

The MED7P3, high speed AlInGaP red LED, is designed for plastic optical fiber (POF) communications. As it has a small emitting window, a good coupling efficiency with POF can be achieved.

Also, it is suitable for optical sensors which requires a visible light and a small emitting aperture.

Features

- Small emitting window ($\phi 160\mu\text{m}$)
- High speed($f_c:30\text{MHz}$)
- High output power

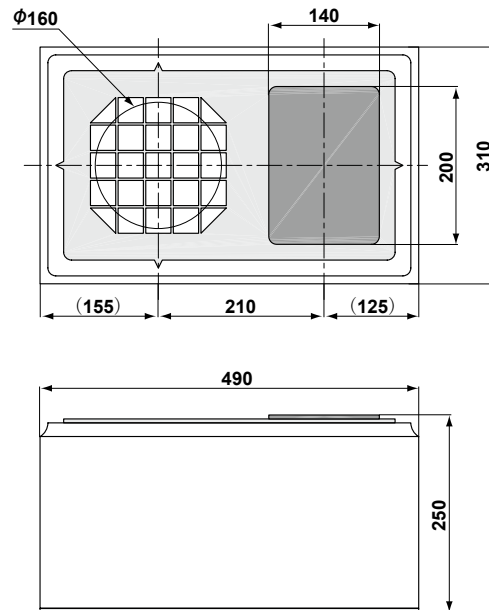
Structure

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

Applications

- POF communications
- Optical sensors
- Optical switches

Dimensional outline drawing(μm)



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

Parameter	Symbol	Rating	Unit
Forward Current	I_F	50	mA
Reverse Voltage	V_R	3	V
Operating Temperature	T_{opr}	-40 ~ 85	$^\circ\text{C}$
Storage Temperature	T_{stg}	-40 ~ 100	$^\circ\text{C}$

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

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Current	V_F	$I_F=20\text{mA}$	-	2.0	2.5	V
Reverse Current	I_R	$V_R=3\text{V}$	-	-	10	μA
Output Power	P_o	$I_F=20\text{mA}$	0.4	0.7	-	mW
Central Wavelength	λ_c	$I_F=20\text{mA}$	630	650	670	nm
Cutoff Frequency	f_c	$I_F=20\text{mA}+10\text{mAp-p}$	25	30	-	MHz

