

# Emitter Assembly ELM-4000 Series

Dual Drive  
Lead Frame Construction  
Pulse Oximetry Component  
Clear Epoxy

The ELM-4000 Series Emitter Assemblies are specially designed for medical applications where selection of peak wavelength is a key requirement. Emission source material is GaAlAs in conjunction with GaAlP complete with clear epoxy lens.

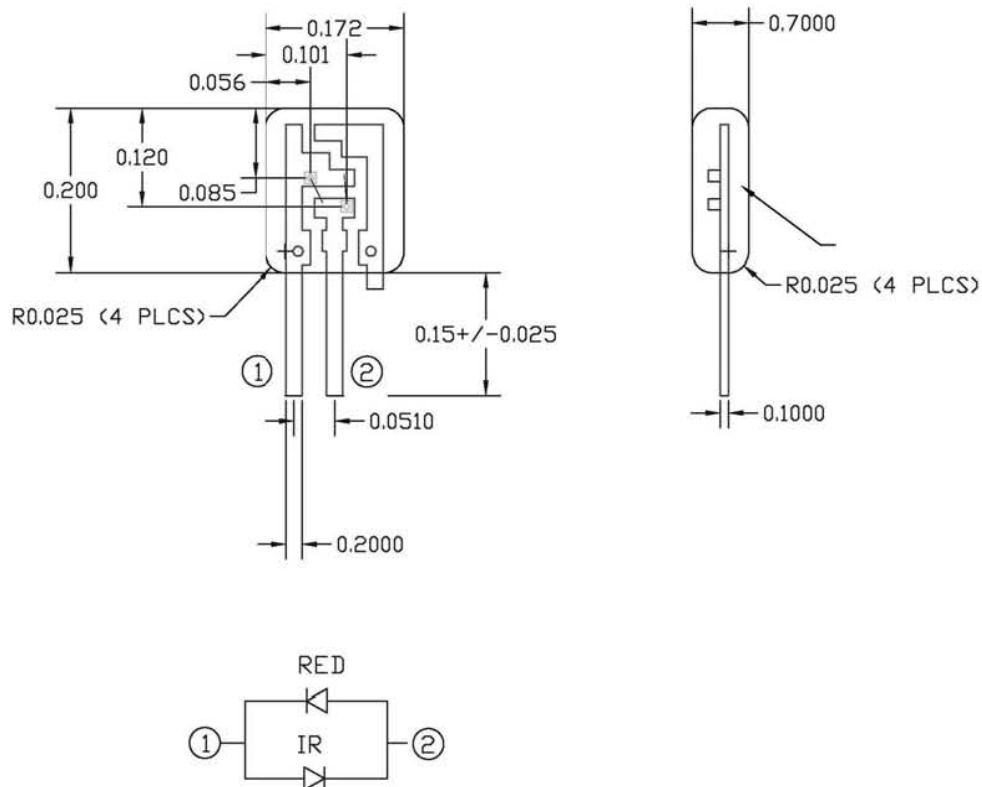
## FEATURES

- Low Cost
- 660 nm  $\pm$ 3 nm Peak Wavelength Red LED
- Two IR Wavelength Choices
- Dual Drive
- Clear Epoxy Lens

## APPLICATIONS

- Pulse Oximetry
- Finger/Ear Probes
- Disposable Strip or Butterfly Sensors

## Dimensions (ELM-4001)



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## Specifications & Ratings

### RED 660nm

Parameter @ 25°C	Symbol	Conditions	Min.	Typ.	Max.	Absolute	Unit
Forward Voltage	$V_f$	$I_f=20\text{mA}$		1.85	2.30		V
Reverse Voltage	$V_{B_r}$	$I_{br}=10\mu\text{A}$	3.0				V
Reverse Current	$I_r$	$V_r=3\text{V}$			100		$\mu\text{A}$
Luminous Intensity	$L_v$	$I_f=20\text{mA}$	25				Mcd
Peak Wavelength	$\lambda_p$	$I_f=20\text{mA}$	657	660	663		nm
Spectral Bandwidth	$\lambda\Delta$	$I_f=20\text{mA}$		20			nm

### INFRARED 880nm (ELM-4001)

Forward Voltage	$V_f$	$I_f=20\text{mA}$			1.50		V
Reverse Voltage	$V_{B_r}$	$I_{br}=10\mu\text{A}$	3.0				V
Reverse Current	$I_r$	$V_r=3\text{V}$			100		$\mu\text{A}$
Peak Wavelength	$\lambda_p$	$I_f=20\text{mA}$	870	880	890		nm
Spectral Bandwidth	$\lambda\Delta$	$I_f=20\text{mA}$		60	80		nm
Total Output	$P_o$	$I_f=20\text{mA}$	$\geq 0.6$	1			mW

### INFRARED 940nm (ELM-4002)

Forward Voltage	$V_f$	$I_f=20\text{mA}$		1.20	1.40		V
Reverse Voltage	$V_{B_r}$	$I_{br}=10\mu\text{A}$	5.0				V
Reverse Current	$I_r$	$V_r=3\text{V}$					$\mu\text{A}$
Peak Wavelength	$\lambda_p$	$I_f=20\text{mA}$	930	940	950		nm
Spectral Bandwidth	$\lambda\Delta$	$I_f=20\text{mA}$		45			nm
Total Output	$P_o$	$I_f=20\text{mA}$	$\geq 0.6$	1			mW

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## Ordering Information

### Description

Emitter Assembly; Lead Frame; 660nm/880nm  
Emitter Assembly; Lead Frame; 660nm/940nm

### Part Number

ELM-4001  
ELM-4002



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