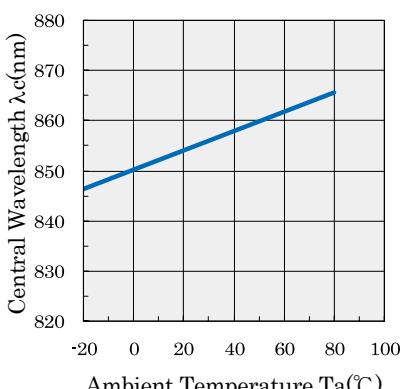
Spectral Width Δλ (nm) vs Ambient Temperature Ta(℃)
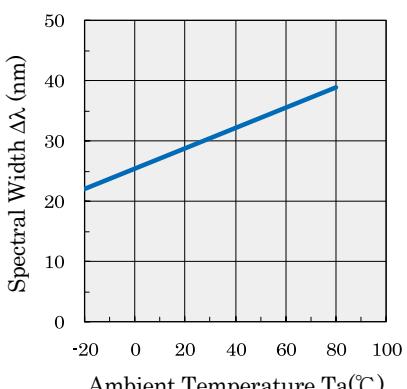
This catalogue was compiled in March 2023. All items listed in the catalogue are subject to change without any prior notice.