*As mounted on T018 header and hermetically sealed

Fig1. I_F / T_a

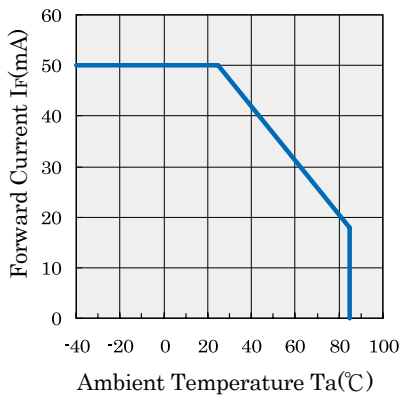


Fig2. I_F / V_F

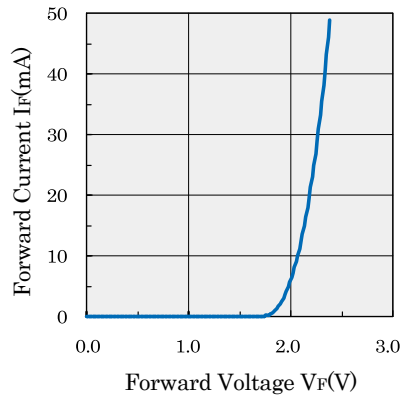


Fig3. V_F / T_a

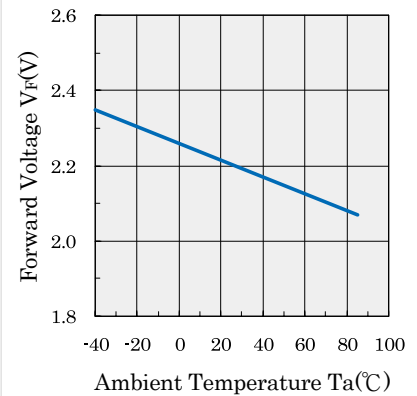


Fig4. P_O / I_F

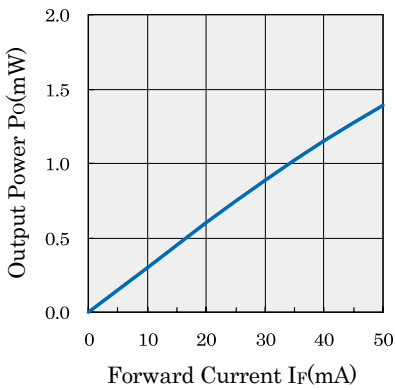


Fig5. Relative P_O / T_a

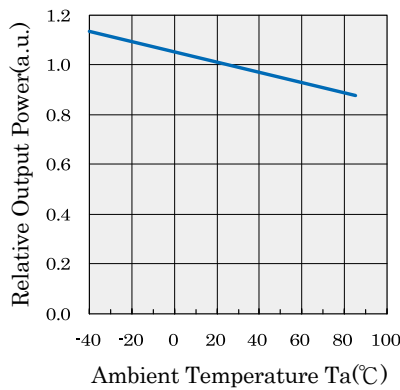


Fig6. Frequency Response

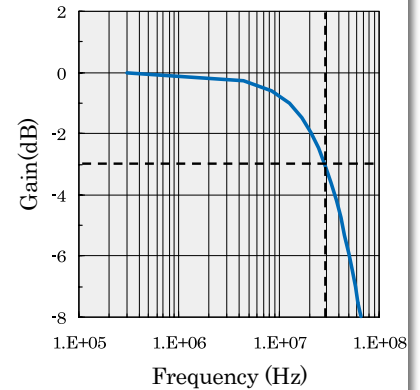


Fig7. Spectral Characteristics

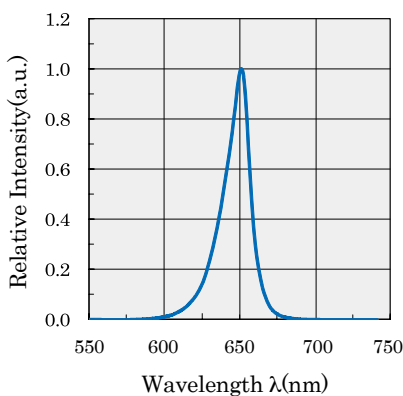


Fig8. Central Wavelength λ_c / T_a

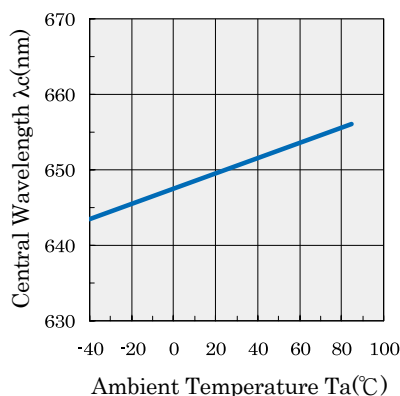
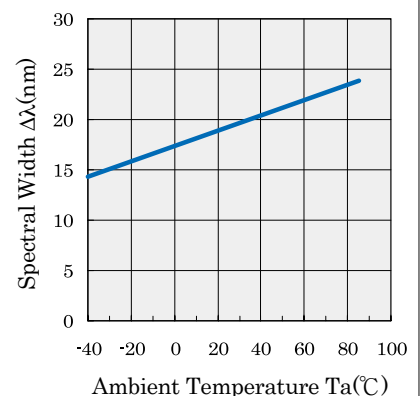


Fig9. Spectral Width $\Delta\lambda / T_a$



This catalogue was compiled in March 2023. All items listed in the catalogue are subject to change without any prior notice.

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